

# ULTRA

## Positions and Polarities Beyond Crisis

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Edited by David Kroll, James Curry and Madeline Nolan



Image: Michaelmore, Roeger & Russell, *Chester House*, Belair 1966, State Library of South Australia BRG 346/28/6/2.

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**Ultra: Positions and Polarities Beyond Crisis**

Edited by David Kroll, James Curry and Madeline Nolan

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The 106 abstracts received were subject to peer review by the Conference Academic Committee and 63 papers were accepted for presentation at the conference following double-blind peer review. Of these, 48 papers are published here.

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# ULTRA

## **Positions and Polarities Beyond Crisis**

### **About Theme**

On the far side or beyond a limit, the term 'ultra' invokes an intensity of experience or conviction that falls outside the usual, the ordinary or the moderate; an attitude, stance, or position that may arise as much from emotion as it is informed by reason, particularly in moments of crisis when normality ceases to hold.

In the writing of architectural history extreme positions tend to suspend or stand outside the critical norms of the discipline in which, arguably, the cautious discerning of significance is the default practice. Positive can become ultra-positive as careful empirical observation and critical argumentation are transcended by the rhetoric of celebration. Commemoration, on the other hand, can evoke comparable rhetorical excess where the end of a golden era, for example, or the loss of a distinctive regional architecture or construction tradition become the focus of ultra-sad lamentation, or ultra-critical claims of abject failure where once dominant narratives no longer appear to sustain belief or explanatory power.

Operating as both a polemic and a call for insightful new inquiry into the discipline through which we think, Ultra invited participants to reflect upon the polarities of architectural discourse as well as the spectrum of positions between these. What are the implications of crises, past and present, in framing (or re-framing) the critical perspectives that architectural historiography may offer beyond such moments of confusion and/or extraordinary conviction? The conference sought broad ranging responses to this question and its theme that reflected on-going work in several established and developing areas of current SAHANZ scholarship.

What was 'ultra', for example, in the design and discursive promotion of Local and Regional Modernisms, and when, if ever, did they become normal? Ultra invited papers that explored different narratives of modernity in different localities of Australasia, Asia and the Pacific. In light of a rapidly globalising world and its culture wars, uncritical celebration of regionalisms and their architectures can become problematic, while their disappearance may be lamented.

In another stream, Construction History, Ultra solicited empirically, critically and/or historiographically oriented papers that interpreted architectural production as part of the larger political economy and cultural field of construction. Papers reflected the theme from a variety of different positions and perspectives ranging, for example, from the celebration of novel construction techniques, to the melancholy that may attend the loss of a building tradition. Papers also examined narratives of the impact of global crises on local Australasian construction trades and industries and/or their patronage in new classes of home-buyers, property developers and design-builders.

Reflecting further upon the value and the agency of our intellectual labour and our design discipline in the context of the present pandemic, and concurrent environmental, political and social crises, the conference aspired to bring together academics and practitioners to explore the tensions between opposing positions, emotional states and modes of thought, along with approaches outside these implied polarities. A further stream focused broadly on Design Practice and Education, and explored perspectives and positions where Architectural History elides with design research and other sub-fields such as creative practice, sustainable architecture, technology and urban design. Papers addressed the agency of historical research in architectural practice, or focused on questions of authorship or histories of practitioners that challenge established power relationships and hierarchies.

# Keynote Speaker

**Barnabas Calder**

University of Liverpool

Barnabas Calder is head of the Architectural and Urban History Research Group at the University of Liverpool, author of *Architecture: From Prehistory to Climate Emergency* (Pelican, 2021) and co-author with G. A. Bremner of 'Buildings and Energy: Architectural History in the Climate Emergency', *Journal of Architecture*, 26, 2 (2021): 79-115.  
DOI: 10.1080/13602365.2021.1891950

## Abstract

Architectural history can – and must – take a leading position in confronting the climate crisis. Construction and operation of buildings are together responsible for 39% of anthropogenic carbon emissions, and the world of architecture and engineering remains catastrophically dependent on carbon-intensive materials, particularly concrete and steel.

Technical research has provided many viable options for radically decreasing our architecture's carbon-intensity, but cultural ties bind us painfully to business-as-usual. History has long been fundamental to architectural teaching and discussion; we as architectural historians can make a critical contribution to the immense cultural shift that is required to avoid climate catastrophe.

Placing the history of energy at the centre of our understanding of the built environment makes inescapably clear the scale of the challenge we face. Thanks to fossil fuels, we are the most energy-rich generation of humans ever: the average citizen of today's richer countries is comparably wealthy in energy terms to the most powerful rulers of the ancient world. Today's architecture faithfully reflects our energy wealth and would be unthinkable without fossil fuels; to supply the power demands of our cement industry through sustainable charcoal would require all the output of a coppiced woodland larger than Australia.

Energy history complicates architectural culture's lionisation of Modernism, and gives new urgency to the study of non-Western architectural traditions, low-energy vernaculars, and pre-1600 architecture in Europe, all of which produced effective buildings with vastly lower heat inputs than we have come (through cheap fossil fuels) to regard as fundamental to architectural production. We, as architectural historians, have an opportunity and an obligation to take a leading position in understanding, communicating and combatting the climate crisis.

# ULTRA

## **Positions and Polarities Beyond Crisis**

### **SESSION 1: *Local and Regional Modernisms***

# The Reconceptualization of the City's Ugliness Between the 1950s and 1970s in the British, Italian, and Australian Milieus

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## Keywords

Subtopia  
Featurism  
Austerica  
Arboraphobia  
Outrage  
ugliness  
Australia  
Italy  
UK  
Architectural Review  
Robin Boyd  
Ian Nairn  
Tendenza  
Neorealism  
Ludovico Quaroni  
Aldo Rossi  
Ernesto Nathan Rogers  
Gordon Cullen  
Reyner Banham  
New Brutalism

## Abstract

The paper examines the reorientations of the appreciation of ugliness within different national contexts in a comparative or relational frame, juxtaposing the British, Italian, and Australian milieus, and to relate them to the ways in which the transformation of the urban fabric and the effect of suburbanization were perceived in the aforementioned national contexts. Special attention is paid to the production and dissemination of the ways the city's uglification was conceptualized between the 1950s and 1970s. Pivotal for the issues that this paper addresses are Ian Nairn's *Outrage: On the Disfigurement of Town and Countryside* (1956) Robin Boyd's *Australian Ugliness* (1960), and the way the phenomenon of urban expansion is treated in these books in comparison with other books from the four national contexts under study, such as Ludovico Quaroni's *La torre di Babele* (1967) and Reyner Banham's *The New Brutalism: Ethic Or Aesthetic?* (1966).

## Introduction: Transnationalisation and the Reconceptualization of the City's Ugliness

1. Marianna Charitonidou, "Réinventer la posture historique: les débats théoriques à propos de la comparaison et des transferts", *Espaces et Sociétés*, 167 (2016): 137-152. <https://doi.org/10.3917/esp.167.0137>.

Transnational historical research focuses on how connections function as central forces for historical processes. The "transnationalization" of historical discourse is based on the effort to understand the impact of cross-border relations on the transformation of certain concepts and ideas in each of the national contexts under study.<sup>1</sup> The transnational approach in social sciences aims to take into consideration the historical dimension when analysing how international exchanges of ideas and values evolve. Therefore, in order to better grasp the exchanges between the three different cultural and socio-economic contexts under study particular emphasis should be placed on a relational analysis of the production and dissemination of the ways the city's uglification was conceptualized between the 1950s and 1970s. The paper departs from the conviction that an analysis of Boyd's conception of ugliness is useful for better understand the debates on ugliness within the Italian and the British contexts.

### Australian Ugliness and Featurism

2. Andrew Leach, "The Gold Coast Moment", *Architectural Histories*, 3(1) (2015). <http://doi.org/10.5334/ah.cd>; Leach, "Letter from the Gold Coast", *AA Files*, 70 (2015): 24-27.

3. John Macarthur, "Robin Boyd's The Australian Ugliness, ugliness, and liberal education", *RMIT Design Archives journal*, 9(2) (2019): 50-57.

The questions addressed in this paper are relevant to the architectural history of Australia or New Zealand, in the sense that one of its main case studies will be the case of Gold Coast Architecture. As Andrew Leach notes, in "The Gold Coast Moment", Boyd tried to interpret the "Tiki aesthetic" employing the term 'Austerica' in order to describe the neon signs and a "rainbow of plastic paint" mere extensions of a cultural surface that captured, too deep suntans and what one writer called a 'climate dictated exposure'.<sup>2</sup> Informative for understanding Boyd's conception of ugliness are the photographs of Australian photographer Nigel Buesst that appeared in the 1968 and 1971 editions of *The Australian Ugliness* (fig. 1), as well as the photographs taken by Robin Boyd during the late fifties when he spent some time as visiting professor at MIT and travelled around the US, and the illustrations he included in *The Australian Ugliness* (fig. 2). Macarthur claims that Boyd agreed with the distinction that Kant drew between aesthetic judgment and pleasure.<sup>3</sup>

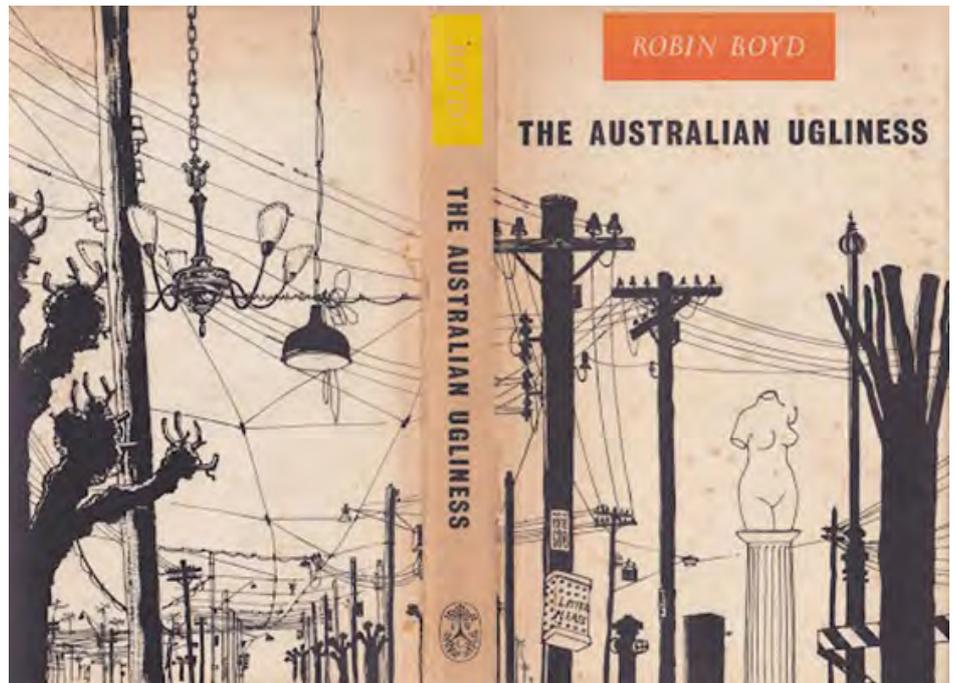


Figure 1: Front cover and back cover of Robin Boyd, *The Australian Ugliness* (Melbourne: F.W. Cheshire, 1960).

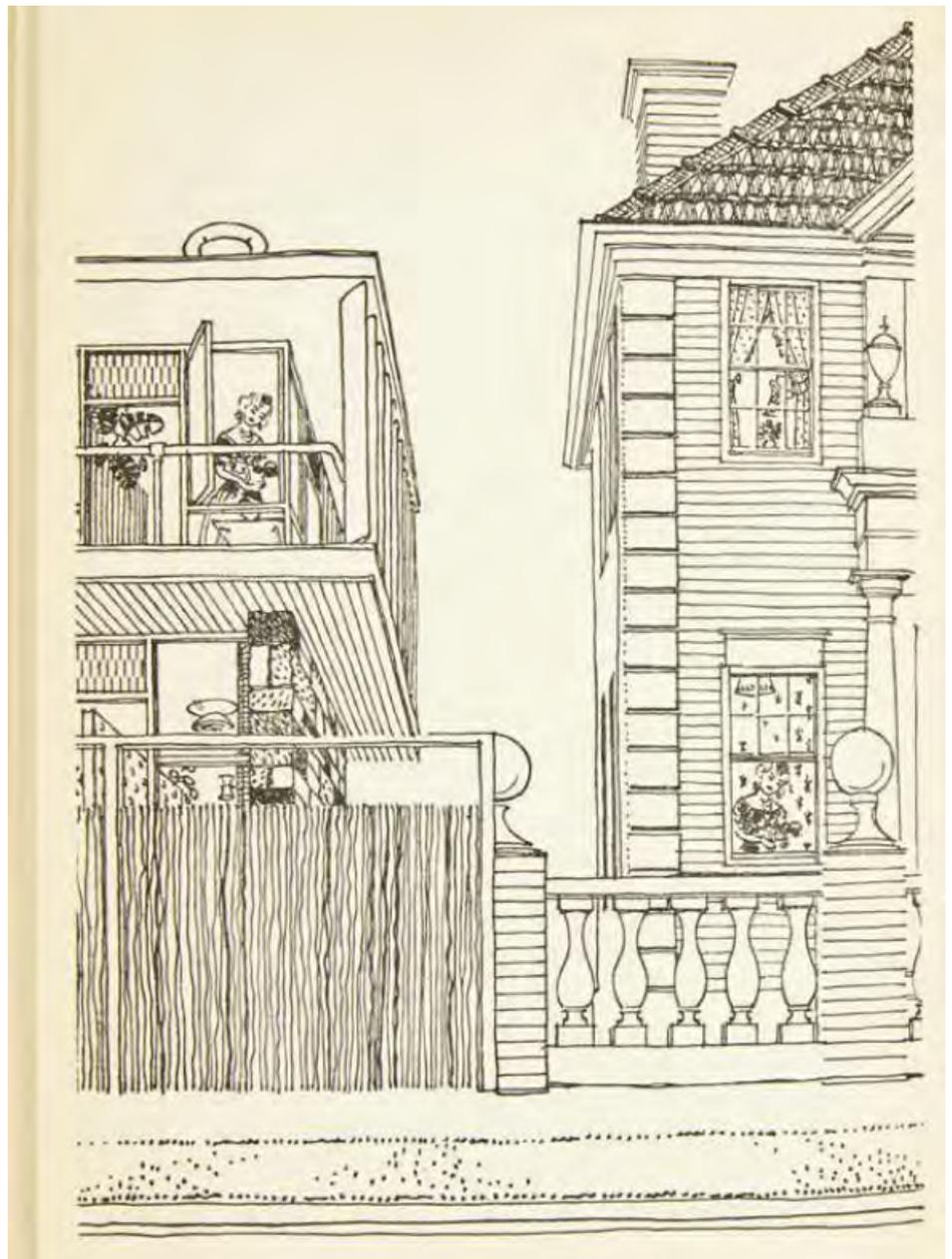


Figure 2. Robin Boyd, *The Australian Ugliness*, (Melbourne: F.W. Cheshire, 1960), 174, Roy Simpson Collection, RMIT Design Archives. Illustration by Robin Boyd, ©2019 Estate of Robin Boyd, courtesy Robin Boyd Foundation

4. Robin Boyd, "The Australian Ugliness", in Chris Feik, Robert Manne, eds., *The Words That Made Australia: How a nation came to know itself* (Collingwood: Black Inc. Agenda, 2013); Boyd, *Australian Ugliness* (Melbourne: Penguin Books, 1963), 23.

5. Macarthur, "Robin Boyd's The Australian Ugliness, ugliness, and liberal education", 51.

6. Ibid.

7. Naomi Stead, "(Not So) Anti-Architecture", *Places Journal* (2017). Accessed 08 Aug 2021. <https://doi.org/10.22269/171017>.

Of particular interest for this paper is an ensemble of neologisms that Boyd employed in *The Australian Ugliness*, such as *Featurism*, *Austerica*, and *Arboraphobia*. *Featurism* referred to "the subordination of the essential whole and the accentuation of selected separate features".<sup>4</sup> According to John Macarthur, "Featurism is an internationally observable aesthetical and ethical failing, but one that Boyd claims to reach an apogee in the Australia of the 1950s".<sup>5</sup> Macarthur, in "Robin Boyd's The Australian Ugliness, ugliness, and liberal education", analyses Boyd's critique of popular taste, and compares Boyd's understanding of ugliness with that developed in the pages of the *Architectural Review*.<sup>6</sup> Naomi Stead has described *The Australian Ugliness* as "a kind of taxonomy of local ugliness", and as "an account of the social and cultural elements that this ugliness was intended to hide".<sup>7</sup>

8. Reyner Banham, "The New Brutalism", *The Architectural Review*, 118(708) (1955): 359.

During the post-war period, a reorientation from the cross-cultural exchanges between Australia and the UK as far as architectural discourse is concerned towards the cross-fertilization between Australia and the United States of America took place. This shift should be taken into account if we try to describe the specificities of the Australian ugliness. Boyd was not only influenced by the ideas of "Townscape" movement and Nairn and Cullen's "subtopia" and "outrage" but also from the so-called New Brutalism to which Reyner Banham devoted his seminal article "The New Brutalism" published in the *Architectural Review* in 1955. Boyd was a casual contributor to the *Architectural Review*. Banham, in "The New Brutalism", paid special attention to the exhibition "Parallel of Life and Art", held at the Institute for Contemporary Art (ICA) in London in 1953 and curated by Alison and Peter Smithson, Nigel Henderson and Eduardo Paolozzi. Banham described New Brutalist aesthetics "as being anti-art, or at any rate anti-beauty in the classical aesthetic sense of the word."<sup>8</sup> The tension between New Brutalist anti-art and anti-beauty aesthetics and Tendenza's anti-aesthetic and anti-elitist stance is insightful for recognizing what was at stake in post-war debates around the notion of ugliness in relation to the question of morality in architecture.

9. Boyd, "The Sad end of the New Brutalism", *Architectural Review*, 142(45) (1967), 11.

In "The Sad End of New Brutalism", Boyd criticised Banham's understanding of New Brutalism. He maintained that his analysis of New Brutalism, due to his effort to legitimise Alison and Peter Smithson's work, neglected the importance of several buildings and architects that could have been described as New Brutalists. Characteristically, he remarked: "the only straightforward and consistent rule followed by Dr. Banham was that New Brutalism was anything the Smithsons permitted".<sup>9</sup> Despite his critique towards Banham's conception of New Brutalism, he was supportive of the ideals of New Brutalism, and believed that it was among the very few post-war movements that were revolutionary. This becomes evident in his following words: "The greatest hope of every evangelical movement like New Brutalism is that it will lead the world away from seductive aesthetic pleasures to the pure intelligence of building".<sup>10</sup> The aforementioned article, which was published in the *Architectural Review* in 1967, is like a critique of Banham's book entitled *The New Brutalism: Ethic or Aesthetic?* published a year earlier.<sup>11</sup>

10. Ibid.

11. Banham, *The New Brutalism: Ethic or Aesthetic?* (New York: Reinhold Publishing Corporation, 1966).

12. Boyd, "The Sad end of the New Brutalism".

Boyd also remarked that "the New Brutalism was certainly the most articulate of all the attempts to re-establish the original integrity and strength of modern architecture that occurred after the soft decade following the war".<sup>12</sup> Boyd believed that New Brutalism was unoriginal in the sense that its ideals were not new. He claimed that "unoriginality is of course the weakness of the argument for New Brutalism as an independent movement".<sup>13</sup> Boyd remarked regarding the value of appreciating ugliness or the unbeautiful: "A capacity to appreciate the unbeautiful is a quality which no Featurist would envy and few would be interested in cultivating; yet this is the key to depth in appreciation of architecture..."<sup>14</sup>

13. Ibid.

14. Boyd, *The Australian Ugliness*, 224.

### Subtopia and Ugliness within the British Context

An important movement for grasping the conception of ugliness within

15. Gordon Cullen, "Hazards", *Architectural Review*, 103 (1948): 99-105; Cullen, "Lees and wheels", *Architectural Review*, 104 (1948): 77-80; Erdem Erten, "Thomas Sharp's collaboration with H. de C. Hastings: the formulation of townscape as urban design pedagogy", *Planning Perspectives*, 24 (2009): 29-49.

16. Mira Engler, *Cut and Paste Urban Landscape: The Work of Gordon Cullen* (London; New York: Routledge, 2016).

17. Macarthur, "Robin Boyd's The Australian Ugliness, ugliness, and liberal education", 56.

18. Mathew Aitchison, "Ugliness and Outrage: The Australian Townscape", in Alexandra Brown, Andrew Leach, eds., *Proceedings of the Society of Architectural Historians, Australia and New Zealand: 30, Open* (Gold Coast, Qld: SAHANZ, 2013), 415.

19. Ivor de Wolfe, "Townscape: A Plea for an English Visual Philosophy", *Architectural Review*, 106 (1949): 354-362; Mathew Aitchison, "Who's Afraid of Ivor De Wolfe", *AA Files*, 62 (2011): 34-39; Aitchison, "Townscape: scope, scale and extent", *The Journal of Architecture*, 17(5) (2012): 621-642; Macarthur, Aitchison, "Oxford Versus the Bath Road: Empiricism and Romanticism in the Architectural Review's Picturesque Revival", *The Journal of Architecture*, 17(1) (2012): 51-68

20. Cullen, "Townscape Casebook", *Architectural Review*, 106 (1949): 363-374.

21. de Wolfe [Hastings], "Civilia. The End of Sub Urban Man", *Architectural Review*, 149 (892) (1971): 326-408.

22. Ian Nairn, "Outrage Twenty Years After", *Architectural Review*, 158 (1975): 328-337.

23. Gavin Stamp, *Anti-Ugly: Excursions in English Architecture and Design* (London: Quarto Publishing Group, 2013), 8.

24. Timothy Hyde, *Ugliness and Judgment: On Architecture in the Public Eye* (Princeton; Oxford: Princeton Architectural Press, 2019), 64.

25. Stamp, "Anti-Ugly Action: An Episode in the History of British Modernism", *AA Files*, 70 (2015), 80.

the British context during the 1950s is the "Townscape" movement. The activities of Hubert de Cronin Hastings as editor of the *Architectural Review* are of great significance for better understanding the context within which the ideas of "Townscape" movement emerged. An ensemble of articles aiming to explain the guiding principles of this movement appeared in the pages of the *Architectural Review* starting in October 1948.<sup>15</sup> Gordon Cullen was along with Ian Nairn one of the main authors of the "Townscape" articles until 1959, when he stopped collaborating with the *Architectural Review*.<sup>16</sup> Ian Nairn started collaborating with the *Architectural Review* later than Gordon Cullen, that is to say in 1954, and departed in 1969. Macarthur relates Hastings's approach in the *Architectural Review* towards ugliness to liberalism. According to Macarthur, Hastings "would accept modernist featurism alongside meretricious historicism and vernacular mis-appropriations of style."<sup>17</sup>

Mathew Aitchison has claimed that "Townscape's proponents saw ugliness, sprawl and blight as symptomatic of the general collapse of the design professions' ability to engage with real-world problems."<sup>18</sup> The "Townscape" movement should be understood in relation to the critiques towards the newly built New Towns and the suburbanization effect that accompanied their construction. Another aspect that is of great significance for comprehending the ideology of the "Townscape" movement is the impact that the generalised use of the car on the urban and suburban landscapes. Despite the fact that the ideas that are at the basis of the "Townscape" movement were already present in an ensemble of articles published in the *Architectural Review* since 1948, an important turning point was the issue of December 1949, which included not only Hastings's article entitled "Townscape: A Plea for an English Visual Philosophy", which was published under the pseudonym Ivor de Wolfe,<sup>19</sup> but also Gordon Cullen's homonymous article as well.<sup>20</sup> An article entitled "Civilia. The End of Sub Urban Man", authored by Hastings in 1971 is also of great importance for understanding his critique of suburbanization.<sup>21</sup> Another text that was published during the seventies in the *Architectural Review* and is useful for revisiting the ideas around "outrage" and "subtopia" is Ian Nairn's "Outrage Twenty Years After."<sup>22</sup>

Another aspect that should also be taken into account when we try to understand the specificities of the conception of ugliness within the British context is the Anti-Ugly Action (AUA), which was a group formed by students at the Royal College of Arts (RCA) in order to protest against the buildings that they considered ugly (fig. 4). As Gavin Stamp remarks in his book entitled *Anti-Ugly: Excursions in English Architecture and Design*, "[i]n December 1958, [...] Anti-Ugly Action demonstrated outside two new buildings they found offensive: Caltex House in the Old Brompton Road and Agriculture House (the monumental Neo-Georgian headquarters of the Farmers' Union, since demolished) in Knightsbridge."<sup>23</sup> According to Timothy Hyde, the critique of ugliness of the Anti-Ugly Action "was an unabashedly aesthetic critique rather than a moral or material one."<sup>24</sup> However, Ken Baynes, who was the Chairman of Anti-Ugly Action, have related the approach of the Anti-Ugly Action to the ideas of the Independent Group<sup>25</sup> of which Alison and Peter Smithson were members along with Lawrence Alloway, Reyner Banham, Colin St John Wilson, Richard Hamilton, Nigel Henderson, John McHale

26. Stamp, "Anti-Ugly Action: An Episode in the History of British Modernism", *AA Files*, 70 (2015), 65.

27. Nairn, *Outrage: On the Disfigurement of Town and Countryside*, special issue of the 1955 *Architectural Review* (London: The Architectural Press, 1956); it brought together articles published in the *Architectural Review*, 117 (702) (1955): 364-460.

28. Nairn cited in Steve Parnell, "Ian Nairn: the pioneer of Outrage", *The Architectural Review*, 27 May 2014. Accessible online: <https://www.architectural-review.com/essays/outrage/ian-nairn-the-pioneer-of-outrage>

29. Aitchison, "The Boyd Ultimatum", *AA Files*, 66 (2013), 61.

and Eduardo Paolozzi. As Hyde reminds us, in *Ugliness and Judgment: On Architecture in the Public Eye*, "Ian Nairn [...] addressed the embers of Anti-Ugly Action in a lecture just after the group was founded."<sup>26</sup> During the fifties, within different contexts other terms also emerged to describe the new features of urban and suburban landscapes related to the phenomenon of suburbanization and the generalised use of the car. Such a term within the British context was "subtopia" used by Ian Nairn, in *Outrage: On the Disfigurement of Town and Countryside*, which collected several articles written for the *Architectural Review* during the early fifties and was published in 1956.<sup>27</sup> Nairn defined "subtopia" as "the annihilation of the site, the steamrolling of all individuality of place to one uniform and mediocre pattern", as well as "the legalization of the urge to dump on a national scale."<sup>28</sup> As Mathew Aitchison remarks, in "The Boyd Ultimatum", "[t]oday, many of the developments Nairn observed are commonplace but in the mid 1950s they were distinct enough to be grouped under one Nairn term, 'subtopia'.<sup>29</sup> Of great significance for the dissemination of Nairn's ideas were the illustrations by Gordon Cullen (fig. 3), which have many similarities with Boyd's own illustrations in *The Australian Ugliness*. Particularly informative regarding Nairn's understanding of "subtopia" and "outrage" are the episodes of "Nairn Across Britain", which were released by BBC the same year as Reyner Banham's film "Reyner Banham Loves Los Angeles", that is to say in 1972.



Figure 3: Gordon Cullen's illustrations enlivened the 'Outrage' special issue of June 1955.

## **ANTI-UGLY ACTION**

ANTI-UGLY ACTION sets out by novel means to combat:

- i. Lack of imagination in architecture.
- ii. Needless suburban sprawl.

and to encourage:

- i. The erection of lively modern architecture.
- ii. The appreciation of modern buildings.
- iii. Urbanism as opposed to Sub-urbanism.
- iv. The preservation of anything worthwhile, from the countryside to individual buildings.
- v. To further better understanding between artists and architects.

It hopes to do this by:

- i. Attracting and awaking public interest in Architecture by means of public demonstrations, posters, dissemination of literature, exhibitions.
- ii. Attacking bad schemes and buildings at the public meeting stage.
- iii. Supporting other societies (New Hampstead Society etc.) in their efforts.
- iv. Petitioning councils etc. who erect rubbish.

ANTI-UGLY ACTION was formed, without too much hope, in the Royal College of Art (Oct. 1958). So far there have been six demonstrations for and against buildings. These demonstrations have attracted a satisfactory amount of publicity. It is hoped that branches of the society will be formed in Architectural and Art Schools up and down the country, which will then be linked by a Central Representative Committee. Already eight branches have been formed.

ANTI-UGLY ACTION has immediate plans for:

A comparative EXHIBITION of housing to be shown in the London Parks.

The production of a BOOK putting forward the group's views in a hard hitting and graphic form.

A study group is preparing a report on art and architectural EDUCATION.

Something must be done to create a better environment for clerks, coloured people, directors and old age pensioners.

D O I T

Make those who build realise that appearance matters. Make other people realise that they are concerned with appearances.

Chairman: Ken Baynes, Secretary: B.J. Newman, Treasurer: W. Wilkins.  
23, Cromwell Road, LONDON, S.W.7. Telephone: KNightsbridge 1362.

Figure 4: AUA manifesto, March 1959

### **The Conception of Architecture and City's Ugliness within the Post-war Italian Context**

Pivotal for understanding the conception of ugliness within the Italian context are the debates around Tendenza and Neorealist architecture. Taking as main actors Ernesto Nathan Rogers and Aldo Rossi, for the former, and Ludovico Quaroni, for the latter, my aim here is to clarify their respective positions regarding the relation of post-war (sub)urbanization to city's uglification. Ernesto Nathan Rogers, Quaroni and Rossi shaped

discourses based on the idea that architects are responsible for society. Both Tendenza and Neorealist architecture intended to reformulate the ways one judges architecture through new models corresponding to post-war urban expansion, establishing criteria that aim to take into consideration the struggle for social reconstruction. Within this context, continuity was seen as antidote to modernism's crisis.

30. Ernesto Nathan Rogers, "Elogio della tendenza", *Domus*, 216 (1946), 47.

31. Rogers, "Ortodossia dell'eterodossia", *Casabella Continuità*, 216 (1957), 4; Rogers, *Esperienza dell'architettura* (Turin: Einaudi, 1958), 90.

32. Enzo Paci, "L'architettura e il mondo della vita", *Casabella Continuità*, 217 (1957): 53-55.

33. Paci, *Diario fenomenologico* [1931] (Milano: Il Saggiatore, 1961).

34. Rogers, "The Image: The Architect's Inalienable Vision", in György Kepes, ed. *Sign, Image, Symbol*, (New York: George Braziller, 1966), 242-51.

The term "tendenza" was originally employed by Ernesto Nathan Rogers in "Elogio della tendenza", in 1946.<sup>30</sup> Rogers also referred to "tendenza", in "Ortodossia dell'eterodossia" (1957) and in *Esperienza dell'architettura* (1958). He drew a distinction between the concepts of "tendenza", style and coherence, defining "tendenza" as "an act of modesty that integrates the activity of each individual in the culture of their own epoch, inviting them to consider their selves before anything else as parts of society".<sup>31</sup> Rogers's temporally-driven aesthetic model, which lied on the concept of continuity and the idea of "sensing history", is the result of his encounter with Enzo Paci's phenomenological approach. Rogers believed that a balance between utility and beauty should be found, while Paci considered that architects should not conceive society as "theorized or ideologized or structured beforehand according to the perspectives of a given sociology". Instead, they should "make alive and real social relationship of [...] [their] country, with its needs and miseries, with its illusions and hard sense of reality, of the limits and conditions of life."<sup>32</sup> Paci was convinced that, to achieve such an engaged view, it is indispensable to "see the things the way they are". In his *Diario Fenomenologico*, he defined as phenomenon "what appears, what we see as we see it and we can faithfully describe, without judging it before we can see it precisely as it is."<sup>33</sup> Rogers' view in "The Image: The Architect's Inalienable Vision"<sup>34</sup> drew on Paci's phenomenological approach.

35. Casciato, "Neorealism in Italian Architecture", in Sarah Williams Goldhagen, Réjean Legault, eds., *Anxious Modernisms: Experimentation in Postwar Architectural Culture* (Cambridge, Mass: The MIT Press; Montreal: CCA, 2001), 31.

36. *Ibid.*, 29.

Neorealist attitude should be understood within the context of the process of city creation in a new Italy after the WWII damages. As Maristella Casciato underlines, "[i]t was in the south that the new national architectural language of Neorealism found its concrete expression."<sup>35</sup> The contrast between south and north Italy is important for grasping the differences between Neorealist and Tendenza architecture. The context *par excellence* of Neorealist architecture is Rome, while the milieu *par excellence* of Tendenza is Milan. For instance, "[m]ilanese architectural culture had maintained a sense of the continuity of the modern movement and the rationalist European experience."<sup>36</sup> This can explain Rogers' choice to give *Casabella*, which he directed since 1953, the subtitle "continuità".

37. Luca Molinari, "Constructing New Continuities in a Post-War World: the relationship between Jaap Bakema and Ernesto Nathan Rogers", in Carlo Togliani, ed., *Un palazzo in forma di parole. Scritti in onore di Paolo Carpeggiani* (Milan: Franco Angeli 2016), 487-495.

BBPR's Torre Velasca is a thought-provoking case study for reflecting on Tendenza's aesthetic theory (fig. 5, fig. 6). Given that it provoked several reactions and has been often characterized as ugly, its examination could illuminate Tendenza's stance towards ugliness. A common preoccupation of Tendenza and Team 10 was the concern for architecture's moral dimension. Despite the affinities between Team 10 and Ernesto Nathan Rogers' aesthetic views, which have been highlighted by Luca Molinari,<sup>37</sup> Peter Smithson and Jaap Bakema criticized sharply BBPR's Torre Velasca, when it was presented at the 1959 CIAM conference in Otterlo. Smithson argued that it was aesthetically and ethically wrong and "a bad model to give because

38. Peter Smithson cited in Oscar Newman, *New Frontiers in Architecture: CIAM '59 in Otterlo* (New York: Universe Books, 1961), 94-97.

39. "Casabella . . . casus belli?", *L'Architecture d'aujourd'hui*, 77 (1958), 55.

40. "Si vis pacem demain . . . para bellum . . . aujourd'hui", *Casabella Continuità*, 220 (1958), 53.

there are things that can be so easily distorted and become not only ethically wrong but aesthetically wrong."<sup>38</sup> He described it as a model with dangerous consequences and blamed Rogers for not being aware of his position in the society. Before this controversy, Torre Velasca had received an equally negative critique in France, in *L'Architecture d'aujourd'hui*, where it was regarded as an effect of the Italian appreciation for "ugliness, baroque inflammation, exaggeration, false originality, the strange, and the bizarre."<sup>39</sup> Casabella responded to the ironic title "Casabella . . . casus belli?" of *L'Architecture d'aujourd'hui*, which attacked BBPR's aesthetics, publishing a text with the equally caustic title "Si vis pacem demain . . . para bellum . . . aujourd'hui."<sup>40</sup>



Figure 5: BBPR's Torre Velasca featured on the cover of the issue 232 of *Casabella Continuità*, published in October 1959



Figure 6: Torre Velasca (1950-1958) by Ludovico Belgiojoso, Enrico Peressutti and Ernesto Nathan Rogers (BBPR) in Milano

41. Rogers, *Esperienza dell'architettura* [1958], ed. Luca Molinari (Milan: Skira, 1997).

The double stance of embodying cultural values without literally imitating past forms is emblematic of BBPR's posture. Rogers underlined that the significance of Torre Velasca's design strategy lied "in its intent to epitomize, culturally speaking – while avoiding repetition of the expressive language used in any of its buildings – the atmosphere of the city of Milan, its ineffable yet perceptible character."<sup>41</sup> This endeavour to transcribe through architectural composition a given culture's characteristics without imitating an existing visual language brings to mind Neorealist approach, which also aimed to invent an architectural language, based on cultural points of reference. A difference between *Tendenza* and Neorealist architecture is that the latter, in contrast with the former, developed an architectural language based on a set of mimetic devices. Neorealism's paradox lies in its double vocation to imitate and re-invent cultural identity's points of reference.

42. Rogers, "Le responsabilità verso la tradizione", *Casabella Continuità*, 202 (1954): 1-3.

43. Ludovico Quaroni, "Il ratto della città", *Spazio e Società*, 8 (1979), 28.

*Tendenza* and Neorealist architecture shared their interest in the intensification of architects' responsibility, the reestablishment of the relationship between reality and utopia and the critique of modernist homogenised and impersonal functionalism. Rogers invited architects to understand their "responsibilities towards tradition",<sup>42</sup> shaping an aesthetic view based on the understanding of tradition as "life-world". The notion of responsibility was also central for Quaroni. He believed that cities had become "too anonymous, too ugly, too inefficient", because architects did not try to change this situation, and left "political friends [...] and] city planning cousins"<sup>43</sup> to decide about their future. For him, city's ugliness was a result of losing the sense of architects' responsibility for city's transformation.

Both Quaroni and Rogers aimed to reinvent the relationship between utopia and reality. Quaroni's approach is characterized by the belief in the potential of imaginary reality to revitalize urban design. In *La torre di Babele*, he expressed his belief "in the creative value of utopia – of an imaginary reality [...] which [...] holds the seeds for revitalizing a process

44. Quaroni, *La Torre di Babele* (Padova: Marsilio Editore, 1967).

45. Rogers, "Utopia della realtà", *Casabella-Continuità*, 259 (1962), 1; Rogers, *Utopia della realtà* (Bari: Laterza, 1965).

46. Rogers, *Esperienza dell'architettura* (Turin: Einaudi, 1958); Paci, *Esistenza ed immagine* (Milano: Tarantola, 1947); EPaci, "Il cuore della città", *Casabella Continuità*, 202 (1954), vii.

47. Quaroni, *La Torre di Babele*.

48. Henry Miller, *Tropic of Capricorn* [1939] (London: Penguin, 2015), 176.

49. Rossi, "Introduzione", in Quaroni, *La Torre di Babele*.

like urban planning that has lost its capacity for energetic response."<sup>44</sup> Quaroni's conception of utopia's creative force as imaginary reality, capable of revitalizing urban planning processes, brings to mind Rogers' understanding of "utopia of reality" as "teleological charge that projects the present into the possible future". Rogers underscored utopia's capacity "to transform reality in its deepest essence, in the moral and political, as well as in the didactic and pedagogical fields."<sup>45</sup> The existential aspects of his perception of architecture's "experience" draw on Paci's phenomenological perspective, who associated the problem of "The Heart of the City", the 1951 CIAM's topic, to the necessity of a "synthesis of permanence and emergence."<sup>46</sup>

In *La torre di Babele*, Quaroni argued that "the modern city is really ugly", claiming that the lesson of historic cities, which was neglected in modern cities, is the well-integrated synthesis of functional, technological and aesthetic aspects. For him, the quality of architectural and urban artefacts depends on the extent to which the synthesis of these aspects is based on "an immediate, direct, good-natured relationship". Quaroni focused on the tension between historic and modern city, assimilating historic city to beautiful city and modern city to ugly city. He associated historic city's beauty with its "clear design [...] [and] structure." For him, modern city was ugly because it was chaotic. *La torre di Babele* opens with the following phrases: "The architect tends by its nature, and by professional deformation, to the total control of the city, as if it were a single building. But the mythical Tower of Babel, you know, never came to fruition."<sup>47</sup> Quaroni adopted Henry Miller's definition of confusion as "an order that you do not understand"<sup>48</sup> to explain the non-possibility of modern city's control with the non-capacity of architects to understand the order of post-war cities and their transformation and expansion. He related the inability to comprehend the order of contemporary city's urban fabric to his belief that modern city is ugly. As Rossi mentions, in his introduction to *La torre di Babele*, "Quaroni's theory [...] revolves around the significance of the city and of architecture, and the fundamental question: what does it mean for us architects if the modern city is ugly?" Rossi claimed that Quaroni failed to recognise modern city's potential beauty, because he blamed modern architecture itself instead of speculation and ignorance. Rossi, instead, considered that modern city's ugliness is the result of "an absurd mechanism which operates on several different levels."<sup>49</sup>

Quaroni's aesthetic approach could be explained drawing a distinction between architects' disinterested view vis-à-vis beautiful architectural and urban artefacts and architects' engaged view vis-à-vis ugly architectural and urban artefacts. The spectator of beautiful objects is disinterested, in contrast with that of ugly objects. When a viewer is confronted with ugly objects a desire to intervene emerges. The subject cannot be disinterested any more. Such an interpretation can help us explain post-war Italian architects' engagement vis-à-vis the re-invention of conceptual tools seeking to reshape the ugly aspects of urban and suburban formations. The belief that the problem of urban expansion should be part of architects' task became a common demand of different post-war Italian approaches. The spectator became engaged vis-à-vis post-war Italian cities' reality.

In contrast with Karl Rosenkranz's thesis that ugliness is the active

50. Karl Rosenkranz, *Aesthetics of Ugliness: A Critical Edition* [1853], trans. Andrei Pop and Mechthild Widrich (London; New York: Bloomsbury Academic, 2015).

51. Mark Cousins, "The Ugly", *AA Files*, 28 (1994): 61-64.

52. Manfredo Tafuri, "Les 'muses inquiétantes' ou le destin d'une génération de 'Maîtres'", *L'Architecture d'aujourd'hui*, 181 (1975), 17.

53. André Bazin, *What is Cinema?* Volume II, ed. Hugh Gray (Berkeley: University of California Press, 1971), 25.

54. Bruno Reichlin, "Figures of Neorealism in Italian Architecture (part 1)", *Grey Room*, 5 (2001), 83.

55. Aristotle, *Poetics*, ed. John Baxter and Patrick Atherton, trans. George Whalley (Montreal; Kingston; London; Buffalo: McGill-Queen's University Press, 1997), 62.

56. Tafuri, *Ludovico Quaroni e lo sviluppo dell'architettura moderna in Italia* (Milan: Comunità, 1964), 94.

negation of beauty,<sup>50</sup> Mark Cousins maintains that the ugly cannot be thought of as the opposite of the beautiful and defines ugly "as a matter of place" and the ugly object as "an object which is experienced both as being there and as something that should not be there."<sup>51</sup> This sense of not belonging to one's place could be related to Gilles Deleuze's interpretation of Neorealism as a profound stage of confusion that had led to the loss of feeling of belief in this world. Deleuze's understanding of confusion could be compared to Quaroni's conception of post-war Italian city's confusion. Even if Deleuze is affirmative, while Quaroni is negative towards confusion, both share the conviction that such a confusion makes necessary the invention of new modes of relating creative processes with reality. Tafuri described Quaroni's compositional method as "poetic of non-fabulation."<sup>52</sup> This distinction between poetic of fabulation and poetic of non-fabulation could help us grasp the perceptual mechanisms of Quaroni's design process.

Neorealist approach constitutes an endeavour to conceive ugliness as a path to the real putting forward the reality of post-war Italian city. Neorealism's intention to recuperate the immediacy of reality instrumentalized and aestheticized urban ugliness. Such a point of view vis-à-vis the connection between ugliness and reality is apparent in post-war Italian Neorealist Cinema, as in Roberto Rossellini's *Roma città aperta* (1945) and Vittorio de Sica's *Ladri di biciclette* (1948). André Bazin, a major theorist of Neorealism in cinema, highlighted the opposition between "aesthetic refinement and a certain crudeness, a certain instant effectiveness of a realism which is satisfied just to present reality."<sup>53</sup> He related this conflict between aesthetic refinement and crudeness to the enlightening power of reality. This crudeness to which he refers could be associated with ugliness. The attachment of neorealism to the aesthetic of ugliness has been also highlighted by Bruno Reichlin, who shed light on the relation of neorealism to "the propensity for an aesthetic of the ugly."<sup>54</sup>

The endeavour of transforming ugly features of the urban landscape into architectural instruments of social and moral engagement was at the heart of Neorealist approach. In the context of post-war Italy, architects often aimed to transform ugly elements into devices of reflection about how one's aesthetic criteria interferes with the meaning they give to reality. Tiburtino district, designed by Ludovico Quaroni and Mario Ridolfi, is often interpreted as a Neorealist expression in architecture. In this case, Quaroni and Ridolfi conceived the construction of social housing in a suburban neighbourhood of post-war Rome as a way to contribute to citizens' moral engagement towards life. This transformation of the norms according to which a city is judged as beautiful or ugly was paralleled with a shift from aesthetic criteria to politic, ethic, moral, social and civic criteria. The moral implications of aesthetic evaluation are apparent in Aristotle's *Poetics*, where "aischros" (ugly) has moral as well as aesthetic implications.<sup>55</sup> Characteristic of this moral engagement linked to Tiburtino district's spirit is Tafuri's description of it as a "manifesto of a state of mind, of an impelling need to communicate, to build a reality together with society and not simply for society."<sup>56</sup>

In terms of formal expression, neorealist architecture is characterized by a shift from a pre-established concept of compositional unity to one obtained by means of superposition and expressed through

57. Quaroni cited in Tafuri, *Ludovico Quaroni e lo sviluppo dell'architettura moderna in Italia*, 190.

58. Quaroni, "Il paese dei barocchi", *Casabella continua*, 215 (1957), 24.

the aggregation of successive elements and the obsessive fragmentation of walls and fences, as in the case of Tiburtino district's (fig. 7). Furthermore, it is characterized by the elaboration of formal discontinuities and the rediscovery of streets' value. It is also based on the surgical examination of the singularities of the visible world and everyday life. Quaroni wrote, in 1954, regarding Rome's character: "The baroque spirit is the spirit of Rome. It is a spontaneous generation, a creature of the site: autochthonous. It uses, even in the order of architecture, the vital disorder of the life of Rome."<sup>57</sup> This remark is penetrating for grasping Tiburtino district's intention to capture Rome's vitality (fig. 8). Quaroni's appraisal of Rome's vital disorder is indicative of Neorealism's transformation of city's ugly features into architectural instruments of social and moral engagement. The aesthetic project of Neorealist architecture lies in the double vocation to render architectural composition mundane and renounce the artificiality of the new. Quaroni wrote in 1957 regarding Tiburtino district's vitality and aestheticization of ugliness: "There was life, in any case, in the neighborhood. Beautiful or ugly, it lived as best it could."<sup>58</sup> The vitality is more important than anything else, for him, and, for this reason, he replaced the antagonism beautiful/ugly by that of vital/non-vital.

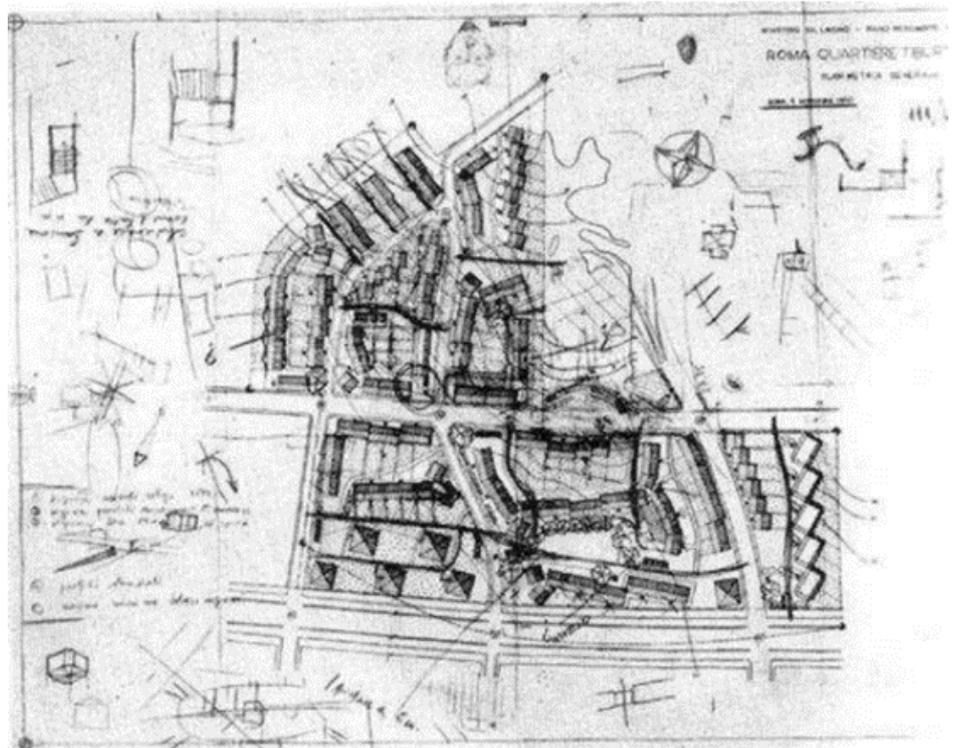


Figure 7: Tiburtino District, general plan (1949)



Figure 8: Via Luigi Cesaza, Tiburtino District, by Ludovico Quaroni and Mario Ridolfi

59. Immanuel Kant, *The Critique of Judgment* [1790] (Indianapolis; Cambridge: Hackett Publishing Company, 1987), 180.

60. Rossi, *The Architecture of the City* [1966], trans. Diane Ghirardo and Joan Ockman (Cambridge, Massachusetts: The MIT Press, 1982), 127.

61. Bruno Zevi, *Architecture as Space: How to Look at Architecture* [1948] (New York: Horizon Press, 1957).

According to Kant, aesthetic judgments are judgments made about beauty. Kant focuses on the subject's experience of the feeling of pleasure or displeasure and conceives beauty, not as a property of objects, but as related to the subject's feeling of pleasure. He notes: "Fine art shows its superiority precisely in this, that it describes things beautifully that in nature we would dislike or find ugly."<sup>59</sup> Kant's conception of beauty as related to the subject's feeling of pleasure brings to mind Aldo Rossi's remark that architecture's "capacity to be transmitted and to give pleasure" is part of technics, that is to say architecture's "means and principles."<sup>60</sup> Zevi's distinction between beautiful and ugly architecture is based on the idea that "[b]eautiful architecture [is] [...] architecture in which the interior space attracts us, elevates us and dominates us spiritually [...] [while] ugly architecture would be that in which the interior space disgusts and repels us."<sup>61</sup>

62. Rossi, *Arquitetura da Cidade* [1966] (Lisbon: Edições Cosmos, 1977).

63. Rossi cited in Terry Kirk, *The Architecture of Modern Italy, Volume II: Visions of Utopia, 1900–Present* (New York: Princeton Architectural Press, 2005).

64. Pier Vittorio Aureli, "Rossi's concept of the locus as a political category of the city", *OverHolland*, 8 (2009), 59.

65. Rossi, *L'Analisi urbana e la progettazione architettonica: contributi al dibattito e al lavoro di gruppo nell'anno accademico 1968/69* (Milano: clup, 1974), 61.

66. Rossi, "Introduzione", in *Architettura razionale* (Milan: Angeli 1973), 13.

Rossi noted, in 1977, in the introduction of the Portuguese edition of *Architettura della città*: "Topography, typology, and history come to be measures of the mutations of reality, together defining a system of architecture wherein gratuitous invention is impossible. Thus, they are opposed theoretically to the disorder of contemporary architecture."<sup>62</sup> Rossi understood typology as an instrument for measuring reality and resisting to contemporary architecture's disorder. His conception of typology as antidote to disorder and means to evaluate the real explain why Rossi believed that the "choice of typology at the beginning of the design process" was the means to avoid ugliness. He maintained that a "lot of architecture is ugly because it cannot be traced to a clear choice; without one, it is left deprived of meaning."<sup>63</sup> For Rossi, "the individuality of the urban artifact was the moment of decision in which typological principles were applied to the real city."<sup>64</sup> Rossi asserted in 1974: "If the modern city is ugly, as Quaroni says, it means that the models of reference have gradually worn out [...] rationalism that arose from the Haussmannian solutions has been lost; the capitalist modern city has, in its instability, the inability to give itself a face."<sup>65</sup> If we juxtapose the above thesis with Rossi's assertion a year before, in the catalogue of the XV Triennale di Milano "Architettura razionale", where he declared that "there is no longer any ideological shield for ugly architecture",<sup>66</sup> we would be confronted with the paradox of Rossi's declaration of the non-effectiveness of the very notion of rational architecture, just a year after

his choice of this title for the XV Triennale di Milano.

67. Rossi, *The Architecture of the City*, 103.

68. *Ibid.*, 130, 127.

69. Aureli, "The Common and the Production of Architecture: Early hypotheses", in David Chipperfield, Kieran Long, Shumi Bose, eds., *Common Ground: A Critical Reader* (Venice: Marsilio Editori, 2012).

For Rossi, ugly architecture is the architecture that is not characterized by a clearly defined individuality and has not emerged through a clear typological choice. Pivotal for understanding what Rossi understood as clearly defined individuality is the notion of "locus", which should not be assimilated to the notion of context, and concerns the "relationship between a certain specific location and the buildings that are in it [and] is at once singular and universal."<sup>67</sup> For Rossi, the city as the "locus of the collective memory" and the defining parameters of an architectural artefact are "the autonomous principles according to which it is founded and transmitted."<sup>68</sup> What is at the centre of his conception of architectural artefacts is his double understanding of them as individual and social works. His view towards common architecture is not negative, since Rossi's research [...] [is] "focused on the whole city, and not just on authored architecture."<sup>69</sup> Rossi's interest in non-authored architecture is pivotal for understanding how his view appropriates in an affirmative way characteristics that in a different context could be treated as ugly.

70. Rossi, *A Scientific Autobiography*, trans. Lawrence Venuti (Cambridge, Mass.; London: The MIT Press, 1981), 83.

Rossi's aesthetic view towards ugliness in *Architettura della città* and *A Scientific Autobiography* are distinct. In the approach, he developed in *Architettura della città*, he identified of ugly architecture with architecture that does not derive from a clear choice of typology and understood disorder as necessarily negative. He adopted as criterion for judging if architecture is ugly or not the extent to which form-making was based on clear choices of typologies. Progressively, his approach incorporated an elective affirmation vis-à-vis disorder. In contrast with his disapproval of disorder in *Architettura della città*, in *A Scientific Autobiography*, Rossi is more positive towards disorder. He drew a distinction between arbitrary and non-arbitrary disorder, aiming to understand the space of encounter between order and disorder: "I felt that the disorder of things, if limited and somehow honest might best correspond to our state of mind. But I detested the arbitrary disorder that is an indifference to order, a kind of moral absurdness, complacent well-being forgetfulness."<sup>70</sup>

70. Rossi, *A Scientific Autobiography*, trans. Lawrence Venuti (Cambridge, Mass.; London: The MIT Press, 1981), 83.

71. Rossi, "The Analogous City", *Lotus International*, 13 (1976), 6.

72. Mojca Kuplen, "The Aesthetic of Ugliness: A Kantian Perspective", *Proceedings of the European Society for Aesthetics*, 5 (2013), 275.

73. *Ibid.*

In "The Analogous City", Rossi referred to the importance of the dialectics of the concrete and underscored the "capacity of the imagination born from the concrete."<sup>71</sup> Kant's claim that "ugliness is constituted by the free imagination being unrestrained by the understanding's need for order"<sup>72</sup> could be associated with Rossi's interest in this kind of disorder described above. Rossi's belief in the creative force of the concrete could be associated with Kant's conviction that "ugliness pushes the freedom of the imagination to a high degree."<sup>73</sup> Both positions interpret ugliness as a powerful source of creativity. Kant's connection of free imagination with ugliness and Rossi's belief in the capacity of the concrete to activate imagination are useful for understanding ugliness' imaginative potential.

74. Paci, *The Function of the Sciences and the Meaning of Man* [1963] (Evanston: Northwestern University Press, 1972), 24.

When confronted with Torre Velasca, we are in face of a paradoxical parallel effect of estrangement and familiarization, which lies on the tension between "continuità" and "preesistenze ambientali" and can be explained through Paci's view of the relationship between past and present: "It is while questioning the past (but not by becoming the past) that I understand the present and the interest of the present for its own transformation."<sup>74</sup> Similarly, what is at stake in Aldo Rossi's

concept of analogy is a process of de-familiarization, which provokes an intensification of semantic ambiguity. Quaroni's replacement of beautiful/ugly by vital/non-vital shows that his concepts of the "città meravigliosa" and the "qualità diffusa" cannot be understood without untying their existential load, which as in Ernesto Nathan Rogers and Aldo Rossi's case, moralizes ugliness. This appropriation of estrangement and de-familiarization and their existential implications justify Neorealism and Tendenza's aestheticization of post-war Italian cities' ugliness.

### At the Crossroads the British, Italian, and Australian Conception of Ugliness

75. Banham, "Neoliberty: The Italian Retreat from Modern Architecture", *Architectural Review*, 125(747) (1959): 231–235.

76. Romaldo Giurgola, "Reflections on Buildings and the City: The Realism of the Partial Vision", *Perspecta*, 9/10 (1965): 107-130.

The exchanges between Italy and the UK played an important role for the evolution of the debates around the architecture and city's ugliness. Another case that is enlightening regarding the debates between the Italian and British architectural theorists is the controversy between Reyner Banham, who was enthusiastically defending Alison and Peter Smithson's aesthetic view, in 1959, and Ernesto Nathan Rogers's approach. More specifically, Banham attacked Rogers's approach using the label "Neoliberty."<sup>75</sup> Regarding the exchanges between the Australian and the Italian milieu, an important figure was Romaldo Giurgola, who migrated from Italy to Australia.<sup>76</sup> In parallel, Aldo Rossi's proposal for a tower in Melbourne in 1979 is a case that could serve for exploring if there is any common ground between Australian Featurism, as Boyd understood it, and Rossi's understanding of typology and the analogous city.

77. Macarthur, "Robin Boyd's The Australian Ugliness, ugliness, and liberal education", 56.

78. Boyd, "The Sad end of the New Brutalism".

79. Naomi Stead, Tom Lee, Ewan McEoin, Megan Patty eds., *After The Australian Ugliness* (Melbourne: National Gallery of Victoria and Thames and Hudson, 2021).

80. Boyd, *The Australian Ugliness* (Melbourne: F.W. Cheshire, 1960), 118.

Helpful for comparing Boyd's Featurism with the Townscape movement is Macarthur's remark claiming that "Hastings would accept modernist featurism alongside meretricious historicism and vernacular mis-appropriations of style, on the grounds that buildings of very varied architectural quality could be composed by an architectural eye at an urban level."<sup>77</sup> In parallel, useful for understanding Boyd's conception of ugliness and New Brutalism is the fact that New Brutalist ethic functioned as an antidote against architecture and city's ugliness.<sup>78</sup> Of great importance for better grasping the cross-cultural exchanges between Australia and the UK regarding the concept of ugliness in architecture and urban design is Boyd's article entitled "The Sad End of New Brutalism", and *After The Australian Ugliness*.<sup>79</sup> Boyd, in *The Australian Ugliness*, refers to New Brutalism to Ian Nairn's work. In parallel, he authored several articles for the *Architectural Review* between 1951 and 1970. Boyd remarks in *The Australian Ugliness*: "The solution then is to recognise that there is an appropriate time and place for both the technology of space-enclosure and the architecture of expression, and to work to eliminate the neuter type: neither scientific nor artistic."<sup>80</sup> On the one hand, the Townscape movement related ugliness to the difficulty to distinguish urban features of the town and those of the countryside. On the other hand, Boyd related ugliness to the lack of capacity to eliminate what he called "the neuter type".

# The Making of a Newcastle Modernist: The Early House Designs of Sydney C. Morton

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## Keywords

Architectural Modernism  
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Newcastle

## Abstract

In his article series "Modern Homes of Newcastle", published in the *Newcastle Morning Herald* between 1961 and 1964, journalist Alan Farrelly wrote about the contemporary domestic architecture of Newcastle and its surrounds and in doing so brought public attention to the work of a generation of the city's younger architects. Prominent amongst these was Sydney Charles Morton who had four houses of his own design featured in the series. These houses stand out for their bold modernist appearance involving stark rectilinear forms, light-weight construction, flat roofs and large amounts of glazing. For readers of the newspaper, they were an illustration of how far residential design in their region had come.

This paper looks at the pre-history of these houses in the early domestic work of Morton which included the design of 'Orana', or what locally became known as "the chicken coop". In the context of early 1950s Newcastle, where pitched roof, brick and tile homes were standard, 'Orana' certainly represented a radical departure and rethinking of the modern house. Like that of many of his generation, Morton's work, and in particular his breakthrough project in 'Orana', occupies a position of 'ultra' defiance against convention. The aim of this paper is to understand how this position developed and grew in strength within his time as a student at Sydney Technical College and within his early practice.

## Introduction

1. For a study of this article series see Paul Hogben, "Unlocking Newcastle's Modernist Domestic Architecture," in *Proceedings of the Society of Architectural Historians, Australia and New Zealand: 37, What If? What Next? Speculations on History's Futures*, edited by Kate Hislop and Hannah Lewi (Perth: SAHANZ, 2020): 111-123.

In his article series "Modern Homes of Newcastle", published in the *Newcastle Morning Herald* between 1961 and 1964, journalist Alan Farrelly wrote about the contemporary domestic architecture of Newcastle and its surrounds and in doing so brought public attention to the work of a generation of the city's younger architects.<sup>1</sup> Prominent amongst these was Sydney Charles Morton who had four houses of his own design featured in the series. These houses stand out for their bold modernist appearance involving stark rectilinear forms, light-weight construction, flat roofs and large amounts of glazing. Three of the houses are dramatically cantilevered over their sites to maximise views towards coastlines or over the city (Figure 1). Their internal planning is compact with kitchen and dining rooms separated by semi-suspended serveries or shelf units. The external walls consisted of either vertical weatherboards or fibrous cement panelling. Asbestos cement was used for the roofing. For the newspaper's readers, these houses were an illustration of how far residential design in their region had come, where steep sites were not considered an impediment to achieving a contemporary setting for modern living.



Figure 1: Houses designed by Sydney Morton and featured in the "Modern Homes of Newcastle" series published in the *Newcastle Morning Herald*.

Sources: Left: *Newcastle Morning Herald*, 12 August 1961, 7; Centre: *Newcastle Morning Herald*, 9 September 1961, 7; Right: *Newcastle Morning Herald*, 12 January 1962, 6. Courtesy of Newcastle Herald/ACM.

2. The seminal reference for the architectural history of Newcastle and the broader Hunter region is Les Reedman's *Early Architects of the Hunter Region: A Hundred Years to 1940* (Brooklyn, NSW: Les Reedman and Margaret Walker, 2008). As the title indicates, this book does not address the post-war period.

3. *RAIA Newcastle Division Newsletter*, October 1998.

4. Bob Donaldson and Don Morris, *Architecture Newcastle: Preserving its Educational History, A History of Architectural Education at Newcastle* (Newcastle: Bob Donaldson and Don Morris, 2001), 17, 24.

5. *Ibid.*, 193, 196.

Like his fellow Novocastrians who began practice in the years after the war, little is known of Morton's architectural career and output.<sup>2</sup> An obituary by Nina Walmsley published in October 1998 tells of the place and reputation he had within the post-war Newcastle profession:

Some of Newcastle's great homes and flat buildings came out of Syd's office at that time including the then infamous "chicken coop" on Bruncker Road, Adamstown .... Many of Newcastle's architects worked for Syd whilst they were students and brought to the office extraordinary skills which were tempered and matured by Syd's experience and technical finesse.<sup>3</sup>

Morton also features in Bob Donaldson and Don Morris' history of architectural education at the University of Newcastle in which he is named as one of the Newcastle students who joined the architectural diploma course at Sydney Technical College in the late 1930s.<sup>4</sup> Donaldson and Morris' book includes illustrations of some of Morton's student projects and records his later contribution as a staff member of the school of architecture at the University of Newcastle in the area of building construction.<sup>5</sup>

As suggested by Farrelly and Walmsley, Morton had a strong presence

6. "Big Windows Feature in New Home," *Newcastle Morning Herald*, 10 July 1953, 4.

7. David Nash, "Orana - An Australian Welcome for a Polynesian Word?" *Placenames Australia: Newsletter of the Australian National Placenames Survey* (June 2016): 1, 5-8.

within the Newcastle architectural scene for his domestic work. One of his earliest commissions was a house design for Vera and William James on a site in Adamstown Heights in Newcastle. Nearing its completion in July 1953, the house gained the attention of the *Newcastle Morning Herald* for its modernity, in particular the large amount of window glazing and for its "Californian style".<sup>6</sup> Locally, it was given the nickname "the chicken coop" presumably because of its elevated timbered volume and ramp entry. A 1955 photograph of the house displays the word 'Orana', a term possibly derived from 'Kia orāna', a common greeting within the Polynesian language used on the island of Rarotonga (Figure 2).<sup>7</sup> Orana is also the name of a region in central western New South Wales. This paper will return to this house in more detail in a later section.



Figure 2: 'Orana', Adamstown Heights, Newcastle, NSW.  
Source: State Library of New South Wales, Home and Away – 28233 (photo: 16/8/1955).

The present study seeks to understand the manner in which Morton developed such a strong devotion to modernism in the area of domestic architecture. In his practice he designed other types of buildings, but residential design was his most visible. The paper considers Morton's contact with the office of Castleden & Sara as an articulated pupil in the late 1930s and the likely influence this had on his architectural formation. It then examines how his work as a student at Sydney Technical College expressed a modernist sensibility in relation to domestic architecture. The paper then turns to his early residential commissions, built and unbuilt, as a practitioner in Newcastle in the early 1950s as post-war building restrictions were lifted.

This study was made possible due to the collection of Morton's drawings held by the Auchmuty Library at the University of Newcastle.<sup>8</sup> These drawings date from 1934 to 1975, with the majority concentrated on his student work and project commissions of the 1950s and early 1960s.<sup>9</sup> The secondary literature cites two interviews that were held with Morton, one by Les Reedman in 1994 and another by Don Morris in 1996.<sup>10</sup> Unfortunately records of these interviews have yet to be found,

8. The author would like to thank the staff of the Special Collections (Archives) department of the Auchmuty Library at the University of Newcastle for their assistance in accessing Morton's architectural drawings.

9. Two drawings, dated June and July 1934, were basic orthographic studies of a box and bracket, done while Morton attended Newcastle Central Junior Technical School.

10. See references in Reedman, *Early Architects of the Hunter Region*, 181, and Donaldson and Morris, *Architecture Newcastle*, 15.

as no doubt they would contain valuable content for a study of Morton's career.

## Articles

11. Donaldson and Morris, *Architecture Newcastle*, 195.

12. See articles and reports on Sara's experience abroad: "Trend Abroad: Impressions of Newcastle Architect, Housing Improvements in Many Centres," *Newcastle Morning Herald*, 25 June 1937, 19; "Modern London: Mr. Sara's Impressions, Address to Business Men's Club," *Newcastle Morning Herald*, 7 October 1937, 5; "London's Stores: Mr Sara's Impressions," *Newcastle Morning Herald*, 25 November 1937, 5.

13. "Modern Residence, Completed at Hamilton," *Newcastle Morning Herald*, 4 February 1939, 20. Another feature that was noted were the "easy-folding" windows around the solarium.

14. See "New Residence, Parkway Street and Jenner Parade, Hamilton South, Newcastle, N.S.W.," *Construction*, 20 March 1940, 16.

15. "Trend Abroad," 19.

16. "Work in Progress," *Newcastle Morning Herald*, 18 November 1939, 22.

17. See "Shops and Flats in Hunter Street," *Newcastle Morning Herald*, 15 March 1941, 12; "Six Flats at Bar Beach," *Newcastle Morning Herald*, 22 March 1941, 2.

18. Reedman, *Early Architects of the Hunter Region*, 188, 252.

Sydney Morton was born in February 1921 in Mayfield, a suburb to the north-west of central Newcastle which, by the early 1920s, was home to a population of factory workers and their families. BHP steel works, Commonwealth Steel Products and John Lysaght & Co.'s manufacturing plant were nearby. Morton attended Broadmeadow Central Junior Technical School, which became Newcastle Central Junior Technical School in 1932. On completion of his schooling he worked for Commonwealth Steel and began to study engineering.<sup>11</sup> Deciding to pursue a career in architecture instead, he entered the office of Castleden & Sara as an articled pupil in the late 1930s. This was a great time for an aspiring architect to be involved with this practice. Sara had returned to Newcastle in June 1937 after eight years working in London and travelling through Europe where he encountered new thinking and was able to see examples of modernist architecture firsthand.<sup>12</sup> The influence of this experience was most visible in the residential commissions the practice undertook in the late 1930s, one of which was a large house for Mr. A. Fairhall on the corner of Parkway Street and Jenner Parade in Hamilton South. Described in the press as "following the modern Continental school of architecture", this flat-roofed, unadorned two-storey house featured a protruding semi-circular front section housing a solarium.<sup>13</sup> Its walls were of exposed biscuit-toned bricks with rows of darker toned bricks for the parapets and copings.<sup>14</sup> The use of warm yellow bricks in contrast with darker tiles was something Sara had admired in modern Dutch architecture.<sup>15</sup>

Castleden & Sara's will to adopt new approaches to the design and construction of residential buildings also encompassed the use of reinforced concrete for house foundations<sup>16</sup> and an enthusiasm for new models of flat design.<sup>17</sup> Talk of the contemporary architecture of London and Europe and being part of an architectural practice with a strong sense of moving with the times would have rubbed off on the young Morton. So too would have Sara's ethic of rigorous detailing and thoroughness of design documentation.<sup>18</sup> This office experience however was only one part of Morton's early architectural formation. His studies at Sydney Technical College were another.

## An Architectural Diploma

Sydney Technical College began offering its architectural diploma course to students living in Newcastle in 1926. At that time the course was five years of part-time study, with its early stages comprising subjects in building construction, construction drawing, architectural history, architectural drawing, freehand drawing, descriptive geometry and modelling. The opportunity to create original design schemes was offered in the later stages of the course. In 1933 an additional year was added, bringing the diploma to six years of part-time study. The early emphasis on building construction was a continuation of the tradition of technical college education which fostered practical knowledge and

19. Sydney Technical College had been established in 1878 as an outgrowth of the Sydney Mechanic's School of Arts. Some of its early graduates included Florence Taylor and William Hardy Wilson, and in the 1920s Emil Sodersten and Sydney Ancher. An integral part of the curriculum and philosophical approach of technical colleges, not just in Sydney but elsewhere, was the maintenance of the office article system as a necessary complement to a student's academic studies. For a historical outline of architectural instruction at Sydney Technical College see P. R. Proudfoot, "The Development of Architectural Education in Sydney, 1880-1930," *Australian Historical Studies*, 21, no. 83 (October 1981): 197-211.

20. Reedman, *Early Architects of the Hunter Region*, 50.

21. Pitt was in partnership with E. H. R. Merewether and enjoyed an influx of work in the area of hotel design and remodelling in the late 1920s and 1930s thanks to Tooth & Company. Jeater had returned to Newcastle from Sydney in 1925 having studied in England after the war and becoming an associate of the Royal Institute of British Architects. In Sydney he supervised the erection of the Manchester Unity Building (1923) by Tate & Young.

22. See "Cooperation in Making 'Wirraway': Attractive Block of Home Units," *Newcastle Sun*, 6 November 1939, 2. Cecil Hay's rendering of the building was a complete modernist vision. See "Imposing Block of Flats for the City," *Newcastle Moring Herald*, 25 February 1939, 20.

23. The construction drawing courses consisted of a string of studies of conventional building sections, components, materials and constructional systems, increasing in complexity of scale and technical depth from stage to stage.

24. See, for instance, the buildings identified by Robin Boyd in "Morningside Peninsula," *Architecture*, 38, no. 4 (October-December 1950): 148-151. For a study of the place of the holiday house in the propagation of architectural modernism in Sydney see Maryam Gusheh and Catherine Lassen, "Informal Modern: Holiday Houses," in *Leisure Space: The Transformation of Sydney 1945-1970*, edited by Paul Hogben and Judith O'Callaghan (Sydney: NewSouth Publishing, 2014), 208-224.

skills as the basis for architectural thinking.<sup>19</sup>

For those who lived in Newcastle, the diploma course at Sydney Technical College was offered through the Newcastle Technical College within its Wood Street branch. As students progressed to more advanced levels they were required to travel to Sydney, by rail or passenger steamer, to attend classes there.<sup>20</sup> In 1927 Alexander Hutton Martin replaced Byera Hadley as Lecturer in Charge of the diploma course. Locally, two prominent Newcastle architects – Nigel B. Pitt and William D. Jeater – were appointed as instructors, with another locally-based teacher, illustrator Reg Russom, running the freehand drawing classes.<sup>21</sup> In the mid-1930s Jeater teamed up with Frank Rodd and later Cecil Hay to lead one of Newcastle's largest practices. Like Castleden & Sara, Jeater, Rodd and Hay were interested in the modernisation of residential architecture, their most ambitious project of the late 1930s being the eight-storey 'Wirraway' block of home units at Ocean Beach in Newcastle. This was the most modern design of such a block that local construction could support, and incorporated advanced lighting, refrigeration and lift technology.<sup>22</sup>

'Wirraway' would have been a significant case study for architectural students in Newcastle at the time, including Morton who joined the diploma course in 1939. His work within architectural history and construction courses displayed an aptitude for precision and fine detail. His construction drawings were extremely neat and thorough compositions demonstrating a sound grasp of material and technical properties.<sup>23</sup> Stage 3 of his studies, in 1941, provided Morton with an opportunity to undertake an architectural design subject. This consisted of a series of esquisse-like exercises and more elaborated design proposals for larger buildings. Here we can see Morton expressing an interest in modern architecture, where the situation permitted. His scheme for a Memorial Hall captured a functionalist aesthetic with its formal articulation of internal spaces, plain wall surfaces, simple fenestration, crisp detailing and use of bright colour.

The most telling example of Morton's interest in architectural modernism at this point however was his scheme for a 'Week-end Cottage at Lakeside' (Figure 3). For this he sharpened the curved corners of a more urban residential aesthetic and conceived the roof as an outdoor living space. His drawing suggests rendered walls rather than the use of exposed brick and the plan opens to a north-westerly aspect. Overall, the scheme was consistent with the way the weekender had become a liberated ground for simplified construction in Australia during the 1930s.<sup>24</sup>

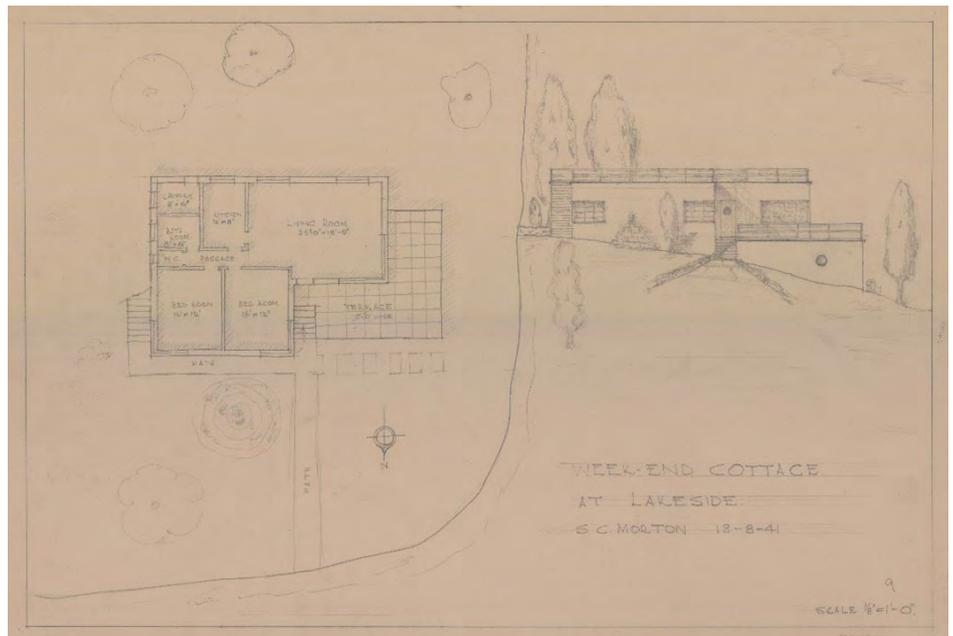


Figure 3: 'Week-end Cottage at Lakeside', Sydney C. Morton, 13 August 1941. Source: Auchmuty Library, University of Newcastle, Special Collections (Archives), Sydney Morton Architectural Drawings, MOR23.

Morton's studies at Sydney Technical College were suspended in late 1941 due to the war. Evidence suggests that Morton worked as an independent draftsman in the following years. He drew up plans for a garden of remembrance at Newcastle crematorium in Beresfield, dated September 1941, December 1942 and February 1943. In June 1945 he was commissioned by D. Colquhoun Esq. for the design of a residence in New Lambton for which he envisaged a pitched roof weatherboard construction.

On returning to his studies in 1945 Morton enrolled in a set of engineering courses, as these must have been the only options at the time. In March 1946 he was able to resume architectural design and building construction subjects, along with subjects in specification writing and town planning. One of his first design problems was the design of a Mountain Cabin. Morton conceived a structure that allowed the small building to extend beyond a retaining wall and project over the ground below (Figure 4). There is representation of material quality in the horizontal wall banding suggestive of timber slats and a concrete block retaining wall. The living room opens to a terrace (labelled an outdoor living area) through three glazed doors on the eastern side and another to the north. In tune with the informality of a mountain retreat, there is a spatial flow between the kitchen and living area.

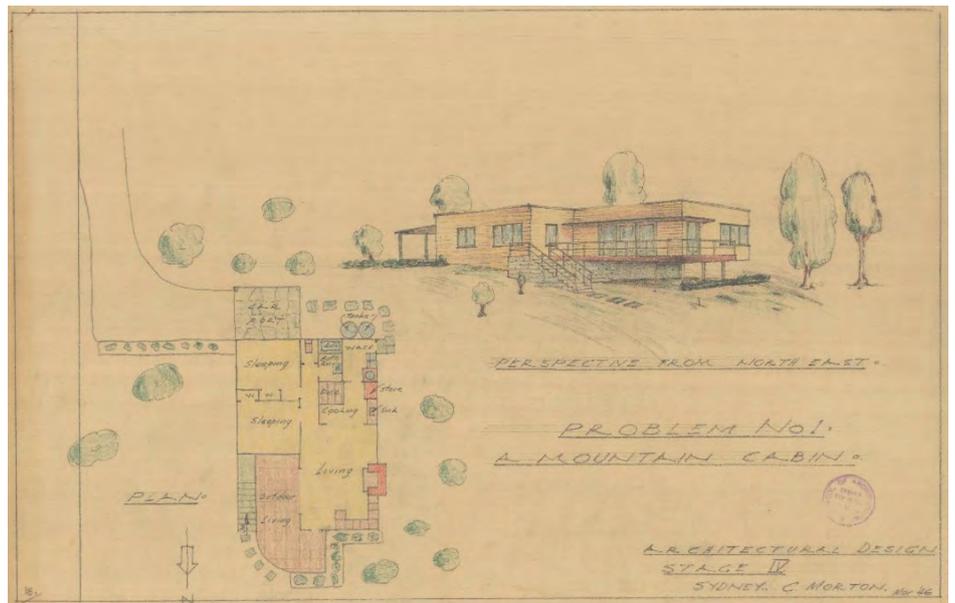


Figure 4: 'Problem No 1. A Mountain Cabin', Architectural Design Stage IV, Sydney C. Morton, March 1946.

Source: Auchmuty Library, University of Newcastle, Special Collections (Archives), Sydney Morton Architectural Drawings, MOR86 001.

Morton produced another scheme for a house in Stage 5 of this studies (Figure 5). This time the design consisted of elements of a more suburban type, located at the edge of a lake. The design shows a strong embrace of the northern orientation with the introduction of a glazed sleepout area lying between a patio and verandah. Despite the severity and exposure of the flat roof, the house is given a warmth through the light brown colour of its (block?) walls and soft yellow toning of the underside of its roof and eaves.

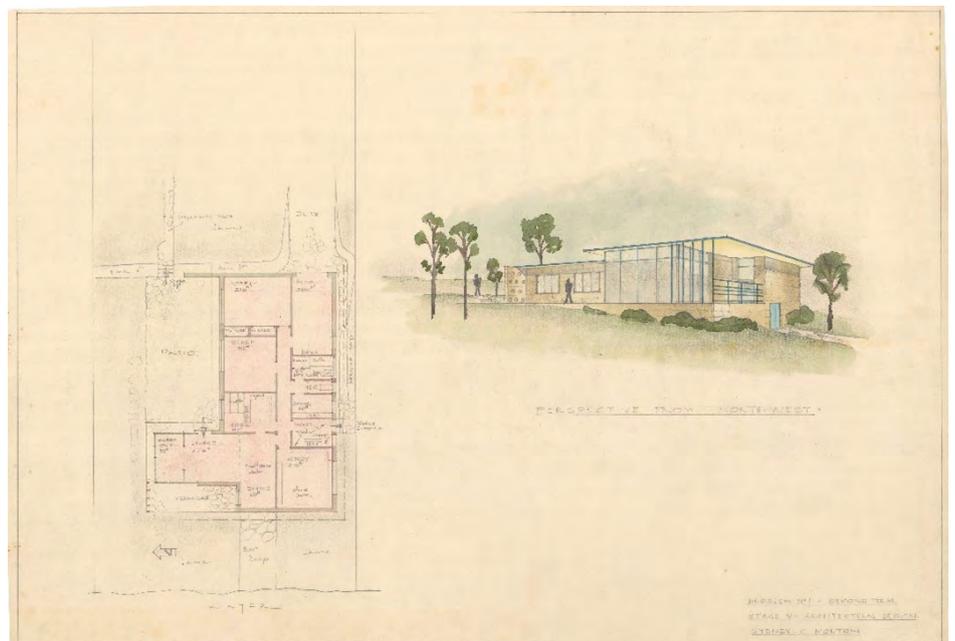


Figure 5: 'Problem No. 1', Second Term, Stage V, Architectural Design, Sydney C. Morton, May 1947.

Source: Auchmuty Library, University of Newcastle, Special Collections (Archives), Sydney Morton Architectural Drawings, MOR76.

The final stages of architectural design within the diploma course were framed as town planning problems where students had to conceive a range of buildings, their locations and relationships to each other. Morton was required to produce a plan for a hypothetical rural community settlement, a housing estate in Sydney and to reconfigure the 'Nine-Ways' junction within the suburb of Broadmeadow in Newcastle. Morton's scheme for the community settlement consisted of a gridded layout of 28 farmlets, each a regular five acres in size, and a front entry hub consisting of a community hall, handicrafts and library block, a shop and bulk store, and a service station. A consistent architectural language dictated the appearance of all the buildings within the estate scheme. The farmhouses follow a template design, altered to orientation. Simple in plan, each consisted of two-bedrooms (with the potential to add a third) and a decent sized living room that would open to a verandah through a window-wall and fully glazed doors (Figure 6). His drawings suggest timber-frame construction.

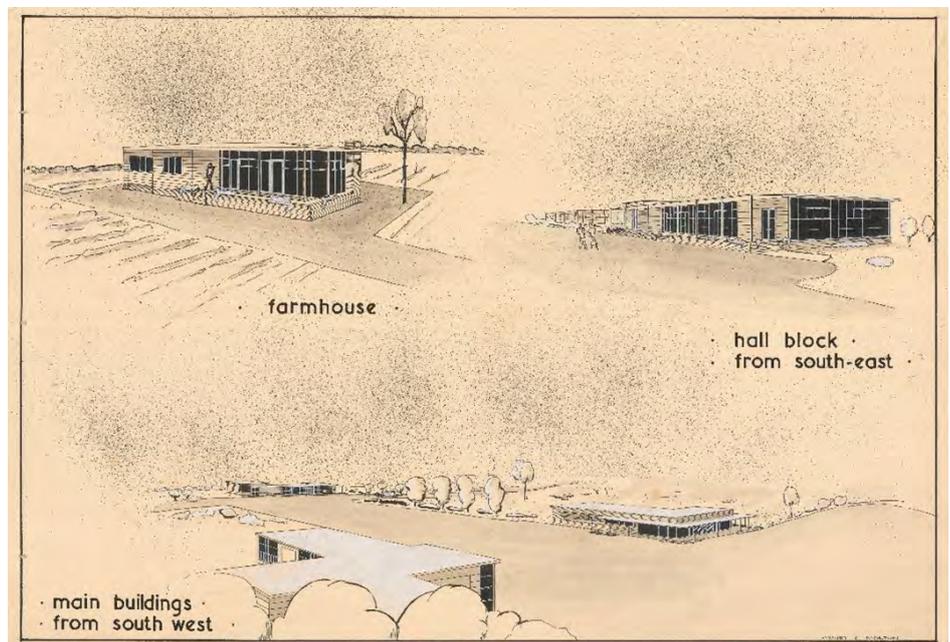


Figure 6: 'Third Term Problem: A Community Settlement', Sydney C. Morton, October 1947.

Source: Auchmuty Library, University of Newcastle, Special Collections (Archives), Sydney Morton Architectural Drawings, MOR67.

Morton's last student project to involve residential design was for a suburban housing estate along Anzac Parade in Sydney. This consisted of a gently curved set of streets and housing lots. A centrally placed shopping centre would provide amenity for the residents as would the treelined walkways and footpaths. The houses themselves would be similar in size, materiality and aesthetic quality (not too dissimilar to the farmhouses within his community settlement scheme). The idea was house construction that was modest, low cost and easily reproducible.

From this survey of Morton's student work we can see the development of an approach to domestic architecture that demonstrated a knowledge of modern planning ideas and construction technology. Planning was dictated by orientation to the northern sun. All the houses had flat or slightly angled roofs. There is a growing interest in light-

25. See "Timber Homes' Competitions," *Journal of the Royal Victorian Institute of Architects*, 36, no. 2 (May-June 1938): 64-71.

26. This exhibition, entitled 'Better Homes Exhibition', was organised by the newly-formed Modern Architectural Research Society of Sydney and the featured design schemes were selected from a competition among the Society's members. See "Modern Homes of Timber," *Australian Women's Weekly*, 15 July 1939, 5; "The Modern Architectural Research Society Display," *Architecture*, 28, no. 9 (September 1939): 195.

27. See Michael Bogle, "Arthur Baldwinson: Regional Modernism in Sydney 1937-1969" (PhD Dissertation, RMIT University, 2008), 169-178.

28. Among these were Walter Bunning's *Homes in the Sun* (Sydney: W. J. Nesbit, 1945) and *The Sun Post-war Homes, Architects' Competition Designs* (Melbourne: The Sun-News Pictorial, n.d.).

29. "Personnel," *Newcastle Morning Herald*, 6 April 1949, 2.

30. "Attractive Brick Home as First Prize in Legacy Art Union," *Newcastle Morning Herald*, 14 February 1946, 6.

frame timber construction which was reflective of an enthusiasm for timber home construction that had emerged within architectural circles in Australia prior to the war. A driving force for this was the Timber Development Association of Victoria's heavily publicised 1938 'Timber Homes' competition which attracted entries from across Australia. Its aim was "to demonstrate the practical and aesthetic possibilities of timber construction in domestic architecture and to encourage research in new methods of timber construction in residential building."<sup>25</sup> An exhibition of drawings and models displaying the possibilities of timber in low-cost home construction was held at the David Jones Department Store Gallery in Sydney in July 1939.<sup>26</sup> As a prominent participant in the competition and contributor to the exhibition, Arthur Baldwinson would have some success in the realisation of timber home construction with the first of his Sydney buildings after arriving there from Melbourne: the Collins House at Palm Beach (1939) and the Kingsford-Smith House at Taylors Point (1940).<sup>27</sup> After war's end, there were several articles and publications that architectural students could consult on future home design in Australia in which they would find illustrations of new types of structure and construction, open plans and the incorporation of large amounts of glazing to connect indoor and outdoor living spaces.<sup>28</sup>

On the completion of his studies in 1948, Morton graduated from the diploma course and was enrolled by the Board of Architects of New South Wales the following year.<sup>29</sup> As far as his overall performance went, Morton achieved Pass grades for design subjects but did better in construction studies. Even though in the eyes of his teachers his design work may not have been worthy of higher grades, it does testify to the progressive and imaginative outlook Morton possessed in relation to the creation of domestic architecture. This leads to the question: how did Morton put his progressive ideas into practice?

## Post-war Commissions

At some point after the war Morton returned to the office of Castleden & Sara. This provided him with an understanding of the way house design could continue to be modernised but within the limits of wartime building restrictions. For example, in early 1946 Castleden & Sara designed a brick veneer and tiled roof home as a prize in the Newcastle and Maitland Citizens' Legacy Art Union. Built in Merewether, this house was noteworthy because of the inclusion of a solarium which had windows that extended almost its entire wall height and a car garage housed under the same roof as the house.<sup>30</sup>

By November 1950 Morton had set up his own practice, working from his home on Maud Street in Waratah. One of his first commissions was the design of a brick extension to a Presbyterian manse in Stewart Avenue, Hamilton. This was followed by the design of a house for Mr. J. Heaney in Bar Beach, the initial scheme of which featured an angled flat roof but which was changed to a tiled pitched timber roof structure. Square in plan, there was little scope to organise the interior spaces around more modern thinking, although in a later scheme for a weatherboard house for Mr A. Orr the living room occupied the centre of a square plan with bedrooms positioned directly alongside, without any passageways separating the two. Financially, Morton's early practice

was buoyed by work he undertook for Peter's Refrigeration Company in Newcastle. This involved extensions to its Darby Street factory including a sketch design for a new office block.

The largest design scheme Morton created in the early 1950s was for a proposed new ambulance station in Waratah. As a proposal, Morton used the opportunity to present a set of bold contemporary ideas for such a building. The scheme contained an abstract blade wall that projected above the entrance and a large double-storey block with a grid of glazed windows on its eastern elevation. There is no evidence to suggest that the proposal was developed and that the building was ever erected. However, it did signal Morton's readiness to strike out and to think in a radical way about the design of buildings for his city.

### 'Orana'

31. Morton's drawings for the house name 'Mrs V. C. James' as the client. Unfortunately, little is known of Vera Christina James at the time of writing this paper. She was born Vera Christina Sutton in Fullerton, New South Wales, in July 1890. She married William Hopkin James in Stockton in 1910 and the couple had five children over the next ten years. Vera lived in 'Orana' until 1972, the year before she died in August 1973.

Morton's opportunity to exercise and display his skills in progressive design and construction came in January 1952 with a commission from Vera Christina James for the design of a house on a site in Adamstown Heights at the corner of Yarrum Street and what was then the Pacific Highway.<sup>31</sup> The lot ran east-west, which meant that the dwelling could be positioned to maximise exposure to the north. This is precisely what Morton did and planned the house to have its three bedrooms run down the northern side and its dining and living spaces enclosed by a large 486 square foot window wall that covered about half of the northern elevation (Figure 7). There would be two entries into the house, one along a path from the Pacific Highway which led into the house via a breakfast room, and the other which branched from the driveway along a ramp and into an entry hall and open (sun) area. The house would consist of two levels, the main level and a lower one housing a garage and laundry, an internal staircase linking the two. Morton's input also extended to the design of bedroom cabinetry and kitchen fittings. His construction drawings show a detailed consideration of the various window casements.

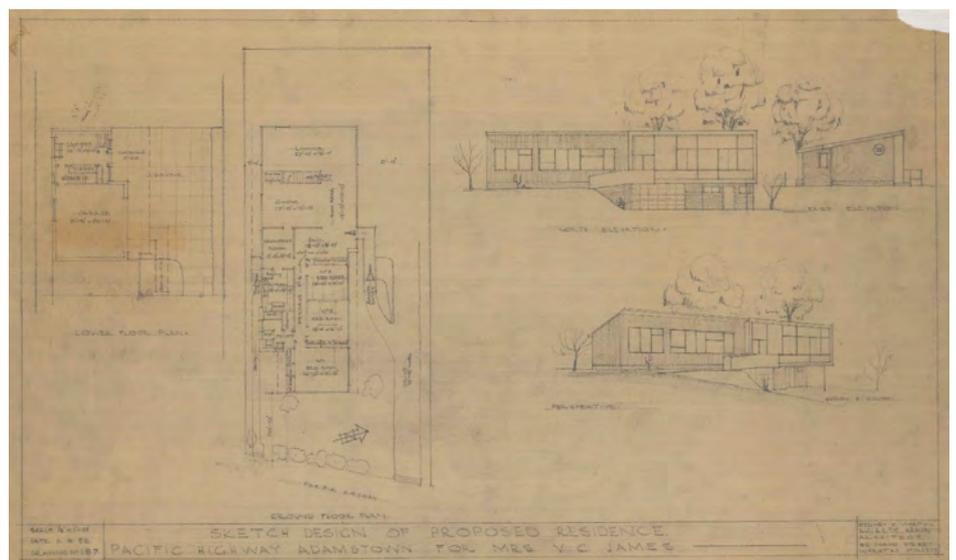


Figure 7: Sketch Design of Proposed Residence, Pacific Highway, Adamstown, for Mrs V. C. James, Sydney C. Morton, 11 March 1952.

Source: Auchmuty Library, University of Newcastle, Special Collections (Archives), Sydney Morton Architectural Drawings, MOR101-001.

32. "Big Windows Feature in New Home," 4.

33. "Opportunities for Business, New South Wales," *Construction*, 22 July 1953, 9.

Construction took place in the first half of 1953. External walls of the upper level were made of vertical pieces of stained red mahogany weatherboard and the angled roof, dipping to the south, was of corrugated asbestos. As mentioned earlier, the house attracted the attention of the *Newcastle Morning Herald* which ran an article that included a photographic image taken from the north-west showing how the house extended over the lower level and the partly suspended ramp (Figure 8). After describing its features, which included weatherboards placed vertically rather than in a more conventional horizontal manner, the article cited Morton as reportedly saying that "the house was designed on Californian lines because the Californian climate was similar to that in Australia."<sup>32</sup> The house's "Californian Style" was also noted by the Sydney weekly *Construction*.<sup>33</sup>

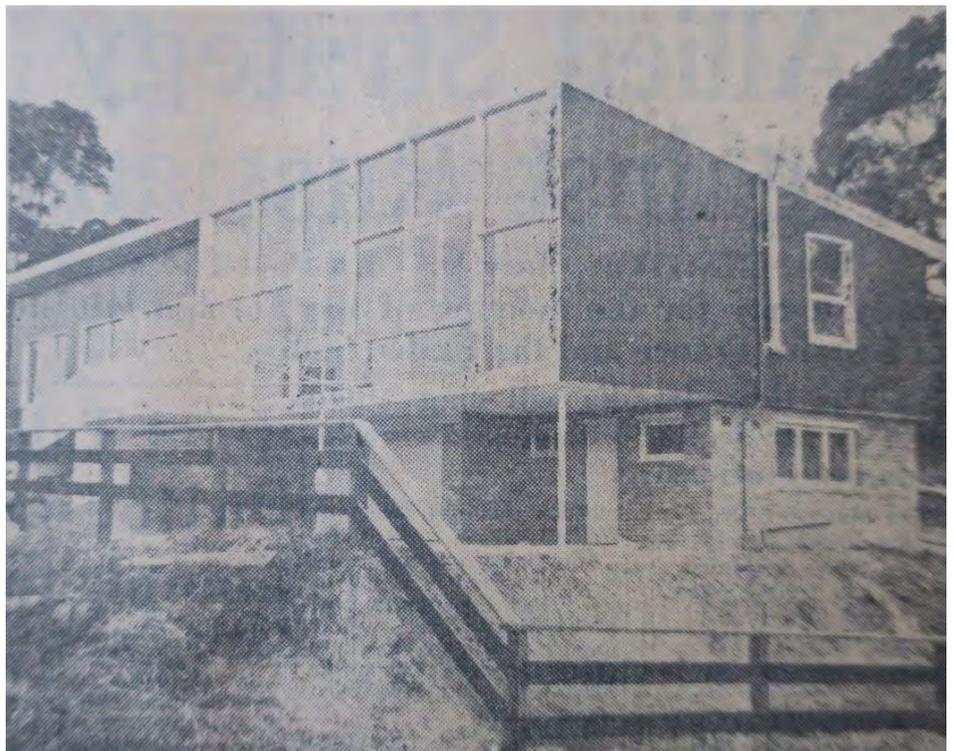


Figure 8: 'Orana' nearing completion in July 1953.  
Source: *Newcastle Morning Herald*, 10 July 1953, 4.

34. Robin Boyd, "The Pacific Home: California & Victoria, Architectural Twins," *The Age*, 9 October 1948, 2.

35. See "America-To-day Architectural Exhibition," *Construction*, 8 December 1948, 5.

Reference to California as a place of interest indicates that Morton may have been following Robin Boyd's earlier argument about the parallels between the recent architecture of Victoria and that of California.<sup>34</sup> Boyd had claimed that "simple rugged form" united buildings in these two places, as did the use of flat roofs and an interest in open plans. In conjunction with this, it is highly likely Morton visited the 'America To-day' exhibition of US West Coast architecture when it was held in Sydney in December 1948. This exhibition displayed the work of Harwell Hamilton Harris, Gardner A. Dailey and Kump & Falk among others.<sup>35</sup> A comparison between 'Orana' and Dailey's Owens House (1939) in Sausalito certainly reveals similarities in materiality, elevation and design for sun exposure. Closer to home, 'Orana' bears obvious comparison to the houses of Harry Seidler which Morton would have known about. Both 'Orana' and the Rose Seidler House, for instance, were timbered volumes that partly sat on steel poles and were suspended over a lower ground level. Both had a side ramp entry and principal elevations made of an irregular pattern of window frames. Seidler's predilections however

were towards Bauhaus-inspired US East Coast modernism rather than California.

## **Conclusion**

'Orana' represented a release of design freedoms that came with the lifting of building restrictions in New South Wales in the early 1950s. Its design and construction may have been inspired by an exposure to Californian regional modernism, but this paper shows that 'Orana' grew out of the formation of a modernist sensibility that is seen in Morton's student work. His time in the office of Castleden & Sara and as a student at Sydney Technical College were the seeding ground for ideas and principles that would inform his later built work, starting with 'Orana'. This is the necessary context to begin a following study of Morton's practice and his other house designs in the 1950s and beyond. As indicated in the introduction to this paper, what becomes a more dramatic element to these is the challenge he embraced in designing for steep sites and the structural and constructional bravado this entailed.

# ULTRA

## **Positions and Polarities Beyond Crisis**

### **SESSION 1: *Construction History***

# Seeds of Concrete Progress: Grain Elevators and Technology Transfer between America and Australia

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## Keywords

Grain Elevators  
Concrete  
Slip forming  
Technology Transfer  
Australia  
North America

## Abstract

Modern concrete silos and grain elevators are a persistent source of interest and fascination for architects, industrial archaeologists, painters, photographers, and artists. The legacy of the Australian examples of the early 1900s is appreciated primarily by a popular culture that allocates value to these structures on aesthetic grounds. Several aspects of construction history associated with this early modern form of civil engineering have been less explored.

In the 1920s and 1930s, concrete grain elevator stations blossomed along the railway networks of the Australian Wheat Belts, marking with their vertical presence the landscapes of many rural towns in New South Wales, Queensland, Victoria, and Western Australia. The Australian reception of this industrial building type of American origin reflects the modern nation-building aspirations of State Governments of the early 1900s. The development of fast-tracked, self-climbing methods for constructing concrete silos, a technology also imported from America, illustrates the critical role of concrete in that effort of nation-building.

The rural and urban proliferation of concrete silos in Australia also helped establish a confident local concrete industry that began thriving with automatic systems of movable formwork, mastering and ultimately transferring these construction methods to multi-storey buildings after WWII.

Although there is an evident link between grain elevators and the historiographical propaganda of heroic modernism, that nexus should not induce to interpret old concrete silos as a vestige of modern aesthetics. As catalysts of technical and economic development in Australia, Australian wheat silos also bear important significance due to the international technology transfer and local repercussions of their fast-tracked concrete construction methods.

## Introduction

1. Reyner Banham, *A Concrete Atlantis: U.S. Industrial Building and European Modern Architecture, 1900-1925* (Cambridge, Mass: MIT Press, 1986).

2. Banham, 16.

During the twentieth century, wheat silos were an instrument of modern aesthetic propaganda and a recurrent source of architectural interest and debate. Notoriously, the bare and utilitarian appearance of concrete silos in North America inspired the European pioneers of the Modern Movement, like Gropius, Le Corbusier and Mendelsohn, who wished to adopt the iconography of industrial buildings into their purist architectural experiments. In the influential book *Concrete Atlantis*, Reyner Banham has elucidated well the essence of this inter-continental exchange between industrial engineering and modern aesthetics.<sup>1</sup> The Modern Movement used images of American factories and silos instrumentally, selectively, rather than for their functional substance tout court. Industrial concrete buildings from the other side of the Atlantic appealed especially to European avant-garde architects because they contrasted with the lingering Beaux Art culture of the 1920s. The American batteries of cylindric silos generated powerful images, suggesting a possible symbiosis between timeless sculptural formalism and modern concrete technology. Not seldom, as Banham noted, the industrial imagery chosen for the propaganda was borrowed from other publications, manipulated or photo-edited to align with the aesthetic agenda of the modern masters.<sup>2</sup>

Occasionally, the iconography was provided first-hand with fieldwork trips. Such was the case of Erich Mendelsohn, who, after visiting Buffalo in New York, reported enthusiastically with a notorious letter to his wife about the fulfilment of his American dreams:

Mountainous silos, incredibly space-conscious, but creating space. A random confusion amidst the chaos of loading and unloading of corn ships, of railways and bridges, crane monsters with live gestures, hordes of silo cells in concrete, stone and glazed brick. [...] I took photographs like mad. Everything else so far now seemed to have been shaped interim to my silo dreams. Everything else was merely a beginning.<sup>3</sup>

3. Erich Mendelsohn, *Letters of an Architect*, edited by Oskar Beyer (London - New York: Abelard-Schuman, 1967), 69.

4. Owen Hatherley, "Silo Dreams: Metamorphoses of the Grain Elevator," *Journal of Architecture* 20, no. 3 (4 May 2015): 474–88.

5. Athanasios Tsakonas, "Victoria's Silo Art Trail," *Fabrications* 29, no. 2 (2019): 273–76.

6. Lisa Mahar-Keplinger, *Grain Elevators* (New York: Princeton Architectural Press, 1993).

7. Thomas Leslie, "Chicago's Other Skyscrapers: Grain Elevators and the City, 1838-1957," *Journal of Urban History* 48, no. 1 (2020): 3-34.

Acknowledging this lineage with the heroic narratives of modernism is *de rigour*, since contemporary academic interest for grain elevators continues to depend on the influential precedent of *Concrete Atlantis*. The architectural fascination for grain elevators lingers on, inspiring, above all aesthetic readings. Echoing Mendelsohn's words, recent research has emphasised grain elevators as an oneiric aesthetic anomaly evoking oppressive political power in totalitarian regimes.<sup>4</sup> In Australia, there is vivid interest in Australian silos about their artistic potential through the 'reactivating' intervention of graffiti art.<sup>5</sup> Following the graffiti-intervention line of thought, modern concrete silos seem to have become an empty canvas calling for visual rectification - to be performed, conceivably, as a foil to their context-indifferent conception. It has been shown, however, that the architectural analysis of modern grain elevators can foster other avenues of cultural and archaeological interpretation. For example, by investigating their typological variations in industrial, urban or rural settings,<sup>6</sup> or their thriving socio-economic function in the fabric of a city at large.<sup>7</sup>

This paper intends to explore this industrial type of building from a

different standpoint, a technological perspective that relates the economic purpose of silos – i.e. the mechanical storage and handling of large quantities of granular or liquid produce – with the engineering and construction challenges posed by tall and hollow concrete structures.

Modern concrete grain elevators hold a prominent place in construction history because they were catalysts of substantial progress in concrete building and engineering. Their influence resulted from transnational economic endeavours generated by two modern technological themes: the bulk handling of food production and the mechanisation of concrete construction.

## American Genesis

8. Mahar-Keplinger, *Grain Elevators*, 18-35.

9. Banham, *A Concrete Atlantis*, 140-141; Ruth J. Hefelfinger, "Experiment with Concrete: a Pioneer Venture in Grain Storage," *Minnesota History* (March 1960): 16-18.

All silos must be designed to resist significant inward and outward pressures, including those for emptying their content, during which the sudden creation of voids may cause implosion. Wheat silos pose an additional problem for the potential of self-ignited explosions, which high concentrations of grain dust can trigger. The earliest American silos for bulk handling were built primarily in wood, steel, bricks or tiles.<sup>8</sup> Although wood and steel silos were relatively quick to assemble, their ease of construction did not resolve but only shifted risks of loss of product – and life – for dust explosions. By the turn of the twentieth century, once sufficient confidence was gained with reinforced concrete construction, it became clear that concrete was the ideal choice for storing wheat for strength and fire-resistance properties. In 1899, Frank Peavey and Charles Haglin - a grain company owner and a building contractor from Minneapolis - erected a twenty-one-metre-tall experimental grain elevator that is credited to be the first tubular concrete silo erected in the world.<sup>9</sup>

The most practical construction techniques of concrete silos, however, did not develop suddenly with one experiment. The first attempts to build concrete silos presented substantial issues with the erection of scaffolds, lifting large shutters, and pouring fresh concrete inside hollow structures of considerable height. Many US patents from the early 1900s suggest how these construction challenges were far from being resolved at the time of the Peavey-Haglin experiment, revealing a widespread concern to conceive formwork systems suitable for the efficient erection of concrete bins.

10. Walter C. Polk, "Apparatus for Building Concrete and Other Like Structures," U.S. Patent no. 908,326, September 18, 1907.

The earliest methods of concrete silo construction used traditional static formwork systems with overlapping steel shutters raised by a crane. Several American concrete engineers and builders devoted their attention to improving these costly formwork methods filing patents explicitly concerned with the construction methodology of silos. For example, one system from Indiana in 1907 proposed shutters and platforms connected with ties to the top of a mast placed at the centre of the silo.<sup>10</sup> In 1910, an invention for a lifting device of shutters from Kansas showed the use of lost steel rods to be placed inside the formwork with the scope of assisting the lifting up of formwork shutters; once the concrete inside walls had set, the rods became part of the wall, thus allowing the connection of another set of rods supported by the wall just completed below. The system was self-climbing in a structural

11. James H. Spencer and John Simpson, "Lifting Device," U.S. Patent no. 980,020, December 27, 1910.

sense, albeit still reliant on the lifting of shutters from a central mast acting as a derrick.<sup>11</sup>

Step by step, several inventors, primarily based in the Midwestern US, worked towards a point of cumulative synthesis that is marked by the invention of the movable formwork system known as slip forming. Slip forming is a self-climbing concrete formwork that slides vertically, extruding concrete slowly and continuously without necessitating the use of derricks or cranes. As the pouring proceeds upwards, the hardened wall previously constructed below supports the moving formwork above. With slip forming, monolithic structures, in the form of circular or boxed sections, can be cast in a relatively short time with one single apparatus, using a continuous cast-in-situ process that eliminates – or at least reduces - cold joints between different sections of the wall.

12. Allen D. Whipple, "Means for Constructing Concrete Walls," U.S. Patent no. 1,075,454, October 14, 1913.

13. Milo S. Ketchum, *The Design of Walls, Bins and Grain Elevators* (New York: McGraw Hill, 1919), 389-391.

One of the earliest inventions that illustrates slip forming is from Allen D. Whipple from Milwaukee, Wisconsin. Whipple's patent, filed in 1911, shows guiding timber yokes used for 'rising' concrete formwork through a hand-operated screw-jack mechanism that allowed the 'endless or continuous' casting of walls in silos.<sup>12</sup> The system is consistent with similar methods of climbing formwork for silo construction, possibly antecedent and depicted in an American civil engineering handbook of the 1910s: the US MacDonald system, and the Canadian Stewart Company system.<sup>13</sup> Although different for methods of hand-operated jacking, these two systems were very similar in principle, and they reflect the characteristics associated with the mature formwork apparatus known as slip-forming illustrated by Whipple's patent (Figures 1 and 2).

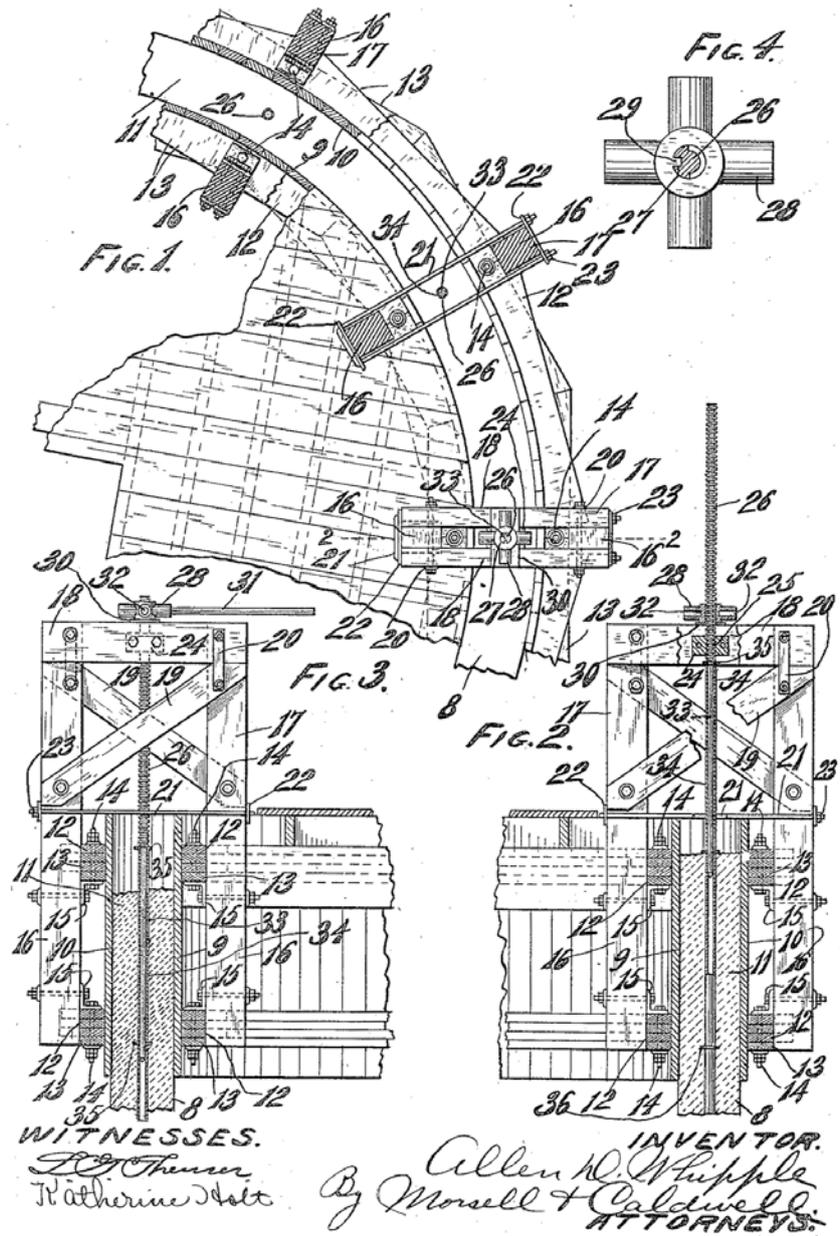


Figure 1: Patent drawings of early slip-forming system for concrete silo construction, 1913. Reproduced from: A.D. Whipple, U.S. Patent no. 1,075,454.

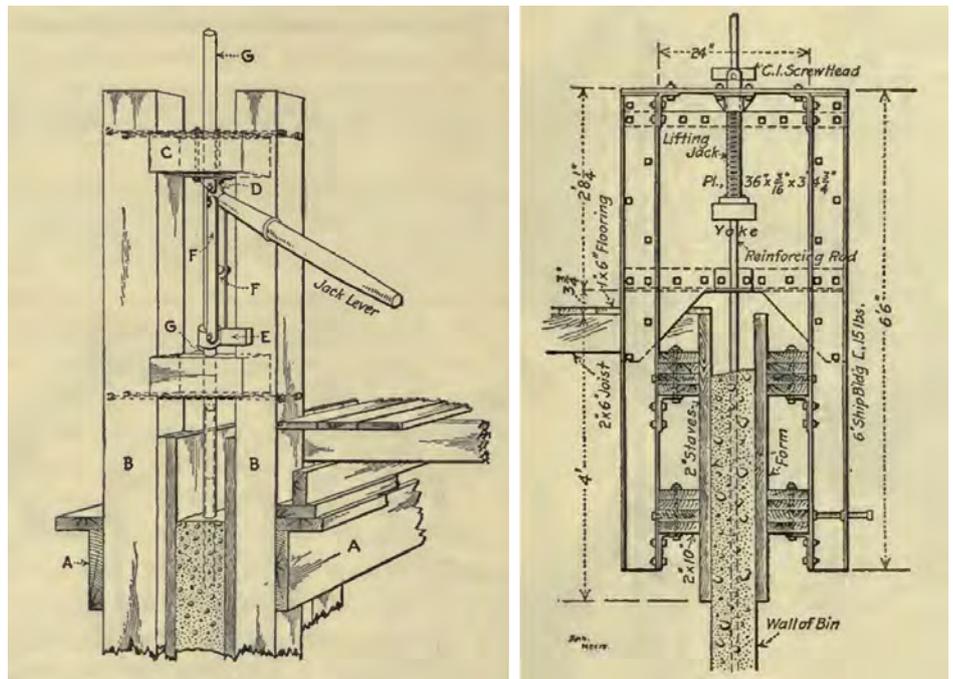


Figure 2: Hand-operated slip forming systems used in the North American grain elevators: MacDonal Engineering system (left) and Canadian Stewart System (right), (1907-19). Reproduced from Milo S. Ketchum, *The Design of Walls, Bins and Grain Elevators*, New York, 1919.

### Wheat Bulk Handling in Australia

While these inventions marked the genesis of slip-forming in America, the bulk handling system of grain was still a matter of debate in Australia. A temporal lag suggests that Australia followed, rather than anticipated technical developments from overseas, but the evolution of Australian silo construction methods presents nonetheless some meaningful local implications.

The business of bulk handling wheat in large silos was first adopted in Australia in the late 1910s, following practice established in the US, Canada and Argentina since the late 1800s. Bulk handling gave significant growth opportunities for farmers who were able to connect from country towns to city terminals through railways or waterways, prospering from the export of their product to international markets. Wheat farming with bulk handling used elevator technologies inside silos with mechanical systems of hoppers and conveyor belts for feeding into and discharging from stations scattered around the countryside and connected by nationwide networks of supply and distribution.

The American experience with these methods of industrial farming showed how the mechanical handling of grain in large quantities, as opposed to the traditional handling and storing in jute bags, gave significant economic advantages for producers, due to savings in labour, better sorting according to price and quality, protection from vermin and deterioration, and long-term storage in times of oversupply.

In the early 1900s, Government-sponsored initiatives were set in Australia with the scope to investigate the benefits of bulk handling, sending experts to visit and report from Argentina, Canada and the

14. State Library of Victoria, Department of Agriculture (Victoria), *Report of Conference on The Elevator System in the Handling and Shipping of Grain*, 5 June 1901.

15. 'The Grain Elevator System,' *The Pastoralists' Review* 18, no. 1 (16 March 1908): 36.

16. Farley, Edwina. "Analysis: Who Owns Australia's Grain?" ABC Rural, 1 May 2013, <https://www.abc.net.au/news/rural/2013-05-01/grain-industry-amalgamation/4661664> (accessed 28 June 2021).

17. A.A. Lee, "The Wheat Belt of Australia," in *The National Handbook of Australia's Industries*, edited by Ambrose Pratt (Melbourne: Specialty Press, 1934), 30-31.

US. The idea to transition to bulk handling, however, was received with hesitance by many Australian wheat farmers, stirring political debate and causing delays in decision-making.<sup>14</sup> The main obstacle against adoption concerned the significant capital required to construct the infrastructure, which entailed the establishment of silo stations and upgrading existing country roads and railway networks. Reports from overseas indicated how the economies of scale of Canada and the US had allowed the successful implementation of bulk handling, dwarfing by comparison the capacity of Australian wheat production. A most discouraging observation derived from the state of ownership of the American infrastructure, which was built and managed, including the railways, mainly through private ownership.<sup>15</sup>

Challenged by overseas competitors and missing out opportunities for international growth, the Australian wheat industry could only overcome this infrastructure lag through sizeable public investment and political involvement. Starting in 1916 in New South Wales, State Governments began establishing Grain Elevator Boards, the public agencies responsible for introducing and overseeing all the activities connected with the supply and storage of wheat production. The Boards were responsible for managing, stowing, and distributing grain from rural areas to shipping terminals. In 1920, the State Wheat Board of Queensland was also established, followed by the Grain Elevators Board of Victoria in 1937 and similar initiatives in 1939 in Western Australia and South Australia.<sup>16</sup> By the late 1920s and through the 1930s, the Australian wheat industry had grown to represent seventy per cent of the total area cropped in the country<sup>17</sup> (Figure 3).

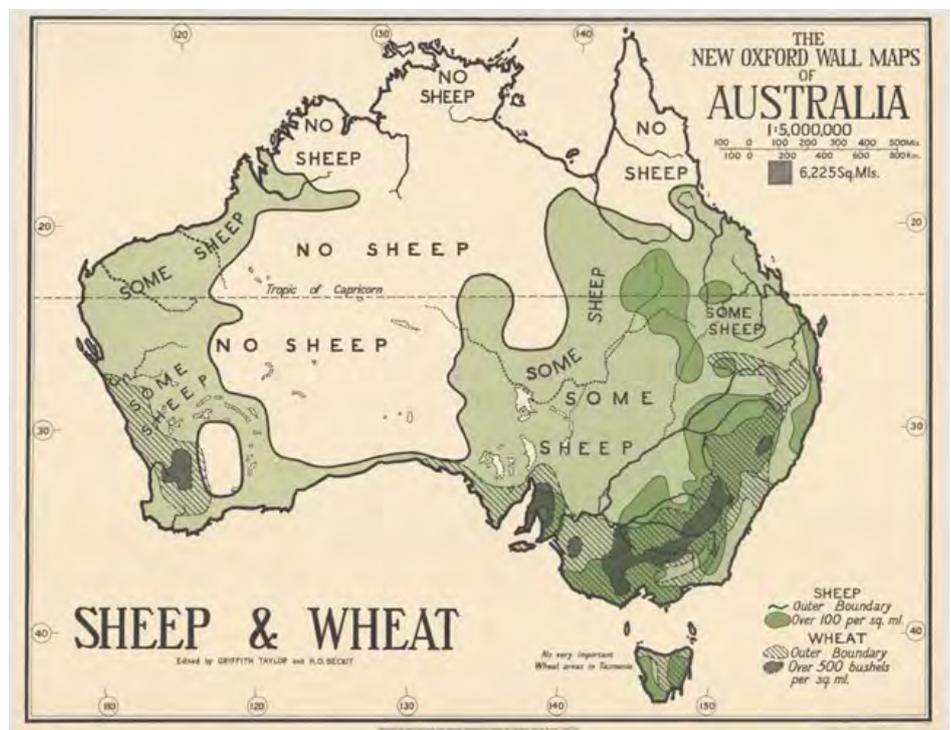


Figure 3: The Australian Wheat Belts. Reproduced from the *New Oxford Maps of Australia* (National Library of Australia, 1920s)

The construction of the infrastructure of grain elevators and rail networks that supported this growth was a considerable part of Australia's nation-building efforts in the inter-war period. The ambitious public building program that ensued faced extraordinary challenges,

requiring fast but also relatively straightforward construction methods. These conditions offered a fertile terrain for introducing new building technologies, among which concrete emerged as the material solution to the problem.

18. Hal Pratt, "NSW Silos Photographs," <https://nswsilos.com.au/history/> (accessed 29 December 2018).

19. Miles Lewis, "Forms & Systems," in *Australian Building: a Cultural Investigation*, 7.08, <http://www.mileslewis.net/australian-building/> (accessed 29 December 2018).

20. "Newcastle (N.S.W) Terminal Grain Elevator 850,000 Bushel Capacity," *Building* 55, no. 329 (January 1935): 57–61.

21. Lee, "The Wheat Belt of Australia," 31.

22. "Geelong Grain Elevator: Large Contract Let," *The Argus*, April 13, 1937, 13.

23. State Library of Victoria, Grain Elevators Board Victoria, Parliamentary Public Works Committee (Victoria), *Progress Report from the Parliamentary Public Works Committee*, 1950.

One of the very first examples of silos built in concrete for the program was in the small rural centre of Peak Hill, NSW, in 1918.<sup>18</sup> Although not the first example of concrete silos built in Australia,<sup>19</sup> Peak Hill signals the beginning of an intense phase of modern concrete construction. Growing from the public building program managed by the Grain Elevator Boards, rural concrete silos flourished thereon, especially during the 1930s along railway lines connecting inland country towns in the Eastern Wheat Belt, the crescent-shaped region stretched from the northern border of New South Wales to the eastern regions of South Australia. Urban silos completed the network with large terminal installations for shipping in city harbours, like the NSW silo terminals at Newcastle<sup>20</sup> and White Bay, Sydney,<sup>21</sup> or the Geelong terminal in Victoria, a facility with twenty-eight, 200-foot-high circular storage bins built in 1937.<sup>22</sup> Just before the material shortages of WWII intervened to slow down this nation-building program,<sup>23</sup> the economic weight of the Australian wheat industry had materialised itself with these prominent structures in cities and the countryside, leaving a permanent sign of modernity, with structures not dissimilar to the more notorious American examples that were publicised in Europe by the pioneers of modern architecture.

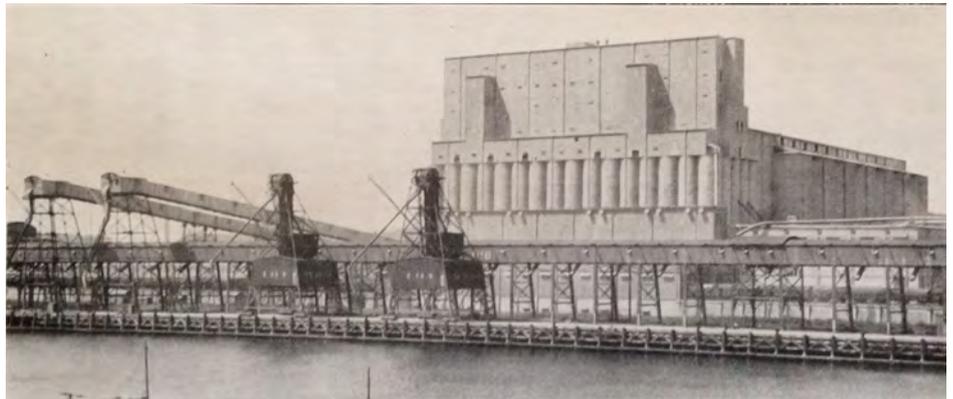


Figure 4: White's Bay Grain Elevator Terminal, Sydney, c.1930 Reproduced from: Lee, *The National Handbook of Australia's Industries*, 1934.

### The Adoption of Slip Forming in Australia

Australian State Governments, through the creation of the Grain Elevator Boards, established the infrastructure necessary for bulk handling with hundreds of rural and urban silo stations on the Wheat Belt. The material of choice for this public nation-building effort was slip-formed concrete construction, which was quickly learnt from America and adopted in Australia around 1920.

The technology transfer link with America is corroborated by the work of divulgation of an Australian civil and structural engineer, Leslie Boyd Mercer. After graduating with a thesis on the bulk handling of wheat at the University of Melbourne, Boyd Mercer travelled overseas in the late 1920s to study the implementation and construction of grain elevator

24. Leslie Boyd Mercer, *Bulk Handling of Wheat and the First Principles of Elevator Design - A Lecture Delivered at the Melbourne University* (Melbourne: Melbourne University Press - Oxford University Press, 1934), 3.

25. Leslie Boyd Mercer, "Sliding Formwork: Its Use in Silo Construction," *Building* 52, no. 310 (June 1933): 86–90.

26. Alfred Arthur Horan and Thomas Henry Crossan, "Apparatus for use in the construction of cylindrical silos and like structures," Department of Patents, Commonwealth of Australia 14,313/33, September 7, 1934.

27. Lewis, "Forms and Systems," 4-5.

28. "Silo Construction in Queensland: Sliding Formwork Used," *Building* 53, no. 314 (October 1933): 90–91.

29. "Silo Construction in Queensland", 90.

30. "Silo Construction in Queensland", 91.

networks, above all in North America and Argentina. Upon returning to Australia in the early 1930s, Boyd Mercer became a leading expert in bulk handling and slip form technology.<sup>24</sup> Following his promotional effort,<sup>25</sup> slip forming became principal technique used for the construction of Australian silos through the 1930s.

A patent filed in 1933 by Alfred Horan and Thomas Crossan, two engineers from Parramatta, NSW, illustrates the state-of-the-art of silo construction in Australia before WWII. The patent shows a well-developed slip form apparatus with two sets of adjustable steel rings used for supporting an annular array of shutters, and yokes lifted by a hand-operated screw-jack system.<sup>26</sup> Horan and Crossan were not mere inventors, but engineers commissioned to design several grain elevators in NSW, and their apparatus has substantial analogies with earlier slip form patents of the screw-jack type filed in the US two decades earlier. (Figure 5)

It is reported, however, that slip-formed concrete silo works took place in Australia at least since the 1920s, as evidenced by the maize grain elevators at Atherton in Far North Queensland.<sup>27</sup> The Atherton complex was built in two stages: the first group of three bins was completed in 1924, followed by a six bins addition in 1933.<sup>28</sup>

The Atherton maize silos demonstrate how concrete slip forming was instrumental for constructing grain elevators in remote Australian areas. Coverage by the journal *Building* for the second stage of works describes the Atherton silos as 'the largest in Queensland' with a maximum storage capacity of 4,500 tons of maize.<sup>29</sup> The builder, W.M. Doyle, completed the entire project in approximately five months, with the great majority of time being absorbed by groundworks. The erection of the six seventy-foot-high concrete silos was an expedited process that Doyle completed in a week, with each bin progressing vertically through slip forming with a pace of ten feet per day. As described by *Building*, the slip forming apparatus was 'typically American', yet reliant on the specific technical recommendations diffused in Australia by Boyd Mercer.<sup>30</sup>

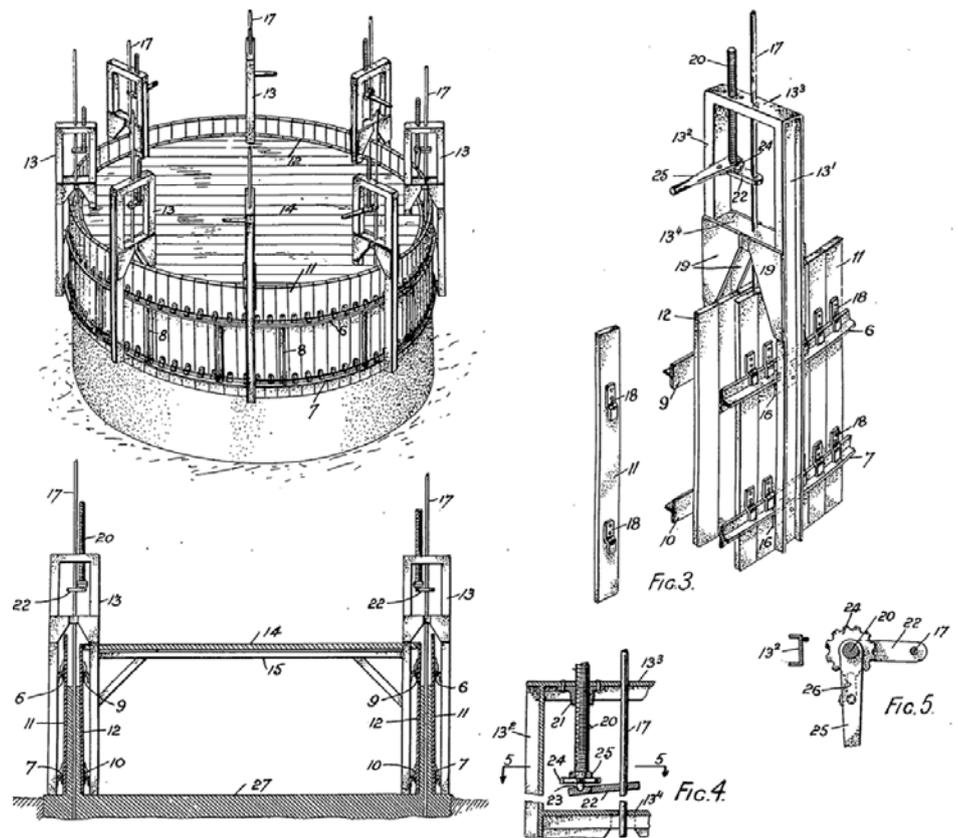


Figure 5: Australian designed slip-formed system for grain elevators, 1933. Reproduced from A.A. Horan and T.H. Crossan, Australian Patent no. 14,313.

Ninety construction workers erected the silos working around the clock in three shifts of thirty men. In each shift, three gangs worked simultaneously from moving timber platforms situated inside the bins and suspended from the yokes of the slip forms. The first gang was responsible for jacking up the sliding forms with hand-turned screw-jack levers, operating in a synchronised effort that moved the entire apparatus upwards by a quarter of an inch with each full turn of the jacking screws.

31. "Silo Construction in Queensland", 91.

A second gang was responsible for placing steel reinforcement and jacking rods between the shutters and a third for the handling and pouring of concrete inside the moving forms. Another group of concreters followed, working on an external platform suspended from the external legs of the yokes, rendering and removing imperfections from the freshly formed surface with a cement wash. The bulky ingredients necessary to prepare the mix on-site, cement and aggregates, were transported to the remote location by rail, using the same infrastructure in place for the bulk handling of maize, the local agricultural produce. Concrete was fed to a site mixer and elevated by a hoist tower for pouring at the top of the working platforms.<sup>31</sup> (Figure 6)

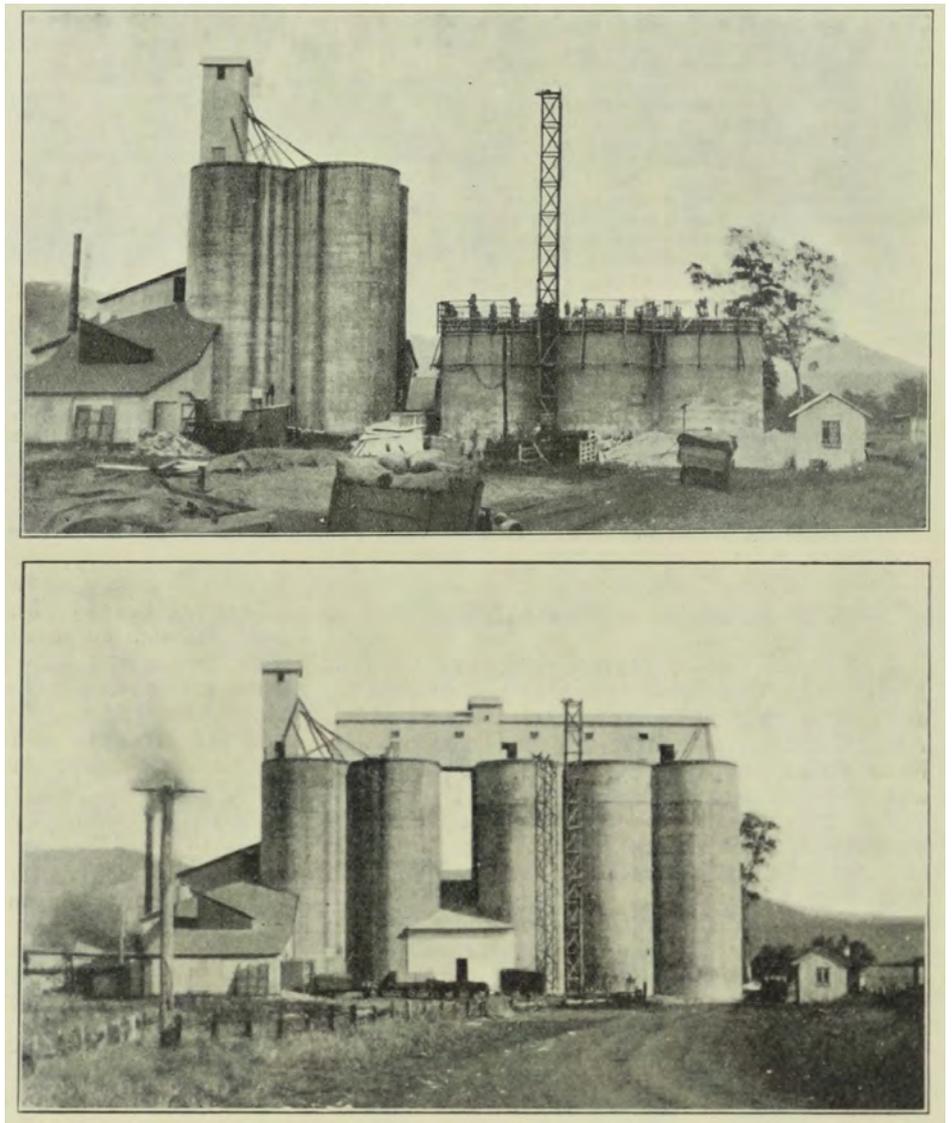


Figure 6: Slip-formed silos under construction, Atherton, Queensland, 1933. Reproduced from: *Building*, 12 October 1933, 90-91.



Figure 7: Slip-formed grain elevators, Victoria, Australia, locations unknown. Reproduced from: Public Record Office Victoria, VPRS 12800 / P0007 / C00915-17 / Photographs by State Transport Authority.

Detailed descriptions like the one of the Atherton silos or photographic records of the construction of rural grain elevators in Australia before WWII are not easy to find, but some Victorian photographs available suggest that slip forming was the national standard method of construction used for rural silos in the 1930s. (Figure 7)

Slip forming was not relegated to the relatively simple shapes of rural stations. Australian knowledge and expertise with this technology also allowed the erection of large batteries of bins

32. Lewis, "Forms and Systems," 4.

33. "Australia's Tallest Silos," *Building* 67, no. 402 (February 1941): 42–44.

in harbour terminals or flour milling complexes in urban settings. Such was the case of Brunton's milling silos erected on the outskirts of Melbourne in 1941 and designed by Henry Simon, an engineer also involved in the design of silos in Queensland.<sup>32</sup> Lewis Construction, the building contractor, completed the whole complex in six months of works, slip forming in four weeks an array of fifteen 140-foot-tall silos claimed to be the tallest and one of the 'quickest' concrete construction achievements in Australia.<sup>33</sup>

## Post-war Tech Transfer

34. K. Kocass, "Off-Form Concrete Related to Fremantle Bulk Grain Terminal Building," *Constructional Review* 38, no. 3 (March 1965): 25–29.

After WWII, the Australian concrete industry entered a new stage of technological change prompted by the advent of motorised construction methods. Progress occurred in several sub-sectors of the industry, with sophisticated methods of vertical construction reflecting trends from the US and Scandinavia, which phased out the hand-operated screw-jack systems of the 1930s with motorised hydraulic jacking systems.

Slip-forming continued as the standard building method for Australian grain elevators well beyond World War II, replacing hand-screw jacking with hydraulic motors. An example of the enduring success of the technology is the impressive Fremantle Bulk Grain Terminal in Western Australia, a facility with 48 circular cells, 36 feet in diameter and 100 feet high that was completed in 1964.<sup>34</sup>

35. "Sliding Formwork: Multistory Concrete Walls Rise 20' a Day Between Continuously Moving Forms," *Architectural Forum* 97, no. 5 (November 1952): 150–52.

36. "Slip Form Construction Speeds Erection of Apartment Hotel," *Architectural Record* 118, no. 4 (October 1955): 248.

Confidence in concrete technology for speedy structural construction advanced further once moving formwork systems transferred from industrial applications to high-rise buildings. From the early 1950s, in Europe and America, the technology of slip-forming began to be used for multi-storey apartments in Stockholm and Copenhagen,<sup>35</sup> radio and television towers and in a ten storey-high hotel in the USA.<sup>36</sup>

In line with these examples from overseas, the technology transfer also took place in Australia, where builders concerned with the challenges of tall concrete structures realised the potential of motorised slip-forming, testing it for the construction of some post-war multi-storey buildings.

37. "'Slipform' Formwork Sets New Pace in Building Erection Times," *Constructional Review* 34, no. 12, (December 1961): 16–18.

One early, possibly the first, slip-formed habitable structure in Australia was in Sydney, at Tatlow Court in Neutral Bay, for a small apartment block designed by Donald Woods Sloane and Gallagher in 1961. The builders, Kell and Rigby, extruded the entire eight-storey-high load-bearing walls with hydraulic jacks and slip-form equipment provided by a specialist contractor named, tellingly, Concrete Silos. The small apartment block was completed in eight days, at the remarkable rate of one storey per day<sup>37</sup> (Figure 8).

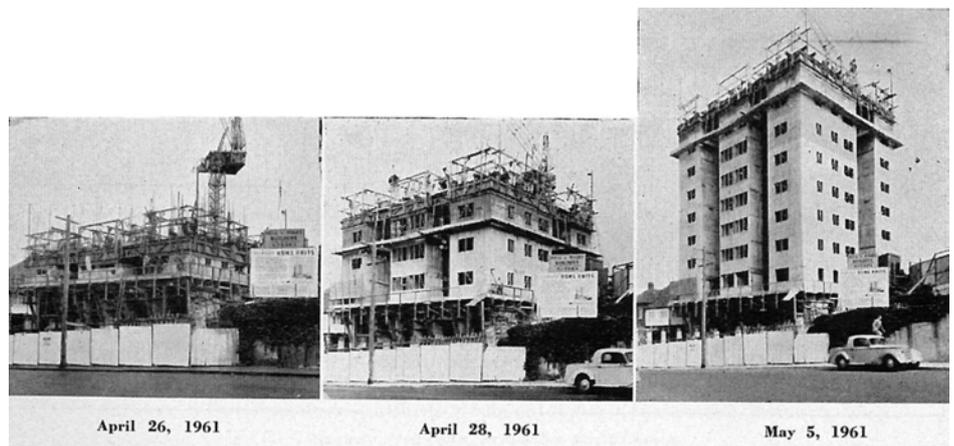


Figure 8: Tatlow Court Apartments, Neutral Bay, Sydney, 1961 (Donald, Woods, Sloane and Gallagher Architects). Photo-sequence of the slip-formed construction used by builder Kell & Rigby and sub-contractor Concrete Silos Pty Ltd. Reproduced from: *Constructional Review*, December 1961, 16.

38. A. Whitting and D. Pearson, "Innovation in Slip Form Construction," *Constructional Review* 35, no. 12 (December 1962): 14-16.

One year later, Sydney-based structural engineers Taylor Thomson and Whitting and builders Finform applied a similar technique at the Dorian Towers in Double Bay, in another apartment block designed by architects Forsyth Evans and Associates.<sup>38</sup>

39. W. M. Newman, "The Use of Moving Forms in the Construction of Concrete Service Towers for Multi-Storey Buildings," *Constructional Review* 35, no. 6 (June 1962): 22-27.

In the same period, W.M. Newman, a structural engineer from England, was responsible for introducing slip forming in office buildings for the construction of concrete service cores at the Bushell Instant Coffee Factory at Concord (Brewster Murray architects, 1960-61) and Transfield House, in North Sydney (Sabemo architects and builders, 1960-61). The transfer of slip-forming from industrial to commercial construction owed much to the expertise of Concrete Silos, the sub-contractor involved in all these examples. Concrete Silos was the licensee of Scandinavian hydraulic jacking systems, commercialised in Australia under 'Prometeo' and 'Sentab', and the patent holder of a climbing jack system developed by one of its in-house engineers.<sup>39</sup>

## Conclusion

The genesis and diffusion of slip-forming as a modern concrete construction method underlines the technical importance of grain elevators in the history of high-rise construction. Acting as a vehicle of international technology transfer and innovation, the legacy of Australian grain elevators has a facet of technological culture that complements arguments that purport the re-use and preservation of the many concrete silos that still survive intact.

Industrial concrete construction processes were essential for the development of new modern architectural ideas. However, industrial architecture influences did not limit to the aesthetic iconography advertised by heroic modernism. Industrial buildings, like grain silos, provided a global terrain of technology transfer bound to have meaningful consequences that went beyond serving the modern aesthetic propaganda that is usually emphasised in architectural historiography.

The rural and urban proliferation of wheat silos contributed to establishing a confident high-rise concrete industry that began thriving with moving formwork construction methods, leading eventually to the transfer of slip-forming from industrial applications to habitable high-rise concrete structures.

In Australia, grain elevators were an instrument of modern nation-building in the hands of public enterprises run by State Governments, similar in the built-form outcomes but very dissimilar in the processes of agency of their American counterparts. The mechanical technique of slip-forming was like a *deus ex machina*, which allowed State Governments to engage, at a fast-tracked pace, in the sudden transformation of the countryside and cities across the nation, scattering hundreds of concrete silos from North to South and East to West, leaving tangible evidence of the far-reaching consequences of modernity. Slip-forming is a fast-track construction process and apparatus that lets the quick building and vertical extrusion of complex architectural forms. In Australia, it was the tool that allowed catching up with the global markets of wheat, filling with concrete a modern infrastructure lag that was perhaps impossible to close otherwise.

# The Sandstone Squarehouses of Macarthur: The Ultra Vires Blockhouses of Sydney Basin's Dispossession

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## Keywords

Macquarie  
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## Abstract

South of Campbelltown, wedged between Sydney's two great rivers, where the Georges and the Nepean almost meet is Macarthur. In the early 1810s, to go beyond Campbelltown was to leave the authority of colonial Sydney - a colonial ultra vires frontier. Here are *squarehouses* that date from the mid-1810s, some were built during the height of Sydney's frontier wars, before the 1816 Appin Massacre, which secured colonial control over all of Macarthur.

These *squarehouses* are archaeologically intriguing as they are almost square, not large, have thick sandstone walls, some have 'slot openings' and others small openings. Were these *squarehouses* built with a defensive premise in mind, the openings for use as 'gunloops' as much as ventilation? If so they would be architectural evidence of the frontier wars.

The suggestion is that these small *squarehouses*, often overlooked as just an outbuilding in the homestead aggregation, were among the first buildings built on a property. If built on contested land, its presence would have acted as notification of a land claim, while its physical structure provided a bolthole from which one could defend life and property - a private blockhouse.

*Blockhouses* existed right across the British settler empire, with common standards constructed for defence in frontier areas from South Africa to New Zealand, Canada and the United States. So it should be no surprise to find them at the beginning of colonial NSW and yet it is, and this raises questions as to why this distinctive colonial structure is missing in Australia.

The placement of these *squarehouses* and the prospect of their loops - their surveillance isovists over creeks and valleys, would provide historical insight into the colonial consolidation of these landscapes.

## Introduction

1. Byrne, William (1903) *Old Memories: General Reminiscences of Early Colonists -II* Old Times May p105

*One day a fine young aboriginal named Moudonigi, who had been partly brought up by Mr. Kennedy, came rushing up to our place, saying that a tribe of blacks were close at hand, determined to exterminate all of us. After a hasty consultation my step-father sent my mother and sisters to Mr. Kennedy's homestead, and then determined to defend the house as best he could. Luckily the soldiers had left some of their old uniforms when they were removed to Sydney. My father put on one, my brother another, and Moudonigi dressed himself in the third. He got on the roof with an old musket, and he was a capital shot. I can tell you. But there was no need to do anything in the way of shooting. No sooner did the blacks see the king's red uniform than that was enough for them. We saw no more of them, and were never afterwards troubled with them.*<sup>1</sup>

William Byrne above is recalling his childhood, around Appin circa 1816. This quote we use not to illustrate the Frontier conflict at the edge of the colony, though it does, but the role the built form plays. The Kennedy Homestead is obviously a place of greater protection: is it because of greater firepower or is the homestead a better defensible structure or both? The three men left behind are defending the house and using it as a defensive structure.

2. Roxburgh, Richard & Baglin, Douglas (1978) *Colonial farm buildings of New South Wales* Adelaide: Rigby

3. Reynolds, Henry (1981) *The Other Side of the Frontier* James Cook University

4. Gapps, Stephen (2018) *The Sydney Wars: Conflict in the Early Colony, 1788–1817* Sydney: NewSouth

5. Gapps, Stephen. 2019. *Rifle slits and gun loops: Early colonial domestic defensive architecture in the Sydney region* retrieved 25th July 2021

When looking over the old district of Appin, in Macarthur, we keep on coming across these isolated strong-holds often with vertical slots dotting the rural landscape. They look defensive, but we are told they are just ventilation slits for old granaries or barns. This is an established narrative for these types of outbuildings (barns if big, or granaries if small) not just here but across NSW<sup>2</sup>, Australia perhaps. This built expression fits the peaceful settler narrative, which is now well challenged by Reynolds<sup>3</sup> et al in the historical record. Stephen Gapps, in his recently published *The Sydney Wars*<sup>4</sup> chronicles the early colonial military campaigns in this area, and on later reflection on the function of these outhouse structures<sup>5</sup> he comes to the conclusion that they likely doubled as defensive structures too. Indeed they must have, if they were built during the frontier conflicts, intentionally or not, and if built slightly later the experience of conflict would still reverberate in their built expression. This makes the Macarthur *squarehouses*, along with other outhouses structures along the Hawkesbury/Nepean river, architectural evidence of the Frontier Wars, likely the earliest evidence of such in Australia.

In this essay we situate the defensive structure strategy of the British Empire on settling new occupied lands, immediately before and after Australia; investigate the use of farming buildings when settling, focusing on their aperture details - vertical slits and gunloops; then how these granary/barns are placed within other frontier settings of Australia namely Tasmania. The focus then shifts back to Appin with similar barns and other buildings that are defensive but too small to be barns and argue that they fit the Blockhouse defensive structure type of the British Empire, and were likely placed to secure possession and expand the frontier.

## Defensive Structures of British Colonialism

The majority of Australia's first contact experience occurred between 1788 and 1840. Within the British imperial settler project, this Australian colonial experience was bookended first by the North American War of Independence - lost in 1783, and the Treaty of Waitangi which saw the expansion of British settlement across New Zealand. Thus many British soldiers had seen duty in North America before arriving at Port Jackson, and after an Australian stint many would fight in the New Zealand wars. Defensive structures were a significant part of both the North American and New Zealand indigenous cultures, and the colonial battles that took place there. In the Australian context defensive structures are surprisingly rare.

Yet Governor Phillip in his preparations for Botany Bay, had fortifications at the forefront of his mind, and he executed them not at Botany Bay but at Sydney Cove as though he had foreseen the topography - using the Tank stream to contain the convict settlement within Dawes point.

6. Phillip, Arthur 1787 *Phillip's Views on the Conduct of the Expedition and the Treatment of Convicts* Bladen, F. M & Britton, Alexander & Cook, James. 1892, Historical records of New South Wales Government Printer, Sydney viewed 18 November 2021 [http://nla.gov.au/nla.obj-343658027\\_p89](http://nla.gov.au/nla.obj-343658027_p89)

*On landing in Botany Bay it will be necessary to throw up a slight work as a defence against the natives—who, tho' only seen in small numbers by Capt'n. Cook, may be very numerous on other parts of the coast—and against the convicts; for this my own little knowledge as a held engineer will be sufficient, and will be the work of a few days only; but some small cannon for a redoubt will be necessary. Within the lines the stores and provisions will be secured; and I should hope that the situation I should be able to take may admit of having the small rivers between the garrison and the convicts so situated that I may be able to prevent their having any intercourse with the natives.<sup>6</sup>*

7. Walton A. 2003. *New Zealand redoubts, stockades and blockhouses, 1840–1848* New Zealand Department of Conservation

British defensive structures were grouped into three: redoubts, stockades and blockhouses. Briefly, these defensive structures are determined by their construction and scale: Redoubts are large earthwork emplacements, *Stockades* are mid-size timber palisade enclosures and *Blockhouses* are small house-sized masonry/timber structures.<sup>7</sup> The British Military had a well developed culture and science of fortifications, *Simes' 1780 Treatise*<sup>8</sup> explores this in some detail.

8. Simes, Thomas. 1780. *A Treatise on the Military Science: Which Comprehends the Grand Operations of War : and General Rules for Conducting an Army in the Field : Founded Upon Principles for the Improvement of the Same, with Occasional Notes : to which is Added, the Manner of Attacking and Defending Military Posts, Villages, Church-yards, Mills, Houses, &c. : Dedicated (by Permission) to His Majesty* Publisher John Millan

In New Zealand there are at least 322 British fortifications built between 1840 and 1881 and 183 Māori ones.<sup>9</sup> Māoris traditionally fortified their villages - *pas* built before European arrival were near impregnable fortresses, with multiple palisades often atop small hills. The British colonial forces alternated and combined fortification types in their strategies to secure ground across New Zealand. In North America, many Native American tribes had similar palisade protections around their villages, and the lonely Fort is almost synonymous with the British and then the US military's push into what they saw as the 'wild frontier'. They also had a history of employing them against indigenous populations, yet in the Australian colonial context it is largely missing from the historical record.

9. Prickett, Nigel. 2016. *Fortifications of the New Zealand Wars* New Zealand Department of Conservation

10. White, John. c1590. *Village of Pomeiooc* Watercolour The British Museum.

11. Power, William. 1849. *Interior of a Pa on the Wanganui River* pen and pencil sketch Sketches in New Zealand, with pen and pencil British Library, p229



Figure 1: John White<sup>10</sup> watercolour of the Village of Pomeiooc c1590 shows a palisade around the Indian village.

Figure 2: William Tyrone Power<sup>11</sup> sketch of a Maori Pa 1849 shows a palisade around the Maori village.

12. Kerkhove, Ray. 2015. *Barriers and Bastions: Fortified frontiers and white and black tactics* CQU Seminar Paper Noosa 11 June 2015 'Our shared history: resistance and reconciliation'

There is little evidence of Australian aboriginals building fortifications, and it is certainly not part of the historical narrative; this likely reveals a very different relationship to land and each other, than what we see even in other first nation cultures. The British colonial engagement in Australia mimics this absence, there are no large forts, stockades or redoubts in the interior, a few forts dot the coast to ward off other imperial powers, rather than the indigenous population. But the historical record does talk of colonists taking refuge in fortified positions from their houses, huts, homesteads and barns/granaries. Historian Ray Kerkhove<sup>12</sup> writes in some detail about this within Queensland. Have these smaller fortified positions been hiding in plain sight?

13. Lake, Jeremy. 2013. *National Farm Building Types*, Historic England p4.

The colonial frontier was outside the periphery of colonial land claims and control - an *Ultra Vires* landscape. Barns were one of the first buildings to go up on a new farm;<sup>13</sup> if a barn was erected on a new land grant, it was the first built form to contest indigenous land ownership. Considering that lack of farming was a Lockean justification for the *Terra Nullius* declaration, an *Ultra Vires* barn was the physical embodied justification for a colonial land claim to turn land into a British '*Terra Tillius*'.

If a barn was first built on contested land and sometimes hostile territory, we would expect to find fortification details in its design, and we do, but they are often overlooked, in part because they step outside the peaceful settler narrative of earlier established Australian historiography, but also because the physical ambiguities of fortification details can hide their dual function. The most obvious of these details is the ventilation slit / loop-holes dichotomy.

## Embrasure Loopholes or Ventilation Slits

14. Lake, Jeremy. 2013. *National Farm Building Types*, English Heritage.



Figure 3: 18th century combination barn and stable and cart shed in Sollers Hope, Herefordshire, England. Photo: Sam Hale<sup>14</sup>

15. Hall, Linda. 2009. *Vernacular Farm Buildings Thornbury*, Local History and Archaeology Society.

Above in Figure 3 is a typical 18th Century barn from England, The ventilation slits were necessary to prevent produce stored in them from rotting or self-combusting and if used for livestock to shed heat.<sup>15</sup>

In Australia embrasure-type windows feature in early convict architecture too, as they provide light, airflow and are relatively simple to construct in stone compared to conventional windows yet still provide rock solid security. We see examples of this at Cockatoo Island's Military Guard Room, Vaucluse house's former convict barracks, and the Cascades Women's Prison in Hobart, amongst others.

The similarity in configuration of ventilation slits and loopholes can be remarkable. Loopholes are an opening in a wall splayed out internally in plan profile around an aperture (such as an arrow slit) - to allow an archer or shooter a horizontal sweep and a slot vertically so they could adjust the elevation of their shot. The outside opening is reduced to minimize the return-fire target.

The *Canonier* was an evolution of this embrasure, shaped to accommodate a firearm, so it could be just a gun round or oval port built into a wall. However, they were often combined with a ventilation slit, thus its external face profile took on an inverted key-hole profile. The hole being just large enough to pass a musket through, while the vertical slot allowed better sighting and could still be used for ventilation. Vertical slits or apertures in a frontier granary/barn could do double duty as both ventilation and loophole.

## Tasmanian Fortified Barns

16. Morrison, Jane *Frontier Conflicts Map – Tasmania* Blog: Australian Frontier Conflicts 1788-1940s

Tasmanian frontier barns provide clear evidence of this double duty, as indeed would frontier homesteads across Australia. Tasmania's frontier wars reached a climax of sorts with Governor Arthur's notorious *Black Line* sweep of 1830, after years of 'native' unrest and sheep killings. It was an eerily similar tactic to New South Wales's earlier sweeps across South West Sydney in 1816, they also used three lines in their sweeps. Though it failed to corral the aboriginal population into the Tasman Peninsula, it did signal the end of aboriginal resistance.<sup>16</sup> By 1834 "*Aboriginal Protector*" Robinson had moved nearly all full blooded 'natives' to Flinders Island. Tasmania had barns rather than Macarthur's

granaries, as sheep rather than grain were the predominant agrarian occupation. Barns built during this unrest could do double duty as a fortified placement as well as a barn.

One of the earliest barns south of Launceston is Brickendon's Pillar Barn c1827, the barn was set on *staddle stones*, not only for greater ventilation but protection from rats. Its high shuttered windows, single elevated entrance and internal brick skin also made it eminently defensible.



Figure 4: Outside shot of the Barn at Brickendon c1829, Staddle Stones shown supporting timber framed brick infilled and timber clad. Photo: Author April 2021

17. Pers Comm Scott Wilson on site April 2021, also reported V jS (2021) *Scott Wilson Wesleydale Blog* Northern Architecture | Country Houses 09 Jul 2021

18. Robinson, George Augustus. 1834. *Friendly Mission: the Tasmanian Journal and papers of George Augustus Robinson, 1829–1834* (ed. Brian Plomley), 2nd edn., Queen Victoria Museum and Art Gallery, Launceston, 2008, 27 July 1834. For Robinson's two earlier visits to 'Native Hut Corner', see 8 April 1832, p.631 and 18 Jan. 1834, p.871

19. Haygarth, Nic. 2018. *Dan Pickett: Pioneer Cave Guide* Australasian Cave & Karst Management Association 2018 conference retrieved 16th July 2021

However as we move further away from the main Hobart to Launceston thoroughfare, and deeper into frontier territory, defensibility is more evident. In the Chudleigh Valley west of Deloraine a retired soldier Lieutenant Vaughan took up a 2500 acre land grant in 1829,<sup>17</sup> that he called *Native Hut Corner*.<sup>18</sup> With his considerable labour of about 30 convicts, he built a massive barn, 7m by 24m wide with walls 2ft thick, and over 6m in height. Considering the name of the property the Barn was almost certainly built near or on an indigenous camp probably of some significance. The area is surrounded by unique geological formations such as limestone caves through which creeks flow.<sup>19</sup>

This barn reflects its intrusion into indigenous land, for while it provides protection for produce, hay/grain above and sheep below, and their necessary ventilation slits, these slits are configured as defensive architectural features - elevated inverted keyhole loopholes. The fact that these gunloops are on all four sides even overlooking the measured acre compound, itself surrounded by 3m high walls, suggest this barn was the first building on site. He later sold the property in c1837 to Henry Reed, a shipper and whaler.



Figure 5 and Figure 6: Internal detail of the Gunloop and outside shot of the Barn at Old Wesleydale (Native Hut Corner) c1830 respectively. Gunloops/Ventilation slits are visible in the top half of the wall. Source: Photo Author April 2021

### The New South Wales Macarthur Frontier Experience

The Sydney Basin, however, was the first region in Australia to be 'pacified'. Aboriginal unrest and crop destruction like Tasmania, was used as justification for Captain Wallis to sweep three militia lines across the Cowpastures and Macarthur regions, south west of Sydney. It culminated in the April 1816 Appin massacre and Macquarie's Proclamation that finally pacified the Basin. Any building built in or before 1816 in the Macarthur area was built in contested territory, and we would not be surprised, indeed would expect, to see evidence of fortification elements similar to those later seen in Tasmania. Early settler William Byrne continues to recall the conflict.

20. Byrne, William. 1903. *Old Memories: General Reminiscences of Early Colonists -II Old Times* May p105 State Library Of New South Wales

*We left Parramatta in December, 1812, when I was four years old. My mother had in the meantime married a Mr. Sykes, who had received a grant of land at Appin. We were the first settlers there, and I remember having our Christmas dinner in the barn before our house was built. After we arrived, there was considerable trouble with the blacks. This was largely due to the fault of the settlers themselves, who often treated the blacks with a great deal of cruelty. Outrages by both blacks and whites extended over the years 1813, 1814, and 1815, up till 1816, when the settlers were granted military protection...<sup>20</sup>*



Figure 7 the 1810s colonial frontier landscape between the Georges and Nepean Rivers, just south of Rosemeadow (Campbelltown). The red text is the Colonial homesteads names, the text box's bottom right corner sits just above the homesteads location. Photo: Author (Google) 2021

### The Gilead Fortified Barn

21. Morris, Colleen and Britton, Geoffrey (2000) *Colonial Landscapes of the Cumberland Plain*, and Camden National Trust of Australia (NSW) p69.

In the old district of Appin, the building most similar to the Northern Tasmanian barns in Macarthur is the Gilead Barn. In 1812, Reuben Uther was granted 400 acres near the junction of Menangle Creek and the Nepean River by Governor Macquarie,<sup>21</sup> which he named Gilead, a biblical land of golden fields of wheat. In 1815, Uther had started supplying meat from his farm to government stores, and Governor Macquarie visited the farm and described it:

22. Macquarie, Lachlan. *Lachlan Macquarie, Governor of New South Wales : journals of his tours in New South Wales and Van Diemen's Land 1810-1822 : prospectus* Sydney: Trustees of the Public Library of New South Wales, 1956. Web. 22 July 2021

*"At 11 am entered the District of Appin at Mr Uther's farm, which is a very good and a very pretty well improved one on the slope of a high hill, on the summit of which he has erected his house. Mr Uther's crops look well and promise to be very good and plentiful."*<sup>22</sup>

Within a year of that visit, Macquarie sent troops and militia through the area, with one of the lines of militia possibly assembling at Gilead. Two years later in 1818, Uther sold the land to Thomas Rose. *The Sydney Gazette* advertised it on 16 May as:

23. Bevan (1818, May 16) *Sales By Auction* Classified Advertising *The Sydney Gazette* and *New South Wales Advertiser* (NSW : 1803 - 1842), p. 2. Retrieved July 22, 2021

*"ONE of the most valuable ESTATES in the Colony ... - has a good House and Skelling, erected on a highly pleasant Hill, commanding a view of the Cow Pastures for many miles; a good Barn, &c..."*<sup>23</sup>



Figure 8 and Figure 9: Internal detail of the ventilation slits and an outside shot of the Barn at Gilead c1817 respectively. These Ventilation slits are only on one half of one wall. Source: Photo Author June 2018

Figure 8 and Figure 9 above are shots of what is most likely the *'good barn'* mentioned in the 1818 advertisement as it is a standout barn and one of the oldest buildings on the farm. Though it also likely doubled as a convict gaol - the insets in the window jambs for the bars are still there - later to become a granary, after Rose, a baker, started using it with the mill he built on top of the hill.



Figure 10: Detail of the East and North face of the Gilead 'Granary' (from a Gilead collage, undated 1800s watercolour) it illustrates a double if not triple storey building, Figure 11: Photograph of the Gilead Granary with bars in the windows, it appears that the east door and half the height has been removed, date likely late 1800s/early 1900s.

24. Pers Comm Sue Gay 2019

If this was the *Good Barn* it would have most probably been built at the end of Wallis's sweeps or just after them as it was not mentioned by Macquarie in 1815. It is a massive barn even now, though the top half is missing (according to local folklore its higher sandstone blocks were used to help build St. Marys at Douglas Park<sup>24</sup>), the walls are about 2 feet thick, 11m wide, 34m long, and it was over 2 storeys high. While this Barn mimics quite closely the combination barn/granary type seen around England, there is evidence of this Barn too, doing double duty as both shelter and defence. The prospect from these vertical slots, looks directly over where the wheat fields appear to have been first tilled at Gilead. It also looks past the fields to Woodhouse Creek where any surprise attack by the indigenous population was most likely to come from (anyone travelling the ridge lines could be seen for miles beforehand).

But what is most curious about this Gilead property, is that if this Barn was not actually built first in this hostile territory, what was? In 1815 Macquarie mentioned a house on the summit of a hill, besides fortified barns, the British, did indeed have a small house like fortification too - the *Blockhouse*.

## The Blockhouse

Blockhouses existed right across the British settler empire, with common standards constructed for defence in frontier areas such as New Zealand, Canada and the United States to secure a strategic position, consolidate a military line, protect communications or for the defence of a local community within frontier areas.

25. 'Puketotara Nov. 18' [1864], Puketotara Blockhouse (9.22), near New Plymouth, is an example of a two-storey work. Colonel H.J. Warre, Sketchbook 1864-1865, p. 51, Ref: E-294-051, Alexander Turnbull Library, Wellington

26. Young, Richard. 1980. *Blockhouses in Canada, 1749-1841: A Comparative Report and Catalogue* Canadian Historic Sites: Occasional Papers in Archaeology and History No. 2, Minister of Supply and Services Canada

27. Lepper Brad. 2019. *Archaeology: Old Stone Fort built to protect Ohio settlers, but likely not by French explorer*, The Columbus Dispatch Mar 3 2019.



Figure 12: New Zealand Colonial Blockhouse - Puketotara Blockhouse<sup>25</sup> 1864 near New Plymouth.



Figure 13: Canada Kingston Mills blockhouse<sup>26</sup> 1754 near Rideau Canal.



Figure 14: US Ohio Colonial Blockhouse<sup>27</sup> c1655 near Newcomerstown, is a two-story building about 14-by-14 feet with 22-inch-thick walls made from sandstone blocks.

In the figures 12, 13 and 14 above we can see how small these isolated defensive structures were. The *Blockhouse* from New Zealand appears to be not much wider than 2m by 2m at the base, the Canadian one looks larger around 5m by 5m, as does the US blockhouse. They are all near square in plan.

28. Lepage, Jean-Denis. 2010. *French Fortifications, 1715-1815: An Illustrated History*, McFarland and Company p170.

The figures above help illustrate that Blockhouses were small isolated structures, with thick walls of either timber or stone, with one sturdy barred door, often square in plan with a single room, with a number of loopholes to fire from in relative safety, usually two storeys in height, yet according to French military historian Jean-Denis G.G. Lepage '*when the structure had only one storey, its loopholes were often placed close to the ceiling, with a bench lining the walls inside for defenders to stand on, so that attackers could not easily reach the loopholes*'<sup>28</sup>. Greater detail about fortifying a house can be garnered from retired British soldier Thomas Simes's 1780 Treatise that explicitly describes how to fortify an existing house, this could also apply to a new structure if none existed such as in the New South Wales bush, one would presume. (emboldened text is the author's emphasis):

*Though the mill or house is surrounded with an abbatiss, he should not fail to **pierce the walls with loop-holes about a foot from the ground**, so as to discover the enemys' legs, that they may not get footing on the other side. **These loop-holes should be four inches wide, and three feet distant from one another**; and a little ditch should be made a foot and a half from the wall within the mill or house, in which the men should be placed. **Other loop-holes should likewise be pierced seven or eight feet from the ground, opposite to the interstices of the lower ones, and of the same width,** 'placing the soldiers that are to defend them upon tables, planks, bedsteads,*

29. Simes, Thomas. 1780. *A Treatise on the Military Science: Which Comprehends the Grand Operations of War : and General Rules for Conducting an Army in the Field : Founded Upon Principles for the Improvement of the Same, with Occasional Notes : to which is Added, the Manner of Attacking and Defending Military Posts, Villages, Church-yards, Mills, Houses, &c. : Dedicated (by Permission) to His Majesty* Publisher John Millan

*ladders, & c. and taking care to pierce a greater number opposite to the avenues before, and at the sides of the gate, and the angles of the house, because there are the places where the enemy usually make the greatest efforts. If the mill or house has an inner court, the walls should be pierced which inclose it, so as to fire upon the enemy after he has made himself master of it.*<sup>29</sup>

Blockhouses are near invisible defensive structures, if they still exist as they are small buildings that can be absorbed into later buildings or homesteads or be completely overlooked as being insubstantial. Before we return to Gilead, we must visit Beulah, the closest existing homestead to Gilead about 1500 metres to its south.

### The Beulah Blockhouse

30. Taylor, Richard. 2011. *Background On Beulah* retrieved at 26th July 2021

31. Sydney Living Museums: Caroline Simpson Library & Research Collection: Collection of 23 original land grants, indentures, quit rents and conveyances relating to the property called Beulah at Appin, 1817-1971 at 29th April 2022

32. NSW State Heritage Inventory: Heritage Item Beulah: History - Historical Notes or Provenance at 26th July 2021

The Beulah Homestead was not built until 1835-1836<sup>30</sup>. Four Crown grants became the parish portions 71, 77, 78 and 79 that later aggregated as Beulah. The farmhouse was built on portion 78. Portion 78, was granted to an ex Irish convict named Connor, or Cornelius, Bryan, his assigned Irish convict Connor Boland who would later acquire 30 acres<sup>31</sup>. And a 50 acre land grant was promised to Patrick Pendergast in January 1816. While the deed titles were not finalized until 1823, they were almost certainly in occupation of the land sometime in 1816 as they supplied fresh meat to government stores according to the 25th May 1816 Sydney Gazette<sup>32</sup>.

I believe the first part of this Homestead could have been the blockhouse, and that it may have been constructed in 1816 in the middle of the Appin Campaign. The reason I feel confident stating this is that the *Blockhouse* component of the Homestead is almost a direct physical expression of the Simes's 1780 *Fortification Treatise* related to a house, and Lepage's description of the internal layout of a single storey *blockhouse*.

33. Taylor, Richard. 2011. *Background On Beulah* retrieved at 26th July 2021



Figure 15: The Beulah Homestead c1835-1836', north west perspective Photo: Stewart Watters 2011.<sup>33</sup> The blockhouse is to the far left, not covered by the main homesteads roof.

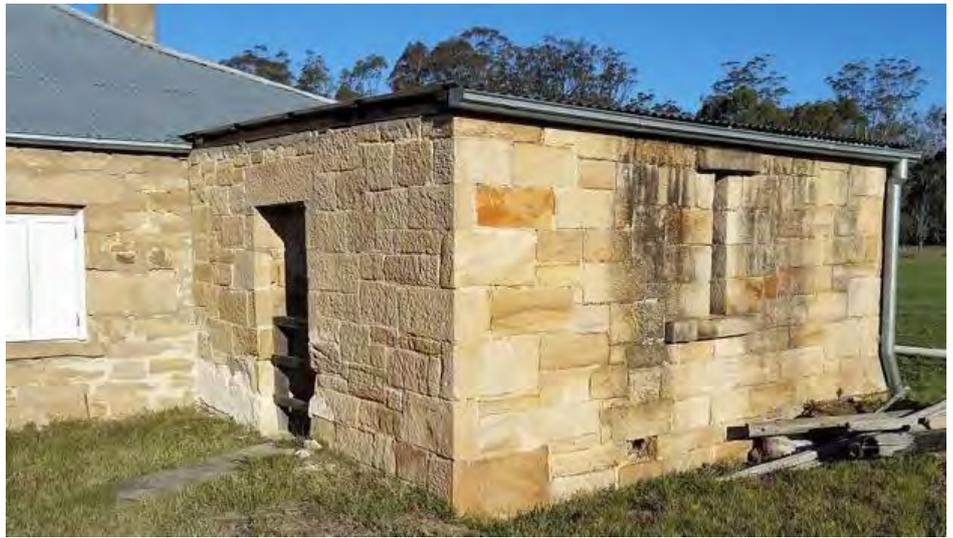


Figure 16: Blockhouse detail of the Beulah Homestead c1816 south east perspective  
 Photo: Author 2018. You can see the North Facing door, and the west facing loophole (vertical slot).

This attached room of the Beulah homestead appears to have been built at a different time to the rest of the house, the sandstone blocks are more finely finished, squarer and have tighter mortar joints, than the rest of the homestead as seen in Figure 16. The cornerstones are larger and well strengthened using alternate horizontal quoining. As a small granary or barn the building is badly designed for it is small, and has holes just off the floor that would let in rats and insects, the built in shelf depths are relatively shallow, and the height is unnecessarily low.

As a smokehouse for meat preservation, however, these Macarthur squarehouses are a close fit as they are of similar dimensions with few openings. The low openings in the Beulah squarehouse could have been used as oven inlets, while there is little visual evidence of smoke internally, there are possible smoke stains on the outside. Smokehouses, however, rarely have windows or a narrow slit opening that this one does, and it is also over engineered, being built like strong room.

As an isolated *Blockhouse*, however Beulah would be a model example of one. It is square in plan - internal dimensions are 3.3m by 3.6m. The walls are 460mm (1 and half feet) thick and 2.1m high. This relatively tight space is an advantage if under attack, as you can communicate and reinforce easily. The door jamb is made of stone and inset so it can't open out. Defendable doors like those in a castle, bastle or house open in as a rule while barn doors and prison doors open out. Lepage's description also reads like he has seen the interior of Beulah.

34. Lepage, Jean-Denis. 2010. French Fortifications, 1715-1815: An Illustrated History McFarland and Company p170

Lepage says that if a *blockhouse* is only one storey, its loopholes were often placed close to the ceiling, "*with a bench lining the walls inside for defenders to stand on, so that attackers could not easily reach the loopholes.*"<sup>34</sup> While here we cannot see the loopholes close to the ceiling we can see the bench lining (or at least the sandstone lugs that would have supported a bench), this would have allowed occupants an ability to stand on it and shoot over the top from all four sides.

Simes backs up Lepage's design advice '*Other loop-holes should*

35. Simes, Thomas. 1780. *A Treatise on the Military Science: Which Comprehends the Grand Operations of War : and General Rules for Conducting an Army in the Field : Founded Upon Principles for the Improvement of the Same, with Occasional Notes : to which is Added, the Manner of Attacking and Defending Military Posts, Villages, Church-yards, Mills, Houses, &c. : Dedicated (by Permission) to His Majesty Publisher John Millan p280*

*likewise be pierced seven or eight feet from the ground... placing the soldiers that are to defend them upon tables, planks, bedsteads, ladders,*<sup>35</sup> we don't need tables and ladders to stand on if a bench has been built-in. The genius of this design is that if you step down from the bench you are completely protected from return-fire (spears).



Figure 17: Internal *Blockhouse* detail of Beulah c1816 north west perspective Photo: Author 2021. You can see the sandstone lugs about a foot and a half up the wall to carry the bench. There are two ground level openings about four inches wide, and the vertical slot loophole in the wall, and the door opening with internal inset jamb. The top loopholes are missing.

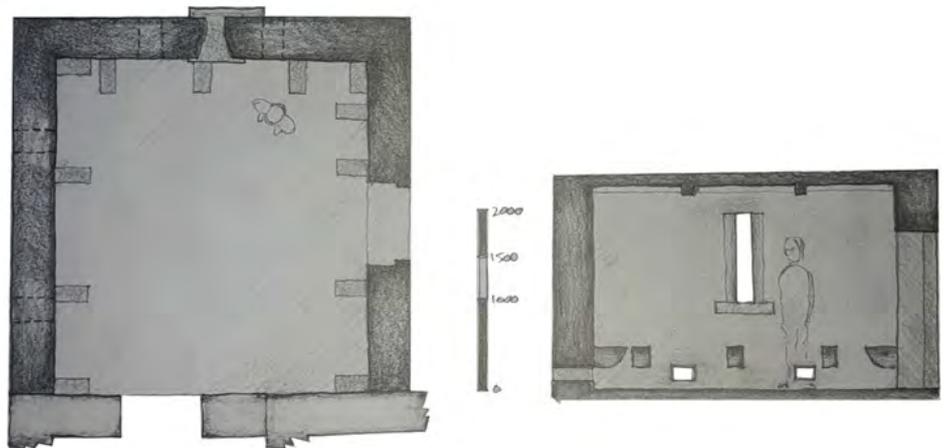


Figure 18: Plan and Section of the Beulah *Squarehouse*

Lapage's benches also provide another benefit in its use as a blockhouse. For Simes says that *'he should not fail to pierce the walls with loop-holes about a foot from the ground, so as to discover the enemys' legs, that they may not get footing on the other side. These loop-holes should be four inches wide, and three feet distant from one another...'* These ground level loopholes have been built into this Beulah square house almost to the inch. On the ground we can see two openings, granted they are less than a foot off the ground, but they are almost exactly four inches wide and just over three feet apart, they also continue around the south face of this squarehouse. The bench makes even more sense here, as an occupant could be firing through the ground level loopholes while lying down and the bench level allows another occupant to move above them without hindrance.

It almost appears as if British soldiers or Byrnes and his assigned convicts were building this *Blockhouse* with direct reference to Simes 1780 *Treatise* and Lepage's instructions. As there were no existing farmhouses on this Frontier to modify, unlike Europe or the Americas, they would have had to build the *blockhouse*. Could it have done double duty as a smokehouse like Old Wesleydale's Barn in Tasmania did? A Smokehouse like Barns protect the most important property a grazier has, and on this land claim it was meat/ A smokehouse also stores meat and thus it would have had to have been defended too. Now, if we return to Gilead, are their first buildings also likely *Blockhouses*?

### The Gilead Blockhouse

The oldest buildings on Gilead are thought to be one of either two small buildings at the back of the homestead, one like Beulah is almost joined to the homestead. Are they the '*good house and skelling*' (isle or bay of a barn<sup>36</sup>) mentioned in the 1818 advertisement for Gilead. Their external dimensions are roughly square, the possible good house is 6.6m by 7.4m and 3m high, while the possible *skelling* (or smaller squarehouse) is 4.6m by 4.4m and 2.7m high (above 2.1m it appears as a later addition). The good house may have meant one made of stone rather than the timber slab huts that used to be in the area. The original stone flooring is similar to Beulah's, as is the cornerstone strengthening quoining detail. If they had been used as *blockhouses* before or while being used as a house or skelling, we would expect to see benches and loopholes, they however are not immediately evident, but considering these buildings have faced over 200 years of alterations this is no surprise. A deeper investigation may uncover evidence of these details.

36. Bailey, Nathan. 1764. *An Universal Etymological English Dictionary* Publisher: Osbourne et al London.



Figure 19: External view of the squarehouse at the back of the Gilead homestead north east perspective circa 1813 perhaps.

### The Glen Lorne Blockhouse

At Glen Lorne there is another *squarehouse* ruin, is this too the remnants of a *Blockhouse*? This building is square in plan but smaller, with internal dimensions of 2.4 m by 3.1 m, and only around 2.2m high, but again with very thick walls - 460mm. The sandstone door inset stops it from

opening out too. There are steel iron bars in the only 800 wide window-like aperture that sits directly opposite the door. On the other walls there are two small openings almost exactly a foot off the ground, they too sit immediately opposite each other. It is hard to tell if there has ever been a built-in bench of sorts, and we cannot see any overhead loopholes, yet if you just step up two feet you would have a 360 degree view all around, and if you step back down, protection. On balance this completely forlorn ruin fits the specifications of another *Blockhouse*.



Figure 20: Is an overall shot of the Glen Lorne square house looking North.



Figure 21: Shows a detail of its barred window on the northern face.

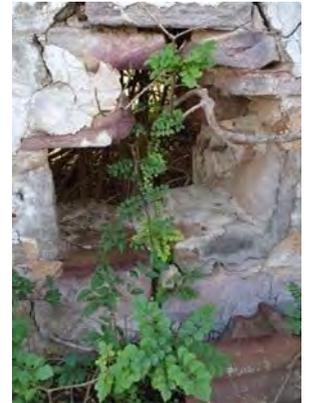


Figure 22: Is a detail of the ground level opening on the western face. Is this circa 1815 perhaps Photo: Author 2021.

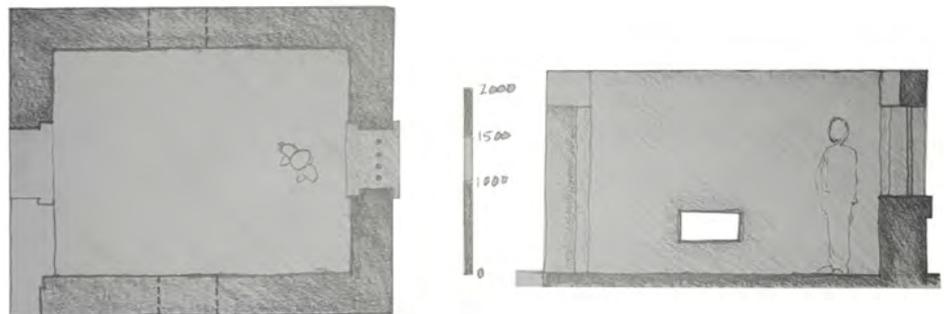


Figure 23: Is the Plan and Section of the Glen Lorne Squarehouse.

### Meadowvale and Hillsborough

37. Morris, Colleen and Britton, Geoffrey (2000) *Colonial Landscapes of the Cumberland Plain and Camden* National Trust of Australia (NSW) Volume 2, p74

Hillsborough has no more standing structures. Meadowvale saw two sandstone outbuildings demolished in 2017, one of which was likely the c1814 Sandstone Cottage as according to<sup>37</sup> The forgetting and removal of this frontier colonial landscape appears to be fairly recent. In the 1950s when Meadowvale was being sold reference to the conflict was stated matter of factly, and gunloops like those at Beulah were acknowledged.

*...Ohlson, has bought the historic 471-acre Meadow-vale property at Appin, near Picton, from Mr. W.Maskus. for about £25,000. The property has within its boundaries a 100-acre grant made to Andrew Hume, brother of the explorer, Hamilton*

38. 1953 'Property Sold For £25,000', *The Sydney Morning Herald* (NSW : 1842 - 1954), 27 June, p. 3. , viewed 27 November 2021, <http://nla.gov.au/nla.news-article18365860> It is possible that this 100 acre lot included Beulah as they are adjacent property today, this has yet to be verified.

*Hume. The sandstone homestead, built more than 130 years ago, has a fortified cellar with gun-pits used to ward off attacks by aborigines...*<sup>38</sup>

These gunpits foreshadow the trench type warfare that was to come to New Zealand and became synonymous with World War One. The forgetting of this colonial frontier landscape is a necessary precursor for these archaeological remnants of Australia's early colonial period to be removed.

## Conclusion

As *blockhouses* these small *squarehouses* that dot the landscape of Macarthur, would attest to the violent nature of the frontier landscape on the edge of Sydney in the early 1810s. They would have played vital roles in protecting not only life and property of the early land claimants in the Macarthur area, but may have been used strategically by the Colonial Administration in the Wallis campaigns to subdue the Sydney Basin. Their existence would make Macarthur, one of the oldest intact colonial frontier landscapes in Australia and essential in understanding those first contact contestations, they are globally unique, as the Australian colonization experience amongst 'new world' colonizations is unusually sparse in the explicit use of fortifications. Their physical presence challenges the peaceful settler historiographical narrative. The urgency for these Blockhouses and their isovists to be catalogued and documented before they are knocked down and lost under NSW's new rezoning growth plans cannot be overstated.

# Hotel Australia to Oberoi Adelaide: The Transnational History of an Adelaide Hotel

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## Keywords

Lift Slab  
Oberoi  
Adelaide modern  
Concrete  
Adaptive Reuse  
Luxury Hotels

## Abstract

In the decades following the war, the spread of international luxury chain hotels was instrumental in shaping the global image of modernity. It was not simply the export of modernist architecture as a style, but rather a process which brought about an overall transformation of the industry and culture surrounding modern domesticity. For Adelaide, well before the arrival of large brand hotel chains like Hilton and Hyatt, this process was initiated by the construction of its first international style hotel in 1960 – Australia Hotel. The proposed paper traces the history of this structure and its impact not only on local design and construction industries but also on domestic culture and lifestyle after the shadow period of recovery after the war.

This paper looks at three specific enduring legacies of this structure that went well beyond the modernist aesthetics employed by its original designers, the local firm of Lucas, Parker and Partners. The hotel was one of the first to employ the new technology of lift-slab construction and was recognised by the Head of Architecture at the University of Adelaide, Professor Jensen, as the outstanding building of 1960. It is argued that it was the engagement with such technological and process innovations that has allowed the building to endure through several renovation attempts. In her study of Hilton International hotels, Annabelle Wharton argues how architecture was used for America's expansion to global economic and political power. Following on from her arguments, this paper explores the implications of the acquisition of the Australia Hotel by the Indian hotel chain Oberoi Hotels in the late 1970s when it became Oberoi Adelaide. The patronage of Indian hotelier Mohan Singh Oberoi came alongside the parallel acquisition of Hotel Windsor in Melbourne, heralding a new era of engagement with Asia. Finally, the paper also highlights the broader impact of this hotel, as a leisure venue for the burgeoning middle class, on the evolving domestic culture of Adelaide.

01. "Oberoi 'better in every respect,'" *The Canberra Times*, June 13, 1980, 10. Available from National Library of Australia <http://nla.gov.au/nla.news-page12398738>.

In June 1980, Australian news dailies were awash with controversies surrounding the acquisition of the iconic Windsor Hotel in Melbourne by an Indian hotel company – Oberoi Hotels. As an article in the *Canberra Times* claimed, the deal "immediately triggered claims that Oberoi was financed by Middle East cash and that the property could become a target for terrorists."<sup>1</sup> Over the following several years, not only did Oberoi successfully acquire and manage the Windsor Hotel, but also spent a considerable amount of money and effort to restore its landmark architecture and interiors to its original glory. From an architectural disciplinary perspective, this project opens up important considerations in terms of the global financial flows following the 1970s oil crisis, the growing impact of the transnational tourism industry and, particularly for Australia, the rising influence of Asian business patronage. But this narrative of an Indian hotelier acquiring an Australian architectural landmark for restoration goes back to a year earlier with the much less publicised case of Hotel Australia in Adelaide.



Figure 1: (L) Hotel Windsor in Melbourne (Source: Picture Postcard); (R) Hotel Australia in Adelaide (Source: SLSA ref. B19598)

02. This recognition is attributed to Professor Jensen, who was the Head of Architecture at the University of Adelaide at the time. See, Michael Page, *Sculptors of Space: South Australian Architecture Museum 1836 to 1986* (Adelaide: RAIA SA, 1986), 238.

This paper traces the history of this fascinating project as it made its journey from the ranks of the 'ultra-modern' in its use of innovative design and construction techniques in late 1950s, to the exemplar of 'ultra-luxury' with its acquisition by one of the most influential global hotel chains some two decades later, and finally to its more recent renovation as a high-end luxury apartment building. The paper will discuss two separate stages in the lifetime of this structure that help define its enduring legacy as a landmark of architecture and domestic culture in Adelaide. The first deals with the design and construction of the building in 1959-60. It was the first structure in South Australia to employ the newly developed technology of lift-slab construction and was recognised as "the outstanding building of 1960."<sup>2</sup> A discussion of this innovative construction history within the broader context of experimentation in concrete construction across Australia will help establish its relevance as a pioneering project. The next section focuses on the 1979 acquisition of the building by the Indian hotelier Mohan Singh Oberoi, under whose patronage the renamed Oberoi Adelaide became the centre of social life and leisure in Adelaide. Here the paper will help locate the restoration of this small hotel within the global flows of finance and patronage that was shaping the architectural market and defining Australia's transforming relationship with Asia. It is argued that the enduring legacies of technological innovations and the impact on local domestic culture of leisure are an integral part the building's heritage that need to be considered.

## Pioneering 'Ultra-Modern' Lift Slab Construction

03. For a general overview of the developments in this period, see Miles Lewis, *200 Years of Concrete in Australia* (North Sydney: Concrete Institute of Australia, 1988). Other details available from [www.mileslewis.net](http://www.mileslewis.net).

04. Both Sydney Opera House and Shine Dome are prominent projects that have been discussed in several publications. But for a detailed discussion of the construction process and agencies involved in the Opera House, see Paolo Tombesi, Marianna Nigra, David Teoh, and Verity Saunders-Ducos, "Once they were heroes: What happened to the companies that built the Sydney Opera House?," in *18th CIB World Building Congress, Building a Better World*, 48-59 (Salford, UK: CIB, 2010). And more recently Luciano Cardellicchio, Paolo Stracchi, and Paolo Tombesi, "Danish Spheres and Australian Falsework: Casting the Sydney Opera House," in *History of Construction Culture*, Joao Mascarenhas-Mateus and Ana Paula Pires (eds), 786- 793 (Leiden: CRC Press, 2021).

05. University of Melbourne Department of Architecture, *Cross-Section*, No. 13 (November 1953): 2.

In 1959, even as work began on the Sydney Opera House, reinforced concrete construction in Australia was still going through a post-war experimental phase with new systems being trailed across the country.<sup>3</sup> The famous 'spherical solution' for the Sydney Opera House, which employed the large precast concrete 'shell' panels supported on precast ribs, was still a couple of years away, and the 46-metre diameter 710-tonne concrete solution for Roy Grounds' Shine Dome in Canberra was concurrently being constructed with in-situ formwork.<sup>4</sup> The decade had witnessed the growth of new precast and prestressed modular systems in order to rationalise on-site production but no method had taken hold. England Pipe and Marlite Ltd. (later EPM), which was established in Melbourne in 1951 by John Harris and W.P. Brown, had started manufacturing precast panels in 1953 but these were mostly used for external cladding. In South Australia, Concrete Industries (SA) bought out SA Portland Cement Company in 1953 and established a plant for precast hollow beam flooring, but its application remained limited.<sup>5</sup> It was the Victorian Housing Commission that probably did the most to streamline building production by employing precast concrete tilt slab construction, but until 1952 most of its buildings were single storey, and by 1959 they had only constructed a few four storey blocks. Within such a context a new contender was to enter the market – Lift Slab Construction.

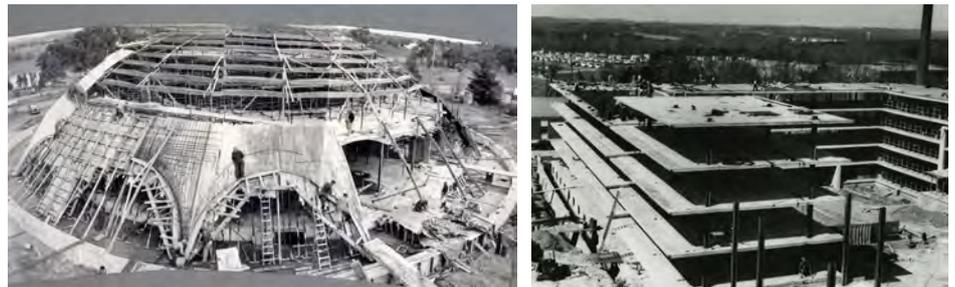


Figure 2: (L) Shine Dome, Canberra (Source: [re-thinkingthefuture.com](http://re-thinkingthefuture.com)); (R) Johnstone Hall, Clemson University, South Carolina (Source: Clemson University Libraries Digital Collection)

06. M. A. Riusillo, "Lift Slab Construction: its History, Methodology, Economics, and Applications," *American Concrete Institute Symposium Proceedings* Vol 107 (1988): 59-68.

07. "Floors Lifted Bodily: New Method Coming to Australia" *Sydney Morning Herald*, April 03, 1956, 10.

The Lift Slab system was designed to reduce construction time and particularly eliminate the use of bulky and tedious formwork in the erection of moderately tall buildings with repeating floor plates. To begin, the ground floor concrete slab is poured in-situ to sit around a grid of columns, usually in steel. Then all subsequent floor slabs and roof slab are also poured at the ground level, one on top of the other, each layer coated with a special compound that would allow for the slabs to be separated later. The steel collars introduced around the columns during the pour are then used to support the slab as they are raised into place and attached to the column at the desired height. The system was originally developed in Texas USA with Northup Hall, Trinity University, Texas (1952) and later employed at the Johnstone Hall, Clemson University, South Carolina (1954) before being patented in 1955 by Philip N. Youtz of New York and Thomas B. Slick of Texas.<sup>6</sup> The system was introduced in Australia under license in 1956 by Lift Slab of Australia Pty. Ltd., of Homebush, Sydney and first employed for the two upper floors of the new administrative block for Behr-Manning (Australia) Pty. Ltd., at Lidcombe, Sydney.<sup>7</sup> Over the next few years around 20 structures

08. 'When finished the Royal Exchange Assurance building would be the tallest in the world at 186 ft.' See University of Melbourne Department of Architecture, *Cross-Section*, No. 72 (October 1958).

employed this system across the country and the tallest lift slab structure in the world was proposed for the Royal Exchange Assurance office block in Sydney.<sup>8</sup> Experimentation with this new system was at the cutting edge of concrete construction technology and in 1959 South Australia's pioneering use of this system began with a proposed modernist hotel building in North Adelaide.



Figure 3: (L) Behr-Manning, Sydney (Source: Constructional Review, May 1957); (R) Alanda House, Adelaide (Source: SLSA ref. B14426)

09. Photograph of Brougham Place, North Adelaide, No. B 14426, Acre 739 Pictorial Collection, State Library of South Australia (SLSA) Archives. <https://www.catalog.slsa.sa.gov.au:443/record=b2063626~S1>

10. McDougall & Vines (Conservation and Heritage Consultants), "North Adelaide Heritage Survey," in *Survey & Recommendations for the City Heritage and Character Plan Amendment Report City of Adelaide* (2004), 1.

11. Jim Handby was also responsible for establishing other hotels in Adelaide like Challa Gardens in 1955 and the Hotel Seaton in 1956. His first hotel from 1935, which eventually became Seacliff Hotel, was originally also named the Hotel Australia. See McDougall & Vines, "North Adelaide Heritage Survey," 2004.

12. Susan Collins, 'Traces that Remain: Architectural Drawings as Contextual Records', Unpublished PhD Thesis, University of South Australia, 2007. Also see entry on George Parker by Susan Collins available from <https://www.architectsdatabase.unisa.edu.au>

13. Page, *Sculptors of Space*, 238.

The corner plot at the crossing of Brougham Place and O'Connell Street in North Adelaide had a uniquely elevated position with views over the city to the south and the Adelaide Hills to the east. The site was home to an old Victorian villa originally belonging to famous medical practitioner John Corbin (1878-1930) which was leased by Florence Eva McLeay from 1939 to 1946 and ran as a guest house.<sup>9</sup> After alterations in 1946 the structure was popularly known as Alanda House. In 1959 the corner plot and three other adjoining properties were acquired by Herbert Harry Handby for the purposes of developing a hotel.<sup>10</sup> 'Jim' Handby was a noted SANFL footy player who had won the Magarey Medal in 1928 but had later taken on to developing hotels.<sup>11</sup> Under the title of Alanda Ltd. he engaged Adelaide architectural practice of Lucas, Parker and Partners to design a new hotel building on this site. William (Bill) Lucas had retired in 1956 and the firm was being led by George Parker who was primarily responsible for the design of the project that came to be known as Hotel Australia.<sup>12</sup> The 8-storey modernist block was the tallest structure in North Adelaide and not only came to define the architecture of the high-rise development in the area but also launched George Parker's career as a designer of hotels for such chains as Travelodge in Australia and Southeast Asia.<sup>13</sup>



Figure 4: (L) Detail drawings by Lucas, Parker & Partners, 1959 (Source: City of Adelaide City Archive, 2482/0037-BAP12880:03); (R) Magazine Advertisement, 1960 (Source: *Building and Architecture*, May-July 1960)

14. *Building and Architecture*, May-July (1960): 11.

15. *Building and Architecture*, May-July (1960): 11.

The building works for Hotel Australia were carried out by general contractors S.J. Weir Pty. Ltd. of Edwardstown, Adelaide in collaboration with Lift Slab of Australia Pty. Ltd., of Homebush, Sydney. Constructed in only eleven months, between September 1959 and August 1960, the building set record time for construction of a property of this size. S.J. Weir attributed the saving of up to five months in construction time to the use of the new lift slab construction method.<sup>14</sup> The process of pouring all slabs at the ground level also created savings in costs of equipment and formwork required to complete the task. While these were to be expected, some of the unexpected value came from the elimination of beams which reduced the total weight of the structural steel and also the total height of the building. Since the placement of the reinforcement steel was being done at the ground level it also increased the speed and thus lowered the cost of reinforcement. The reinforcing contractor, ARC Engineering Pty. Ltd., reported that they were able to average approx. 17 tons for five men per day, which was almost twice their normal average, due to the repetitive nature of the work.<sup>15</sup> These economies were also replicated for the pouring of the slabs, and the actual time to pour the ground and the succeeding nine floors was only three weeks. A further three weeks were allowed for curing and in four more weeks all the floors had been lifted to their final position. So, within a total time period of ten weeks from the first pour, all slabs were in place and work could begin simultaneously across all floors for masonry and finishes.

16. *Building and Architecture*, May-July (1960): 19.

While many of these savings can be attributed to the lift slab construction system itself, the pioneering nature of the work meant that it came with new challenges which the team in Adelaide were able to address through their specific collaboration and innovations. One of the well-known challenges of the system was that the slabs being cast one on top of another would be difficult to separate at a later stage. Here the floor topping contractors, Mosaic Flooring Co. Ltd worked closely with British Paints (Australia) Pty Ltd to address this concern.<sup>16</sup> British Paints had manufactured a special separating compound which needed to be applied with constant thickness and cover across the slab surface. This removed the need for timber separating formers and the topping became the formwork for the ceiling above. Not only were Mosaic Flooring able to achieve this task with no problems for separation, but the evenness of the process also ensured that there was no plastering or finish required for the ceilings upon separation. This elimination of rendering or false ceilings further created extra savings in cost and time.

17. University of Melbourne Department of Architecture, *Cross-Section*, No. 97 (November 1960): 2.

18. *Building and Architecture*, May-July (1960): 11.

The other challenge related to the lifting of the formed slabs using hydraulic jacks along the entire length of the columns. The need for a flat slab with enough rigidity to hold up to the lifting process meant that all beams were eliminated, and high strength concrete had to be used. The final thickness of the slab in this case came out to be 9 inches (230mm) and each floor weighed about 250 tons.<sup>17</sup> To lift the slabs across the entire height of the building also required the columns to be exactly plumb. To achieve this a turnbuckle was attached to a tie rod welded diagonally between two columns to correct any drifts and the collars on the slabs were welded to the columns once at the final position. The slabs were lifted at a rate of 7ft per hour in pairs or threes using hydraulic jacks and lifting rods mounted on top of the steel columns.<sup>18</sup> Once they had reached a height of 25 ft (7.5m) further sections of the column were

added to lift the slab to the desired floor level. Each stage of lift and weld ensured greater rigidity to the structure for further lifting processes.

The process also required perfect cooperation from all the various service providers to allow for continuous lifting to go according to schedule, which included steel supply and welding (Forwood Johns and Waygood), steel erection (J. Radcliff), plumbing (PHR Ltd.), and of course concreting (Universal Ready Mixed Concrete). This further introduced new innovations in the use of public address systems and an electronic safety system circuit to ensure perfect coordination between the various parties involved in the delicately managed lifting process.

19. K.J. Woodger, "Technical Advances in Lift Slab," *Sydney Morning Herald*, March 21, 1961, 23.

The construction of this building provided new solutions for challenges relating to flexibility in the design of floor plates for a system designed for repetition. The third, fourth, fifth and sixth floors of the building had large, cantilevered floor areas of about 20'x 20' (6mx6m) which would have proved a challenge for lift slab construction in terms of column integration. But the reinforcement was calculated in a way that the aesthetics of the building were not compromised. Similarly, a large opening in the slab on the ninth floor of approx. 44'x13' (13mx4m) was also incorporated without any compromises in the building design or the construction process.<sup>19</sup> The overall construction cost came to only £650,000.

20. *The Bulletin*, October 26, 1968.

21. Ray Polkinghorne, "A 'bargain' at \$5.3m," *Advertiser*, February 29, 1980, 4.

The construction of Hotel Australia launched a new era of luxury in Adelaide and the structure soon became the heart of social life in the city with restaurants, cabarets, and night clubs, as well as visiting artists from interstate and overseas. The hotel was later acquired by Hotel Holdings Ltd. who engaged the now expanded practice of Lucas, Parker, Berriman and Lake in 1964 to do some extensions and alterations to the building. In 1968 Federal Hotels of Melbourne made a deal with Hotel Holdings Ltd that gave them 49% interest in the company.<sup>20</sup> The hotel would eventually be acquired by Federal Hotels until its transfer to the Oberoi Group in the late 1970s.<sup>21</sup>

### **Introducing Global Standards of 'Ultra-Luxury'**

22. Thomas Borstelmann, *The 1970s: A New Global History from Civil Rights to Economic Inequality* (Princeton, NJ: Princeton University Press, 2012).

By the late 1970s the 'ultra-modern' aspirations of Hotel Australia were starting to fade and the whole building was in need of some extra care; indeed, all of Australia was. Following the oil crisis of the early 1970s, which led to a fall in economic growth rates across most Western nations, Australia had experienced a combination of inflation and unemployment – a phenomenon described by economists as stagflation.<sup>22</sup> This period of economic recession would continue well into the 1980s until the full impact of the economic reforms initiated under Bob Hawke in 1983 would be felt. From a global perspective, this same economic phenomenon had opened up new opportunities for entrepreneurship in Asia that would have a profound impact on Australian architects and architecture.

The first couple of decades after the Second World War saw a long process of decolonisation whereby new nation states emerged in Asia. As the power shifted from expatriate colonial capital to the local entrepreneurial elite, the mid 1970s also saw the rise in new

23. Annabelle Wharton, *Building the Cold War: Hilton International Hotels and Modern Architecture* (Chicago: University of Chicago, 2001); and Eunice Seng "Temporary Domesticities: The Southeast Asian hotel as (Re)presentation of Modernity, 1968–1973," *The Journal of Architecture* 22:6 (2017): 1092–1136.

24. Amit Srivastava and Cole Roskam, "Fusion of Horizons: Australian Architects in Asia, 1950s–80s," Exhibited at Tin Sheds Gallery, Sydney. 13 July–7 September, 2019.

25. Amit Srivastava, "Hijas Kasturi and Harry Seidler in Malaysia: Australian-Asian Exchange and the Genesis of a 'Canonical Work'" in *Proceedings of the SAHANZ 30, Open*, eds. Alexandra Brown and Andrew Leach (Gold Coast, Qld: SAHANZ, 2013): 191–205.

26. Peter Scriver and Amit Srivastava, "Cultivating Bali Style: A Story of Asian Becoming in the Late Twentieth Century," in *South East Asia's Modern Architecture*, eds. J. Chang and I. Tajudeen (Singapore: NUS Press, 2019), 85–111.

opportunities of trade and investment as well as professional exchange. An early impact was felt in the international tourism and hotel industry which had already benefitted considerably due to the availability of affordable jet powered commercial air travel and the recent introduction of the Boeing 747 airliner (1969). As Annabelle Wharton and others have noted, this space was originally dominated by western hotel chains like Hilton and Sheraton, but now the growing market also gave rise to Asian brands like Peninsula, Marco Polo, Furama, Shangri-La, Taj Hotels and the Oberoi Group.<sup>23</sup> Accordingly, major Asian economic centres like Hong Kong, Singapore and Mumbai became home to large international design practices that defined the architectural and interior design aesthetics of hotels across East and Southeast Asia.<sup>24</sup> With the economic recession in Australia and lack of local projects, numerous Australian architects and designers found work in the neighbouring regions of Asia.<sup>25</sup> Eventually these elite business leaders from Asia also initiated direct trade and investment on Australian shores and brought their approach to design in their engagement with Australian designers.<sup>26</sup> It can, therefore, be argued that it was the patronage of this entrepreneurial elite class that prompted a region-wide development of architectural and interior design expertise, and defined the international luxury tourism industry in the 1980s.



Figure 5: (L) Magazine Advertisement for Oberoi Imperial, Singapore, c.1971 (Source: flickr.com/photos/glenhsparky/6700054099); (R) Oberoi Sheraton, Mumbai, c.1973 (Source: www.oberoihotels.com)

27. The Alan Gilbert Archive is held as a private collection in Sydney currently managed by Adrian and Judith Snodgrass.

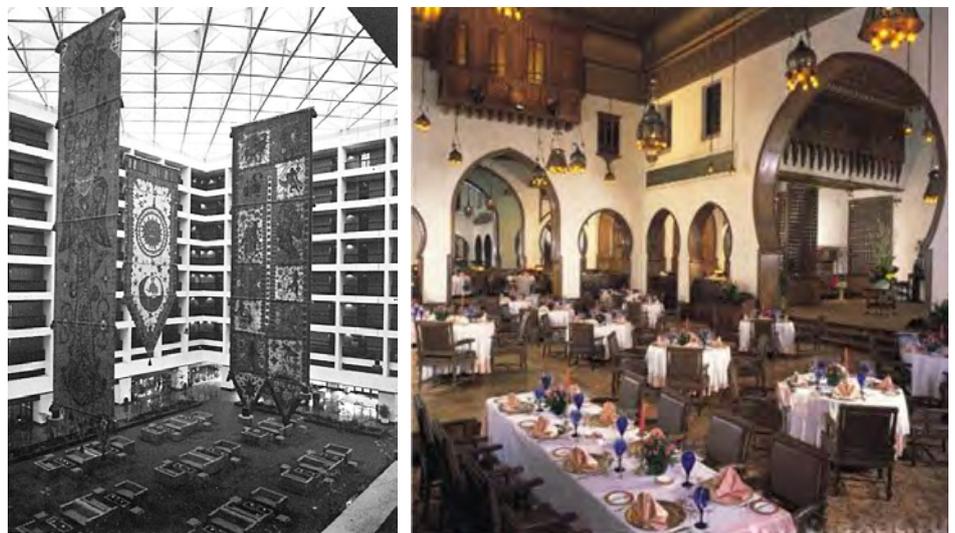


Figure 6: (L) Lobby Interiors for Lanka Oberoi; (R) Restaurant Interiors for Mena House, Egypt (Source: Alan Gilbert Archive)<sup>27</sup>

28. Bachi Karkaria, *Dare to Dream: A Life of Mohan Singh Oberoi* (New Delhi: Penguin, 1992).

29. See Scriver and Srivastava, "Cultivating Bali Style."

30. Polkinghorne, "A 'bargain' at \$5.3m," 4. The hotel was supposed acquired outright by Oberoi in March 1980.

31. "Oberoi chief has room at the top" *Advertiser*, February 26, 1980, 8.

Of relevance to our narrative is the case of one such emergent Asian entrepreneur, Indian hotelier Mohan Singh Oberoi (1898–2002). It was as part of a parliamentary trade delegation to Australia in 1975 that Oberoi had first visited Adelaide and became enamoured by its patrician colonial charms.<sup>28</sup> Over the next few years, as his engagement with Australian design expertise expanded, he contemplated building a new business in Australia.<sup>29</sup> Following the successes of his international ventures and particularly the engagement in the Middle East, Oberoi's financial capacity and freedom increased as he bowed out of the US aid tied support in India and by 1978 secured Saudi and other Middle Eastern investors as financial backers for his Australian ventures. Before the prestigious but contentious hotel deal for the 19th century architectural landmark of the Windsor Hotel, Oberoi made his first inroads into the Australian market with the acquisition of the Hotel Australia in Adelaide in 1979.<sup>30</sup>

In a late 1970s turn to post-modern aesthetics, the international style functionalist building for Hotel Australia was recognised by the discerning patronage of Oberoi as a particularly fine example of the genre which could benefit from his strategy of acquiring iconic properties and restoring them to nostalgic glory with the help of local design expertise. M.S. Oberoi acquired the Hotel Adelaide for \$5.3 million, a significant sum at the time and the highest paid for a building of the size. He would spend another \$3 million to refurbish the entire hotel and restore its original presence as a pioneering mid-twentieth century structure in conservative Adelaide. As they would do with Windsor a year later, Oberoi exercised a distinctive 'glo-cal' sensibility, investing in seemingly anachronistic values and tastes that eventually proved to address market needs and redefine the standard of 'ultra luxury'. M.S. Oberoi once again engaged the original design firm of, Lucas, Parker and Lake Architects & Structural Engineers to do the renovations, but the interior works were carried out by a Singapore interior designer in keeping with the emerging international trends. The modern interiors of Hotel Australia were transformed to be more opulent and glossy, in line with international hotel interiors similar to his previous experiences. As the custodian of his own brand and quality, M.S. Oberoi oversaw the renovations personally and stayed at the hotel premises for several months.<sup>31</sup>



Figure 7: (L) Fashion shoot at Hotel Australia (Source: SLISA ref. PRG1662/7/580/1); (R) Article on Oberoi Adelaide (Source: The Age June 09, 1980, 5.)

32. "The Hotel that did not die of Shame" *POL Magazine* Holiday Issue 1980/1981, 96 - 99.

33. Karkaria, *Dare to Dream*, 1992.

34. Hotel Oberoi Promotion pamphlet, Wedding Catering Menu. The State Library of South Australia, (AuASA) b19605924, Hotel Oberoi Adelaide [ephemera collection], <https://www.catalog.slsa.sa.gov.au:443/record=b1960592~S1>.

35. Polkinghorne, "A 'bargain' at \$5.3m," 4.

The renamed, Oberoi Adelaide brought new standards of luxury and leisure to Adelaide's social life.<sup>32</sup> It was the first hotel with a doorman in Adelaide, a more international menu, brunch events and live music.<sup>33</sup> The hotel also included the Rang Mahal Indian restaurant, the Brougham Restaurant, and the Imperial Lounge and Cocktails, where one could enjoy live music and spectacular views of Adelaide. The hotel boasted of global standard business facilities to hold conferences of up to 1000 attendees.<sup>34</sup> A local daily described the opening night as a "glittering affair with orchids for women, lapel carnations for the men, champagne cocktails, live music and dancing and an elaborate dinner, served with split-second timing. There were gifts, imported from India, for all 200 guests."<sup>35</sup> Oberoi Adelaide would continue to define the standard of 'ultra luxury' over the next several years, before large international brands like Hilton (1983) and Hyatt (1988) finally arrived in Adelaide. By the mid-1980s Oberoi Adelaide was sold to Perth based Interwest Group and they eventually renamed it Hotel Adelaide International. The hotel went through yet another renovation in the mid-1990s by local architect Kenneth Milne, who was responsible for renovations of many mid-century hotels, before finally being closed in early 2000s to be converted into high-end luxury apartments in 2009.



Figure 8: Oberoi Adelaide pamphlets advertising the wedding and lifestyle package (Source: SLSA ref. AuASA b19605924)

36. Seng "Temporary Domesticities," 1092.

37. Bob Byrne "All Class on O'Connell," *Advertiser*, August 17, 2020, 40. Also see Facebook group page: [facebook.com/adelaiderememberwhen](https://www.facebook.com/adelaiderememberwhen)

While the management of the hotel by the Oberoi Group was relatively short-lived, the impact of Oberoi Adelaide on the domestic culture of Adelaide cannot be brushed aside so easily. In her work on Southeast Asian hotels and the changing nature of domesticity, Eunice Seng argues that such luxury hotels can be seen as "temporary spaces of domesticity and consumption" and the experience as well as media coverage does much to define local ideals of domesticity.<sup>36</sup> From that perspective, the impact of Hotel Australia and Oberoi Adelaide is still very much perceivable in the local recollection of the social life during that era.<sup>37</sup> Finally, the direct transformation of the building into high-end luxury apartments extends this idea into concrete form by bringing the domestic spaces within the walls of the hotel and redefining its place within the social and cultural fabric of the city.

## Conclusion

In this paper we have outlined the rich history of a seemingly unremarkable building. The hidden innovations of the pioneering structural system are rarely discussed or publicised in regard to this particular building. And as our investigation has revealed, there is a lot more still to be understood about the specific agency of the various service providers and their small scale but essential improvements to the process that not only defined this structure but had an impact on the broader construction industry. Luckily, recent scholarship in the area of Construction History is paving the path for such an interrogation, and it is hoped that further work will help highlight the real contribution of these unsung actors to the broader realm of architecture. Furthermore, the discussion about the acquisition of the building by the Indian owned Oberoi Hotels group has also opened up new opportunities to understand the impact of the shifts in architectural patronage and transnational practice, as it emerged in the late 20th century, on the Australian architecture and design discourse. By recognising the building as a cultural artefact, we can further appreciate that the influence of its architecture is not limited to the built form, but is also replicated and carried forward in cultural perceptions of domesticity and social life. It is this acknowledgement of the cultural embeddedness of design that has allowed us to excavate both, the contribution of the unrecognised construction agents and the influence of the unassuming cultural actors.

# Producing the House: The Commonwealth Experimental Building Station and Housing Research

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## Keywords

Commonwealth Experimental Building Station  
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## Abstract

Established during the Second World War, the Commonwealth Experimental Building Station (CEBS) researched new building technologies with an emphasis on housing construction. The CEBS experimented with materials and design prototypes in collaboration with both industry and the Council for Scientific and Industrial Research (CSIR), which later became the Commonwealth Scientific and Industrial Research Organisation (CSIRO). Based in North Ryde, Sydney, the CEBS was associated with the Department of Post-War Reconstruction during the Second World War and then moved to the Department of Works and Housing. The paper introduces the CEBS's initial aims through its housing research and design experimentation with built prototypes in Sydney during the 1940s. This research into house design, positioned at the edge of innovation, is situated in the wider housing context of the period. Federally funded building research was predicated by the Commonwealth of Australia's housing shortage during and extending beyond the Second World War. Due to a lack of traditional materials such as bricks and timber from the war effort, the agency trialled developing low-cost, prefabricated concrete and steel houses. These housing experiments are considered in connection to cultural framings of home and its physicality in circulation at the time. After the Second World War, the detached suburban house gained momentum in the political and cultural vernacular as the ideal house for ownership. By examining the CEBS's activities in connection to this background, the paper asks how the nation-state developed mass-production systems to enable government-sponsored agencies to produce more housing for more people but also how understandings of house and home surround and influence innovation in design.

## Introduction

1. Patrick Troy, *Accommodating Australians: Commonwealth government involvement in housing*, (Annandale, NSW: Federation Press, 2012), "Commonwealth Experimental Building Station," *Construction* May 1 1946, 4, Accessed Trove: 1 Jul 2021, <http://nla.gov.au/nla.news-article222873392>.

2. Geoff Bock, *The end was to build well: a half-century of Australian government building research* (North Ryde, NSW: CSIRO Australia, Division of Building, Construction and Engineering, 1995), "Success of building tests," *The Sun*, October 27 1947, 8, Accessed Trove: July 1, 2021, from <http://nla.gov.au/nla.news-article2229551070>

3. Hal Pawson, Vivienne Milligan and Judith Yates, *Housing Policy in Australia: A Case for System* (Singapore: Palgrave Macmillan, 2020), 138.

4. Examples: Robin Boyd, *Australia's Home: Its Origins, Builders and Occupiers* (Melbourne, Penguin, 1968); John Archer, *Building a Nation: A History of the Australian House* (Sydney, Angus & Robertson, 1987); Tony Dingle & Seamus O'hanlon, "Modernism versus domesticity: The contest to shape Melbourne's homes, 1945–1960," *Australian Historical Studies*, 27:109, (1997): 33–48, DOI: 10.1080/10314619708596041.

5. See: Antioe Picon, "Construction History: Between Technological and Cultural History," *Construction History* 21 (2005): 5–19. Accessed July 1, 2021. <http://www.jstor.org/stable/41613891>.

6. Sneja Gunew, *Haunted nations: the colonial dimensions of multiculturalism*, (New York: Routledge, 2003).

The Commonwealth Experimental Building Station (CEBS), founded in 1944 by the federal government, was established partly due to the nationwide housing shortage during and extending beyond the Second World War.<sup>1</sup> A decline in traditional residential construction materials such as bricks and timber from the war effort meant that part of the CEBS's program was developing low-cost, prefabricated steel and concrete houses to increase housing output.<sup>2</sup> The background to the CEBS's implementation and an outline of its early trajectory is introduced to emphasise its work concerning housing. The station's research into building technologies and housing prototypes is situated in the context of cultural understandings of home as tied to the physicality of the house in circulation at the time. After the Second World War, the detached suburban house gained momentum in the political and cultural lexicon as the ideal house for ownership. During the period from the late 1940s into the 1970s, the federal government both produced and financed a large amount of this type of suburban housing stock.<sup>3</sup> This paper is a preliminary investigation to draw attention to the existing literature gaps and to discursively investigate whether the intersection between the CEBS's output and the federal government's housing agendas warrants a further, detailed examination. An examination predicated on how architectural science and the design innovation it fosters connects to the government's delivery of housing.

The housing crisis of the 1940s and the setup of the Commonwealth Housing Commission (CHC), which advocated for the creation of the CEBS to help in alleviating the housing shortage, is considered next to the rise of house ownership as a fundamental tenant of Australian citizenship and the debates around the extent the federal government was responsible for this push into a monotenural society. Analysing select CEBS records of the construction experimentations and ventures into house prototypes, often positioned at the edge of innovation, offers an additional dimension to the existing discourse around the design and spatialisation of housing in the postwar period.<sup>4</sup> Through the CEBS the federal government was intent on developing mass-production systems to enable government-sponsored agencies to produce more housing for more people. However, the CEBS's research also highlights how political and cultural interpretations of house and home surround and influence innovation in design and construction.<sup>5</sup> By making this connection, this paper raises questions about the nation-state's presence in the domestic sphere and in doing so reveals territory for future research on how marginalised housing histories fit into this context. Housing, both through policy and design, can be connected to how the nation-state aims to manage and arguably produce citizens. In the context of the governing apparatus of the Commonwealth of Australia this is complicated by colonialisation and unceded sovereignty by First Nations. Although beyond this short paper's scope, a preoccupation with land ownership through housing in the postwar period signals a modern manifestation of colonial trajectories. Scholars such as Sneja Gunew have argued that colonial apparatuses are palpable in expressions of the Australian nation-state through the management of its populations.<sup>6</sup>

The CEBS was set up on Commonwealth acquired land in North Rye,

7. Early editions: CEBS, *Notes on the science of building: Design for Climate* (Chatswood: Commonwealth Dept. of Works), no. 1, (August 1949); CEBS, *Notes on the science of building: No-Fines Concrete* (Chatswood: Commonwealth Dept. of Works), no. 8, (August 1949).

8. Troy, *Accommodating Australians*, 93-94.

9. Bock, *The end was to build well*, 13.

10. Bock, *The end was to build well*, 14.

11. Troy, *Accommodating Australians*, 94.

12. Examples: David, Victor, Isaacs, *CEBS Bulletin No. 1: The structural sufficiency of domestic buildings*, (Sydney, NSW: Commonwealth Experimental Building Station, 1946); J.W. Drysdale, *CEBS Bulletin No. 3: Climate and house design with reference to Australian conditions*, (Sydney: Commonwealth Experimental Building Station, 1947); Drysdale, *CEBS Bulletin No. 9: Fire Protection in Buildings*, (Sydney, NSW: Commonwealth Experimental Building Station, 1965).

13. Daniel J. Ryan, "Thermal Nationalism: The Climate and House Design Program in Australia (1944-1960)," *ABE Journal* 18, (2021). DOI: <https://doi.org/10.4000/abe.9848>.

14. Examples: Miles Lewis, 'The portable house', in Irving, Robert (ed.), *The history & design of the Australian house* (Melbourne: Oxford University Press, 1985); 274-89; Seamus O'Hanlon (1998) "Modernism and prefabrication in postwar Melbourne," *Journal of Australian Studies*, 22:57, 108-118, (1998), DOI: 10.1080/14443059809387385.

15. T. J. Williamson, "Designing houses for the Australian climate: the early research," *Architectural Science Review*, 56:3, (2013): 197-207. DOI: 10.1080/00038628.2013.807218. Also see: Terence Williamson, "Building and Construction Research" in Philip Goad, Julie Willis, (eds.), *The Encyclopedia of Australian Architecture* (Melbourne, Vic: Cambridge University Press, 2012):164-165.

Sydney on the recommendation from the CHC's (1943-1944) first interim report. Arguably the CEBS's legacy was establishing national building standards but it is probably most known for its technical series, *Notes on the Science of Building*, in publication to 1995, that featured in tertiary education syllabuses.<sup>7</sup> Initially administered under the Department of Post-War Reconstruction and the Department of War Organisation of Industry, it moved to the Department of Works and Housing after the Second World War.<sup>8</sup> The Department of Post-War Reconstruction appointed the CEBS's first director, David Victor Issacs, a structural engineer, who during the war had been involved in the production of extremely lightweight aircraft hangers. According to Geoff Bock, by 1945 the CEBS's staff included specialists in "architectural work, civil, electrical, mechanical and structural engineering, quantity surveying and costing together with general office and drawing staff, model makers and a photographer."<sup>9</sup> The CEBS was initially conceived and practiced with industry cooperation and in collaboration with the Council for Scientific and Industrial Research's (CSIR) Building Materials Research Laboratory, located in Melbourne. These two partnered agencies had distinct operation directives, with the Building Materials Research Laboratory concentrating on material innovation and use whereas the CEBS was responsible for the "design, construction and performance of buildings."<sup>10</sup> By 1986 the CEBS changed into the National Building Technology Research Centre (NBTRC) which had a short lifespan and was abolished in 1987 and resources amalgamated under the Council for Scientific and Industrial Research Organisation (CISRO).<sup>11</sup> The CEBS's early research into cost-effective housing construction was documented in publications and internal reports as well as prototyped in built projects located in Canberra, Sydney and Melbourne during the 1940s and 1950s, often in partnership with the State Housing Commissions.<sup>12</sup>

Interrogations of the CEBS's aims and outputs have focused on how its research has impacted the architectural profession both nationally and internationally, namely it's work on thermal performance and prefabrication methods. Daniel Ryan's recent article, "Thermal Nationalism: The Climate and House Design Program in Australia (1944-1960)," offers an alternative approach in that it explores the complications around thermal performance research in the context of post-war nationalism. It examines the CEBS's international reception in an expanding transnational interest in design sensitised to tropical climates.<sup>13</sup> Although not explicitly about the CEBS, prefabricated housing in settler-colonial Australia has been the subject of extensive scholarship, including the work of Miles Lewis, examining the early architectural trajectories and Seamus O'Hanlon who situates changes in the building industry in the social histories of postwar Melbourne.<sup>14</sup> Scholarship focusing on the CEBS's early research includes the work of T.J. Williamson, notably in his article "Designing houses for the Australia climate: the early research."<sup>15</sup> Centred on the period from 1945-1972, Williamson documents the CEBS's and CSIRO, Division of Building Research (DBR)'s work produced on thermal performance in response to local climates. However, minimal scholarship investigates the CEBS in relation to national or state housing provision or discursively examines the coalescence of technical and design innovation in the context of broader cultural histories that focus on the spatial ideals in circulation about residential architecture.

16. Bock, *The end was to build well*, 10–22.

17. Troy, *Accommodating Australians*, 82–94; Also see Pat Troy and Clem Lloyd, *The Commonwealth Housing Commission and a National Housing Policy: A working draft*, (Canberra: Research School of Social Sciences, Australian National University, 1981); Mike Berry, "Unravelling the "Australian Housing Solution": The Post-War Years," *Housing, Theory and Society*, 16:3, (1999): 106–123, DOI: 10.1080/14036099950149974

18. For overview of CSHA agreements: Troy, *Accommodating Australians*, 95–101; Pawson, Milligan and Yates, *Housing Policy in Australia*, 92–95.

Geoff Bock's, *The End was to Build Well: A Half-Century of Australian Government Building Research* offers an overview of the federal government's formalised building research, chronologically documenting the period from 1944 to 1994.<sup>16</sup> Beginning with the CEBS, and the CSIR Building Materials Research Laboratory, the book focuses on the professional organisation and actors in its administration and research. Relevant to the paper is Patrick Troy's examination of the CEBS's setup related to Post Second World War housing provision in Australia in his book *Accommodating Australians: Commonwealth Government Involvement in Housing*.<sup>17</sup> He discusses successive federal governments involvement in public housing provision in the Commonwealth of Australia. It is focused on housing policy trajectories and the emergence of the Commonwealth-State Housing Agreements (CSHA) in 1945, and how they impact the provision of accommodation—its design types and the influences these types had on town planning.<sup>18</sup>

### House Ownership: The Rise of a Domestic Ideal

19. Alastair Greig, *The stuff dreams are made of: housing provision in Australia 1945–1960*, (Carlton, VIC: Melbourne University Press, 1995); Ruth Balint and Julie Kalman, "The idea of home in postwar Australia," *History Australia*, 11:1, (2014): 6–12, DOI: 10.1080/14490854.2013.11668497

20. Sarah Ferber, Chris Healy and Chris McAuliffe, (eds.) *Beasts of Suburbia*, (Carlton, Vic: Melbourne University Press, 1994); Graeme Davison, Tony Dingle and Seamus O'Hanlon (eds), *The cream brick frontier: histories of Australian suburbia* (Clayton, Vic.: Monash Publications in History, Dept. of History, Monash University, 1995. Chris Butler, "Reading the Production of Suburbia in Post-War Australia," *Law Text Culture* 11 (2005), 11–33.

21. Graeme Davison, "Australia: The First Suburban Nation?" *Journal of Urban History*, 22, 1, (1995): 40–74. DOI:10.1177/009614429502200103

22. Hugh Stretton, 'Housing and Government,' Boyer Lectures, (Sydney: Australian Broadcasting Commission), 1974; Contemporary analysis see: Andrew Gorman-Murray, "Contesting Domestic Ideals: queering the Australian home," *Australian Geographer*, 38:2, (2007): 195–213, DOI: 10.1080/00049180701392766.

23. Hal Pawson, Vivienne Milligan and Judith Yates, *Housing Policy in Australia: A Case for System* (Singapore: Palgrave Macmillan, 2020), 138.

24. Pawson, Milligan, Yates, *Housing Policy in Australia*, 138.

After the Second World War, the detached suburban house built with climate sensitivities gained popularity as an ideal housing type for Australian citizens and its imagery becomes inscribed in the national imagination.<sup>19</sup> In a range of design-orientated publications aligned to the architectural industries and the wider public, this housing type becomes synonymous with ideas about the 'Australian House' and by extension, the physical incarnations of home. Suburbia and its predominant housing type emerge as the location for the 'Australian Dream' of house ownership as connected to ideas of home and emplacement.<sup>20</sup> Graeme Davison, in his notable article, "Australia: The first Suburban Nation?" discusses the suburban boom in Australian cities in the 1950s and 1960s and the emergence of a property-owning democracy that was spatialised through the suburbs.<sup>21</sup> Introducing this housing type and its emergent hold over the Australian population as an aspirational ideal offers a platform to reflect on settler-colonial housing histories. Namely, the political apparatuses that influence the generation and inscription of house ideals and how they endorse select physical framings of home, frequently linked to conceptions of the nuclear family in circulation.<sup>22</sup> An analysis of the federal government's strategic role in the rise of owner-occupied housing helps to understand its aims and agendas into sponsoring research to optimise house production.

Hal Pawson, Vivienne Milligan and Judith Yates have argued that Australia has had a relatively high owner-occupier housing rate since the early 1900s, but the growth period was after the Second World War "from 50% in 1947 to a peak of around 70% in 1961."<sup>23</sup> This rapid growth was one of the highest in the industrialised world and they argue that the "aggregate homeownership remained relatively stable at this level until the mid-1980s but has trended down slightly since then."<sup>24</sup> Associating this growth with social modernisation and the expansion of urbanisation and its counterpart suburbanisation, they also argue that the growth is due to direct government involvement in the provision and financing of housing. They argue: "In Australia, Commonwealth and State governments contributed almost one quarter of the total increase in housing stock between 1947 and 1976. They also provided

25. Pawson, Milligan, Yates, *Housing Policy in Australia*, 138.

26. Troy, *Accommodating Australians*, 4. For an overview of the Commonwealth Housing Policy see: Ross A. Williams, "Housing Policy in Australia, Research paper, University of Melbourne. Department of Economics, no. 113," (Parkville, VIC: University of Melbourne, Dept. of Economics, 1984).

27. See: Greig, *The stuff dreams are made of*, 97-122.:

28. Greig discuss a range of voices relevant to historical period: Colin Hay, "Housing Policy in transition: From the Post war Settlement Towards a 'Thatcherite' Hegemony," *Capital and Class*, no.46, (Spring, 1992); Charles Pickett, "Modernity and Austerity: The 1950s Home", in J O'Callaghan (ed.) *The Australian dream: Design in the Fifties*, (Sydney: Powerhouse, 1993); Greg Whitehall, *Making the Market: The rise of Consumer society*, (Melbourne: McPhee Gribble), 1989.

29. Jim Kenedy, *The myth of home-ownership: private versus public choices in housing tenure*, (London; Boston: Routledge & Kegan Paul, 1981), 113.

30. Greig, *The stuff dreams are made of*, 117-118.

31. Greig, *The stuff dreams are made of*, 118. For home-builder's see: Tony Dingle, "Self-help Housing and Co-operation in Post-war Australia," *Housing Studies*, 14:3, (2010): 341-354, DOI: 10.1080/02673039982830.

32. Kenedy, *The myth of home-ownership*, 125.

up to 30% of all housing finance."<sup>25</sup> In relation to the Commonwealth emphasis on owner-occupier led housing policy, Patrick Troy argues that in Australia, "homeownership is the story of the majority who have been beneficiaries of Commonwealth policy and initiatives directed to those who own their one home or have been encouraged to become homeowners. It is an account of the extent to which housing policy has been constructed to deliver and entrench benefits for the better off."<sup>26</sup> However, the role of the nation-state in the expansion of owner-occupied housing, specifically the level of its orchestration and interference has been heavily debated.<sup>27</sup>

Alastair Greig in the chapter, "The Growth of Owner Occupation" in his book *The Stuff Dreams Are Made Of: Housing Provision in Australia*, offers a summary of the literature examining what prompts this development after the Second World War. Perspectives discussed vary from functionalist, Marxist approaches to centring the effect of rent control to considering the psychological and material influence of post-war modern affluence both as glossy imagery and reality.<sup>28</sup> This includes contesting Jim Kenedy's position that the nation-state combined with concurrent capitalistic interests is instrumental in the growth of owner-occupier house tenure. Kenedy argues that in the Australian context this is achieved through directives including "legislative facilitation of home-ownership, the provision of financial benefits for homeowners and the direct funding of building home-ownership."<sup>29</sup> Greig argues that the nation-state "at most, performed a 'facilitative' rather than 'generative' role in fostering high levels of owner-occupation and that the metaphor of an 'accelerator' is more important than that of a 'trigger'."<sup>30</sup> Instead Greig posits that in the 1950s: "A whole range of social and economic forces coalesced during the decade to push Australia towards a more monotenural society." These forces included the rise of the DIY house builder due to scarcity of labour and materials from the war, as well as the proliferation of architectural Modernism and its influence on house design, interior fashions and household commodities.<sup>31</sup>

Teasing out the scale of involvement the federal government had in the adoption of house ownership as a societal ideal and aspirational aim is beyond the scope of this paper and from this brief analysis of published literature on the subject, it is contested territory. However, it is apparent that Commonwealth and State government policy aimed to encourage certain housing tenure types and the promotion of a monotenural system with owner-occupied at the centre, "maximises class differences in housing and creates rigidities which act to constrain variety and diversity in housing."<sup>32</sup> The Commonwealth's directives to address the housing crisis emerging in the final years of the Second World War, including design orientated research needs to be studied in the context of the growth of owner-occupied housing in Australia.

### **The Housing Crisis of the late 1940s and the Commonwealth Housing Commission**

A future housing crisis, including shortages and the diminishing quality of Australia's housing stock, emerges as a federal government concern during the Second World War. Shaped in part from the downturn of the building industry during the war, housing gathers momentum as

33. Rae Duffy-Jones, "A historical geography of housing crisis in Australia," *Australian Geographer*, 49:1, (2018): 5-23, DOI: 10.1080/00049182.2017.133696; For post-war reconstruction see: Stuart Macintyre, *Australia's Boldest Experiment: War and Reconstruction in the 1940s*, (Sydney: New South Publishing, 2015).

34. Duffy-Jones, "A historical geography of housing crisis in Australia," 13.

35. *Commonwealth Housing Commission, Final report*, 25th August 1944, (Sydney: Ministry of Post-war Reconstruction, 1944), 23-25.

36. Duffy-Jones, "A historical geography of housing crisis in Australia," 6

37. CHC, *Final report*, 25th August 1944.

38. Troy, *Accommodating Australians*, 47-66.

39. *Commonwealth Housing Commission; Second interim report*, 31st March, 1944, (Canberra : L.F. Johnston, Commonwealth Government Printer, 1944).

40. Drysdale, *Report on Overseas Visits, Special Report no.2* (Sydney: Commonwealth Experimental Building Station, 1948).

41. Bock, *The end was to build well*, 31-33.

42. Aust. Parliament. Cabinet Agendum No.5659b, Appendix 1, Experimental Building Station, November 1943 in Bock, *The end was to build well*, 21.

a national issue and becomes central to post war reconstruction.<sup>33</sup> Rae Duffy-Jones in her article "A historical geography of housing crisis in Australia," outlines the spatial dimensions to post world war reconstruction as connected to both the problematisation of housing and its provision. She argues that "the post-war expectation that governments should intervene in social and economic processes to optimise the freedom and opportunities of individual citizens led to a reworking of the relationship between housing and governance."<sup>34</sup> Through the establishment of Inter Departmental Committee and then the subsequent CHC, housing is given prominence in the nation's reconstruction after the war and the CHC's final report, Part IV, charts the need for the federal government to participate in housing, partly as a continuance of wartime controls.<sup>35</sup> Duffy-Jones argues that the government's intervention in housing leads to "problematizing people and places in ways that shape the character of subsequent solutions."<sup>36</sup> She suggests that housing was flagged as a solution to additional, more tangential government problems, namely social and regional problems. This spatialisation of immediate postwar housing policy prompts a drilling down on the spatial, material and physical attributes of the housing examples, asking how the promotion of select housing types effects urban planning. However, more significantly, if the federal government frames housing with the additional task of being a methodology for social reform, how does the design of dwelling types prescribe and inform implicit social conventions.

In April 1943, the CHC was established with two primary aims to present the current housing position and to inquire and report on the future housing requirements during the post-war period.<sup>37</sup> Troy has argued the setup of CHC and its findings was one of Australia's most significant welfare policy initiatives, namely for its legacy in public housing provision.<sup>38</sup> However, the CHC is introduced here as it pertains to the setup of CEBS. A formalised research organisation to foster technical innovation to help with the housing crisis was one of the CHC's recommended strategies in its interim report of March 1944.<sup>39</sup> Prior to the CEBS's establishment, both the NSW Chapter of the Royal Australian Institute of Architects (RAIA) and Institution of Engineers Australia (IEA) lobbied to the director-general of the Ministry of Post War Reconstruction for the Commonwealth to inquire into building innovation. A driving aim was to kickstart the building industry through research into alternative construction methods and early initiatives included overseas scoping studies as well as consultation with Britain's Watford Building Station.<sup>40</sup> In addition, four sample models of British prefabricated, single standing houses arrived in Sydney in 1946, futuristically branded, Airoh, Tarran, Acron and Uni-Seco. Each showcased a material approach— respectively, aluminum, concrete, steel and Uni-Seco was timber framed and covered inside and outside with asbestos cement sheeting.<sup>41</sup> Outlined in a Cabinet Agendum of 1943, cost reduction was the station's main game and it informed other listed priorities including the reduction of ceiling heights and simplifications of plumbing and wiring.<sup>42</sup> Under the heading 'Special Design Problems,' the emphasis on housing is signaled with priorities including the design of a low-cost house suitable for tropical climates, development of prefabrication mechanical equipment unit for low-cost houses and developing concrete houses.

## Precast Concrete and Steel: The CEBS'S Housing Research

43. Example: C.P. Sorensen, *Curtain Walls*, Technical Study No.41, February 1959 (Sydney: Commonwealth Experimental Building Station, 1959).

44. Examples: Drysdale, *Climate and house design: a review of investigations of the thermal behaviour of buildings*, Duplicated document, no. 30. January to August 1949, (Sydney: Commonwealth Experimental Building Station, 1949); *Earth wall Construction*, Duplicated document, No. 28, June 1949 (Sydney: Commonwealth Experimental Building Station, 1949).

45. Internal reports, held at NLA: Report No. 7/2, "Report on the Rose Systems of House Construction," September, 1947; Report No. 364/1: "Report of Tests on Precast Concrete Masonry Units Manufactured by W.J Sloper," August 1974, (Sydney: Commonwealth Experimental Building Station).

46. Report No.1-2. "Report on the Steel Framing on Stewarts and Lloyds System as Used in Home erected at Granville, Sydney, NSW by the HSW Housing Commission and Messrs. Stewarts and Lloyd's (Australia) Pty, Ltd," January 1945; D. Popplewell, Report No.16-1, "Report on a Precast Concrete-Slab House erected at Pagewood NSW," January 1945, (Sydney: Commonwealth Experimental Building Station).

47. Report No.1-2. "Report on the Steel Framing on Stewarts and Lloyds System as Used in Home erected at Granville, Sydney, NSW."

48. Bill Balodis, "CISRO Forest Biosciences 2008 Seminar Series, "The Chronicles of the Forest Products Laboratory, 1918-2008."

Although established with a housing agenda, the CEBS scope of inquiry was considerably broad; for example it investigated optimising curtain wall construction in the 1950s.<sup>43</sup> The CEBS produced extensive documentation classified under bulletins, documents and technical studies and it is too early in the research to make a conclusive judgement about how pivotal the detached house was as a driver in this research.<sup>44</sup> In addition, these publications tend to describe the research's technical attributes intently and offer minimal contextual information about the reasoning behind the research or the directions of enquiry taken. Archives of both the CEBS and the Department of Housing and Works will hopefully uncover the administrative aims undergirding the innovation. However, the agendas informing the setup as outlined and selective surveys of unpublished reports show an invested interest in increasing and improving house construction through alternative materials and methods, that would work alongside tradition building approaches, with house prototypes centred on the nuclear family plan.<sup>45</sup>

Two early built prototypes include a house with steel framing in Granville, Sydney, reported on in 1945 and a precast concrete-slab house in Pagewood, Sydney, constructed in 1944.<sup>46</sup> The Housing Commission of NSW with the CEBS built the experimental house with steel tubular framing in conjunction with the English wrought iron and steel giants, Stewarts and Lloyd, who had operated in Sydney since 1882. The report concludes with the apparent obstacle that in producing a suburban type, steel framing is unlikely to be competitive with timber in a wider housing market due to cost of the steelwork.<sup>47</sup> In this report, there are only construction details and a textual outline of the house's layout and the discussion appears to be grounded on an established design model rather than a reciprocal approach between program and construction. Alternatively, the report documenting the precast concrete-wall house prototype concluded that there were obvious advantages over the traditional use of brick. The report includes a plan and extensive photographic documentation of the construction process with the experimental elements contained to the walls and the flat hoods over porches. The plan is of a detached house with a verandah connected to an outside laundry, two bedrooms, living room and dining room adjacent to an open kitchen—an economical version of the detached house, planned for a nuclear family unit. Extensive photographs document the construction showcasing early systems of trial and error. The CEBS also experimented with plywood house prototypes, raising questions about whether this research drew on early 20th Century investigations in factory-produced houses in the USA by Forest Products Laboratory or from product innovation from its Australian office based in Melbourne.<sup>48</sup> As this research progresses, drilling down on the use and innovation of materials such as plywood or concrete provides a platform to think about how the material languages of construction impress utility next to value and how values associated with specific materials get adopted and reworked across a range of spatial scenarios.

## Conclusion: The Nation-State in the Domestic Sphere

49. Troy, *Accommodating Australians*, 93-94.

The housing crisis in the late 1940s and 1950s propelled an unprecedented interest by the federal government in housing that resulted in the setup of the CHC and formalised research into housing design and construction. The CEBS's history was marked by administrative debates around its purpose and was pushed and pulled under the strategic aims of successive federal governments.<sup>49</sup> However, an analysis of its early output exposes how the nation-state influences and interferes in the production of residential design. From this preliminary study, the federal government intended developing mass-production systems to enable government-sponsored agencies to increase housing production. The CEBS was in part a research tactic for the government to investigate whether it had the capability, the means and the will to work hand in hand with industry to develop a state-sponsored building industry. Raising questions about how the CEBS's findings were adopted and used by industry but also how its relationship with the British equivalent, the Watford Building Station, and the transnational companies it partnered with highlights framings of the Commonwealth of Australia's nationhood during this period. In addition to the primary aims to increase the provision of affordable housing, the CEBS's early research priorities highlight the federal government's favoured types of housing tenure and offer a platform to consider how the nation-state inscribes citizenship through housing.

50. For federal government involvement in housing First Nations: Peter Read, (ed.) *Settlement: a history of Australian indigenous housing*, (Canberra: Aboriginal Studies Press, 2000). For Commonwealth on-arrival accommodation for migrants and refugees, see: Ann-Mari Jordens, *On Accommodating Migrants*, (Canberra: Australian National University), 1994; Sara Wills, "Between the hostel and the detention centre: possible trajectories of migrant pain and shame in Australia," in William Logan & Keir Reeves, (eds.), *Places of Pain and Shame: Dealing with Difficult Heritage*, (New York: Routledge, 2009), 263-280.

By introducing the CEBS's research trajectory next to the escalation of the detached suburban house as the ideal form for house ownership in Australia, this paper has generated initial questions that warrant further examination. Through the lens of architecture, it asks how government-sponsored housing spatialises and visualises housing ideologies? In addition, how do these housing ideologies consider marginalised persons under the nation-state's governing apparatuses and what is their agency within these frameworks? For example, the federal government's assimilatory agendas were encoded in Commonwealth housing provisions for First Nations as well as in the Reception and Training Centres provided for Displaced Persons on-arrival to Australia as part of Post Second World migration programs.<sup>50</sup> Through detailed archival work, the research hopes to explore the manifestation of the nation-state in domestic architecture by asking what both the CEBS and the Department of Works and Housing records indicate about housing provision preferences and how funded innovation fits into these historical narratives. In particular, how the relentlessly persistent trope of house ownership as a method of family or individual securitisation became so ingrained in the national vernacular at the cost of substantial investigation into other forms of collective dwellings.

# ULTRA

## **Positions and Polarities Beyond Crisis**

**SESSION 1: *Design Education and Practice***

# ***Four Melbourne Architects (1979): The Creation of Contemporary Perceptions for Australian Architecture***

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## **Abstract**

In 1979, Peter Corrigan conceived the idea for the 'Four Melbourne Architects' exhibition to be held at South Yarra's Powell Street Gallery. Corrigan led the charge to draw a line between a new generation of architectural practitioners with a fresh design agenda and the conservative practices represented by the Royal Australian Institute of Architects (RAIA). This exhibition, along with the establishment of the Half Time Club and the launch of Transition Magazine, provided platforms for a lively and vigorous profession.

The 'Four Melbourne Architects'—Greg Burgess, Peter Crone, Norman Day and Edmond & Corrigan—were diverse in their approach to architectural design yet shared common concerns of the post-Whitlam generation. The research for this paper examines the documentation between the four architects as they prepared their exhibition, recording the projects exhibited, along with critical reviews of the exhibition. Interviews have been undertaken with the surviving architects involved and people who attended the exhibition. *Four Melbourne Architects* was the first of many exhibitions during that period, which became one of many vehicles for public engagement with early postmodernism and those creating it, where collaboration, inclusion, and connectivity informed designers. That process activated a search for a contemporary Australian identity leading to the development of the 'Melbourne School'.

## Introduction

1. Day, *Four Melbourne Architects Exhibition*.

At a night football match on 20 June 1978 Peter Corrigan proposed for the first time the idea for a limited public exhibition to showcase the changes in architecture that were occurring at that time. Corrigan discussed with Norman Day that it was time for a line to be drawn to distinguish the new generation of architects with a different design agenda to the conservative practices represented by the Royal Australian Institute of Architects (RAIA).<sup>1</sup> A previous challenge to the authority of the RAIA had evaporated when Corrigan threw a carafe of wine across the room at the Last Laugh Theatre Restaurant in March 1978. That occasion was an ambitious but ultimately vain attempt at discussion and theoretical debate surrounding new architectural education and practices. The subsequent exhibition, *Four Melbourne Architects*, held at South Yarra's Powell Street Gallery in September 1979, coincided with the establishment of the Half Time Club and the launch of *Transition: Discourse on Architecture* magazine, both of which became vehicles for a younger generation to develop a lively and critical analysis which would invigorate the profession.

2. Corrigan, 'Letter to Greg Burgess: 10 May 1979', 10 May 1979.

3. Corrigan.

4. Corrigan, 'Minutes of Meeting Held on Monday June 18th, 1979, at 6.00pm at Offices of Edmond and Corrigan'.

5. Corrigan, 'Minutes of Meeting Held on Monday July 16th, 1979, at 6.00pm at Office of Edmond & Corrigan'.

6. Corrigan, 'Minutes of Meeting Held on Monday July 21st, 1979, at 6.00pm at Office of Edmond & Corrigan'.

The idea which developed into the *Four Melbourne Architects* exhibition included the work and ideas of nascent practising architects—Greg Burgess, Peter Crone, Norman Day, and Edmond & Corrigan. Other architects, Graeme Gunn, and Max May had been invited to participate but their involvement did not eventuate.<sup>2</sup> The creative work of the four was diverse but their underlying approach to architecture shared common concerns of a new generation,<sup>3</sup> representative of the Baby Boomers cohort and the significant societal changes of that period (post-Vietnam war, black rights, feminist movement, growing concerns about the environment, failed Internationalism culture, and the Whitlam experiment). Once the four were established, the name of the exhibition was discussed, initially as "B.C.D.E." – Four Melbourne Architecture Firms,<sup>4</sup> Alphabet Soup,<sup>5</sup> then "no further advance on alphabet idea".<sup>6</sup> In all correspondence this was referred to as the Powell Street Exhibition. The research for this paper was conducted using the RMIT's Edmond and Corrigan Collection, the Greg Burgess Archive, and the Norman Day Archive. This also includes reviews of the exhibition, interviews with Greg Burgess and Norman Day, and written correspondence with photographer John Gollings. Gollings kindly provided further details and restoration of some original images. This paper examined the documentation in preparation for the exhibition, images of, and critical reviews of the exhibition.

*Four Melbourne Architects* was the first of many exhibitions that followed during the period 1980-2000, which together contributed to an increasing public engagement around Australia and an awareness of contemporary architecture and those creating it. Many younger architects were associated with the four practices as employees, students, and friends, and involved in assembling the exhibition and became part a creative body of thought which became the strength of architecture in Melbourne in following years. In Corrigan's invitation letter he refers to the emerging Half Time Club:

This is a group of disgruntled recent graduates who have banded together in order to keep their minds alive and their ideals

7. Corrigan, 'Letter to Greg Burgess: 10 May 1979', 10 May 1979.

afloat. I have approached them with a view to passing over some of the responsibility for the publicity, mounting and administration of the show. It would be of assistance to them in establishing their independent identity as an ideas group.<sup>7</sup>

8. Corrigan, 'Letter to Greg Burgess: 19 May 1979', 19 May 1979; Corrigan, 'Minutes of Meeting Held on Monday July 21st, 1979, at 6.00pm at Office of Edmond & Corrigan'.

'Interoffice liaison' for the exhibition was carried out by Michael Ross for Peter Crone, Howard Raggart for Norman Day, Grant Marani for Edmond & Corrigan, and Richard Munday for Greg Burgess.<sup>8</sup> The majority of this group were embedded in the development of Half Time Club and Transition magazine. While outside of the scope of this research, there developed a specific and vigorous debate about Australian identity and its representation in architecture amongst the participants leading to the manifestation of the 'Melbourne School' as described by Andrew Metcalf in *Architecture Australia*.<sup>9</sup>

9. Metcalf, 'Melbourne: Some Notes of Recent Melbourne Architecture'.

10. Cheng and Harris, 'Eminent Modernist Architect Peter Crone Dies'.

In the years since the 1979 Powell Street exhibition, the Four Melbourne Architects' practices developed significantly, not as a cogent group but individually, while maintaining shared visions and values. Peter Crone (1944-2021), a Life Fellow of the Australian Institute of Architects (RAIA) (2001), Crone won numerous awards including the 1993 Victorian Architecture Medal for the Chapel at Trinity Grammar School,<sup>10</sup> and the RAIA National Award for the Stage 1 Restoration of Chadwick House in Eaglemont Victoria designed by Desbrowe-Annear.<sup>11</sup>

11. 'National Award for Heritage. Harold Desbrowe-Annear's Chadwick House, Stage 1, Peter Crone Architects: Jury Citation'.

Greg Burgess (1945-) was awarded the RAIA Gold Medal in 2004, and a Life Fellowship of that Institute in 2005. Also, in 2005 he was awarded an Honorary Doctorate by the University of Melbourne. Significant awards for Burgess's buildings including the RAIA National Sir Zelman Cohen National Awards for Brambuk Living Cultural Centre (winner 1990) and Uluru Kata-Tjuta National Park Cultural Centre (High Commended 1996), and the RAIA National Walter Burley Griffin Award, RAIA (VIC) Melbourne Prize for the refurbishment of the Sidney Myer Music Bowl (2002).

12. Day resigned his membership of the RAIA because his role as a commentator and architectural correspondent for the Age conflicted with the rules of the RAIA

Norman Day (1947-) maintained his role as an architect and architectural critic and is not a member of the RAIA.<sup>12</sup> He was architecture critic for the Age (1976-2011), author of *Modern Houses* (1977), invited keynote for *Emerging Voices* (1987) for the Architecture League New York. Day was awarded an Honorary Doctorate in 2000 by RMIT University and won the RAIA (Victorian Chapter) Bates Smart Award for Media in 2004. He is a Board Member of Architects without Frontiers. Significant projects include heritage-listed Mowbray College, Melton (1983-1997).<sup>13</sup>

13. Victorian Heritage Register, 'Former Mowbray College Patterson Campus'.

14. Corrigan and Edmond, building 8, 1996; Corrigan and Edmond, building 8, 1996; Corrigan and Edmond, Building 8, 1996.

Edmond & Corrigan's most notable project is Building 8 at RMIT University, Melbourne.<sup>14</sup> Their practice was documented in *Cities of Hope*<sup>15</sup> and *Cities of Hope Remembered, Cities of Hope Rehearsed*.<sup>16</sup> Maggie Edmond (1946-) is a Life Member of the RAIA (2001) and awarded an Honorary Doctorate by the University of Melbourne in 2015. Peter Corrigan (1939-2016) was awarded an Honorary Doctorate from RMIT University in 1989, and the Gold Medal by the RAIA in 2003. The architects maintained annual get-togethers to celebrate the exhibition and their friendship (See Figure 1). In an interview, Greg Burgess described the comradeship as "... a moment in time, like war, or life ... the exhibition. We will all have our own stories about it. Mine was very intense because it was crisis and the threshold and the things opened up because I stepped into it, stepped forward and said 'yes'. And so, I'm

15. Hamann, Anderson, and Callister, *Cities of Hope*.

16. Hamann et al., *Cities of Hope Remembered*.

very grateful for the other three".<sup>17</sup>



Figure 1: Melbourne Four lunch Carlton 1980s. L-R Waiter unknown, Peter Corrigan, Norman Day, Peter Crone, Maggie Edmond, Greg Burgess (Photographer unknown).

## The Exhibition

The concept of an exhibition came about because it was one of the few legitimate methods to 'advertise' to the public what architects do. In Corrigan's invitation letter he describes the inspiration for the exhibition as:

### 1.0 THE IDEA

Back in the dim distant past (the early 60's [sic] the Australian Museum of Modern Art, with John Read [sic] at the helm, held a prophetic exhibition of seaside domestic. This is the first serious attempt to show contemporary work since then. It has taken so long to come around, this show needs to have a little class.<sup>18</sup>

The idea that this was the first exhibition since Tavistock Place was introduced by Corrigan in the invitation to participants and in his letter to Jill Graham, Visual Arts Advisor to the Ministry for the Arts in section B:2:

This application is related to the costs of publishing a catalogue and a set of posters, It was intended that the catalogue be serious and of some historic interest, as the last local Architectural Exhibition was 26 years ago, at the Museum for Modern Art in Tavistock Place, the posters would be for publicity purposes and something of a collector's item.<sup>19</sup>

The exhibition at Tavistock Place that influenced Corrigan's thinking was *'Beach houses and a beach motel, a summer exhibition'* (December 1963), which included the work of Peter Burns, Chancellor and Patrick, Graeme Gunn, McGlashan Everist, Guildford Bell & Neil Clerehan, Brine

18. Corrigan, 'Letter to Greg Burgess: 10 May 1979', 10 May 1979.

19. Corrigan, 'Letter to Jill Graham Re: Powell Street Gallery Exhibition', 10 July 1979.

20. Hamann, Anderson, and Callister, *Cities of Hope*, 31–35.

21. Serle, *Robin Boyd*, 321.

Wierzbowski Associates and Robin Boyd (Grounds, Romberg, and Boyd). Corrigan was in the USA between 1967–1974,<sup>20</sup> and missed other exhibitions such as the retrospective exhibition of the architecture of Robin Boyd organised the year after his passing at the University of Melbourne Fine Arts Department (sponsored by Stegbar Windowalls) in June 1972.<sup>21</sup> The idea that this is the ‘first exhibition in 26 years’, that was carried through in documentation and reviews of the exhibition is therefore not completely accurate.

22. Day, *Four Melbourne Architects Exhibition*.

In the preparation for the exhibition, meetings were held to discuss content, cost, organisation, venue, catalogue, publicity, and invitations to participate were discussed. These were minuted and distributed to all participants. According to Day, there was agreement that the venue should not be linked specifically to a particular institution (such as a school of architecture), that it should be publicly available with no entry fee, and importantly inexpensive to establish.<sup>22</sup> Powell Street Gallery in South Yarra was offered as an option because the owners—Harry Curtis, Christine Abrahams, Jenny Heathcote, and David Rosenthal—provided a generous deal with the entire gallery available for two weeks. The gallery was a simple Victorian terrace house located on a street corner with the original rooms generally intact and a contemporary gallery space attached to the rear (east) end of the ground floor.

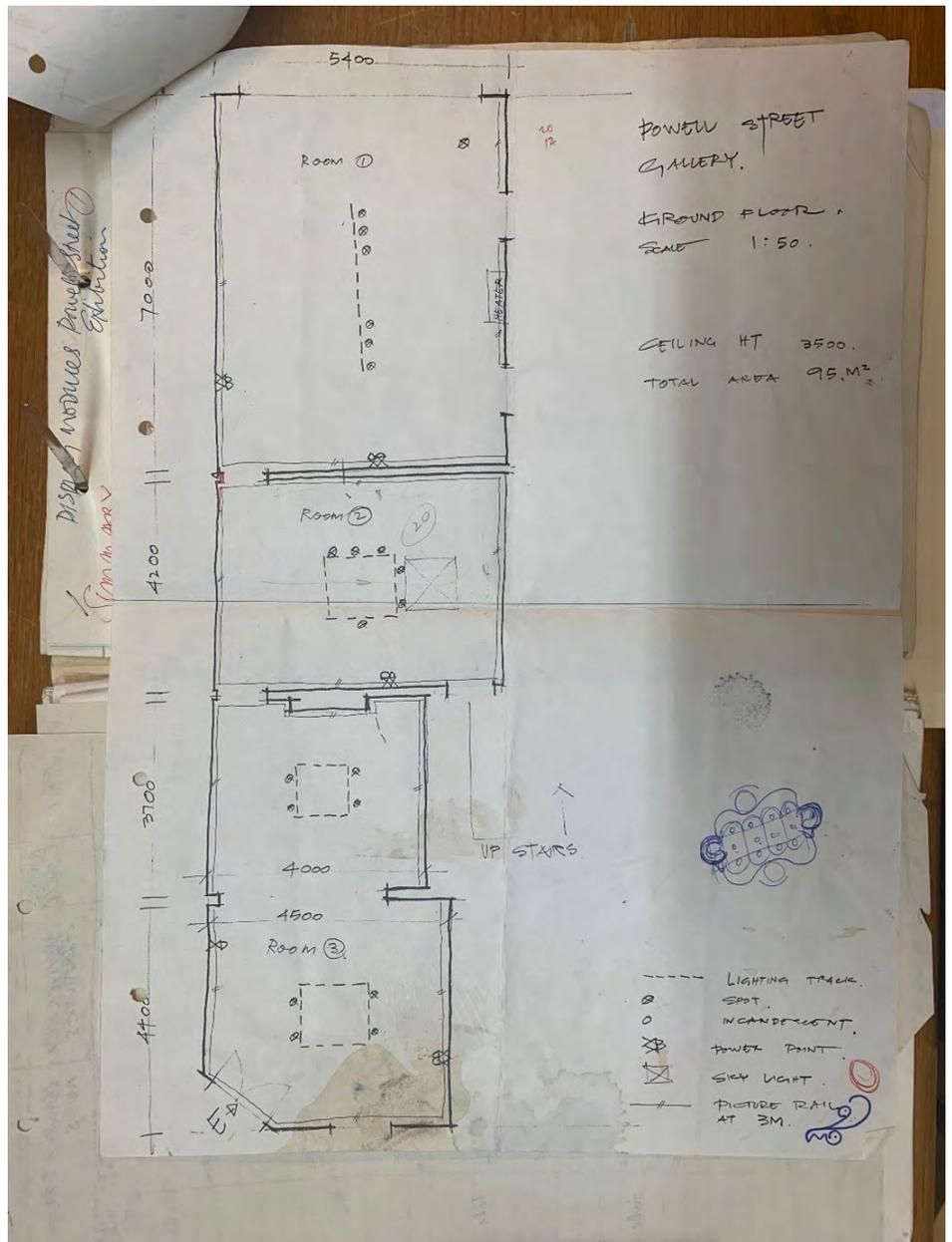


Figure 2: Plan of the Powell Street Gallery. Greg Burgess Archive

Minutes describe progress towards the exhibition—much of which was aspirational (such as audio-visual recordings) and did not eventuate, except for Crone who designed and built a fully structured installation into the gallery rooms on the ground floor.



Figure 3: Peter Crone's exhibition. Peter Crone (standing left) with architecture students © Edmond and Corrigan, School of Architecture and Design RMIT University

Each architect and their teams worked overnight to bump the exhibition into the gallery on the one available night before opening day on 9 September 1979.

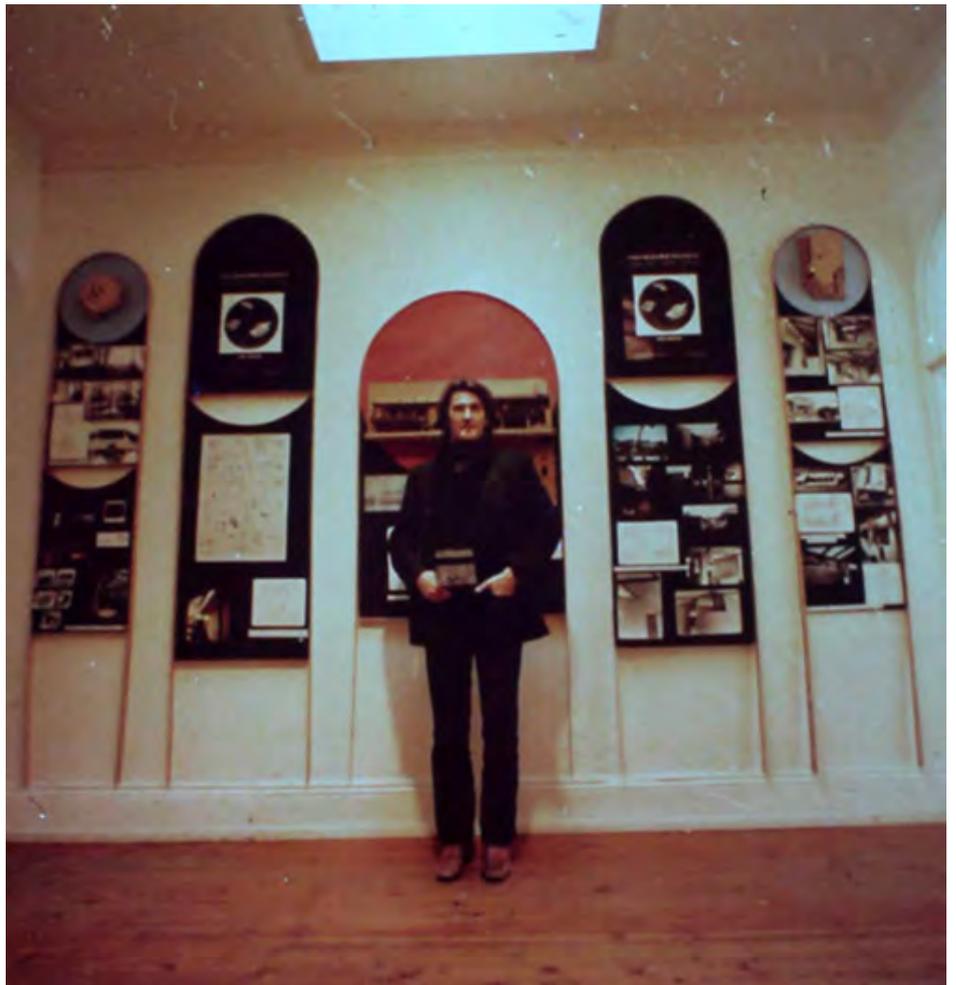


Figure 4: Greg Burgess standing in the exhibition space. Greg Burgess Archive



Figure 5: (left) Installation of work in the Edmond & Corrigan room, (right) detail from the Edmond & Corrigan exhibit © Edmond and Corrigan, School of Architecture and Design RMIT University

## The Exhibition and Reviews

23. McCaughey, 'Architects Throw off the Greyness and Add Humor'.

24. Ward, 'The Urban Vernacular?'

25. Peake, Drew, and Anderson, 'An Exhibition by Four Melbourne Architects: Three Reviews'.

There were three major reviews of the exhibition. *Architects throw off the greyness and add humor* by Patrick McCaughey's in *The Age*,<sup>23</sup> *The Urban Vernacular?* By Peter Ward in the *Australian*,<sup>24</sup> and *An Exhibition by Four Melbourne Architects: Three Reviews* by Cathy Peake, Philip Drew, and Michael Anderson in *Transition*.<sup>25</sup>

McCaughey's review of the exhibition celebrated this new generation of architects. McCaughey had also been involved with the Last Laugh.

26. McCaughey, 'Architects Throw off the Greyness and Add Humor'.

There is no doubt that these architects and their ilk (and they have a sizeable but undefined group of colleagues of similar right hands and right minds) are expanding the range and versatility of Australian architecture. The corporation architects may have looked more prominent in the 70s, but they have wrecked cities and demoralised our only old precincts. Their number and time are up. We cannot, literally or spiritually, afford them anymore.<sup>26</sup>

27. Ward, 'The Urban Vernacular?'

Ward was also enthusiastic in his descriptions, leaving the readers with notion "Is this then to be the new Australian architecture, and Aussie Post-Modernism?"<sup>27</sup> While Michael Anderson wrote

28. Peake, Drew, and Anderson, 'An Exhibition by Four Melbourne Architects: Three Reviews', 14.

The uniqueness of this exhibition is not in its existence – every backstreet in London hides another architectural retrospective – but in the varied scope, abilities and approaches of the four architects on display. It affords a rare glimpse into the world of style, with the exhibited explorations of at least three discernible extremities. Melbourne is fortunate to contain these architects, who, like weeds, stick out in the flowerbed, thrive on the same fertilizer, and bring forth their own strange blooms. Where would we be without weeds?"<sup>28</sup>

## Peter Crone

Peter Crone started his own practice in 1977. While he worked with Edgard Perrotta he has won numerous awards including the RAIA/ Robert & Ada Haddon Design Scholarship (1971), AGE/RAIA House of the Year Bronze Medal in 1975 and citations for projects in 1972 and 1976-77; and the RAIA/ACI/ Gas and Fuel Low Energy House Design

Competition Equal First Prize in 1977.

The projects on display were the Briggs House, Lancefield (1979); Porritt House, Mt. Martha (1978); Hoy House, Hawthorn (1978); Charge House, Mt. Dandenong (1977); McGubbin House, East Ringwood (1977); Mater Christi College Administrative Building, Belgrave (1977); Green House, Williamstown (1979); Kiss House, Hawthorn (1978); Coakley House, Hampton (1978) – AGE/RAIA House of the Year – Citation 1976; Hood House, Benalla (1976); Hueber House, Olinda (1974) – AGE/RAIA House of the Year 'Bronze Medal' 1975.

29. Ward, 'The Urban Vernacular?'

Ward describes Crone as 'an architect's architect, everything is perfect'.<sup>29</sup> His review also noted the opportunity provided by the Haddon Scholarship for Crone to an extensive Le Corbusier pilgrimage.

### Greg Burgess

30. Drew, 'Listen Aborigine: The two regional axes of Australian architecture', 113.

"Greg Burgess may well belong to Melbourne, but he is much more modest and not typical of aggressive Melbourne architecture".<sup>30</sup> After graduation, Greg Burgess works with Edgard Pirrotta and Daryl Jackson and Evan Walker before starting his own practice in 1972. In his rooms, Burgess assembled and composed his story using a collection of models, drawings, prints and layouts which were distributed on the gallery walls and floors. Projects on exhibition were the Barlow House, Mc Crae (1972); Grant House, Blackburn (1972); Hawkins House, Gisborne (1972); McLeod House, Glen Waverly (1972); Perteasy Housing developments, Frankston (1972); Baldc House, Emerald (1973); Perteasy Housing Development, Frankston (1973); Renovation and Additions Rockman House, Yanakie (1973); Bob Fields Housing Development, Frankston (1974); Richards House, Riddell's Creek (1974); Centre for the Wimble Street Child Care Co-operative (with Deborah White), Parkville (1974); Renovations and additions Athorne House, Hawthorn (1975); Renovations and Additions to Bus Depot for Heidelberg Repertory Group, Rosanna (1975); Child Care Centre for the Italo-Australian Education Foundation (with Deborah White), Carlton (1975); Coxhell House, Mt. Martha (1975); Renovations and additions Jones House, Beaumaris (1975); Heath House, Warrandyte (1975); Hunter House, Park Orchards (1975); Renovation and additions Manie House, The Basin (1975); Client brief and Schematic design for the new School of Art and Design, Preston Institute of Technology, Preston (1975); Fritsch House, Shoreham (1976); Scott House, Eltham (1976); Stutterd House, Eltham (1977); Antonello House, Wonga Park (1978); Carlton Community Health Service, Carlton (1978); Feasibility Report for Community Arts Activities Centre - Ministry of the Arts, Swan Hill (1978); Holden House, Strath Creek (1978); Renovations and additions Marshall House, Carlton (1978); May House, Kangaroo Ground (1978); Restaurant for Farley Nominees, Melbourne (1978); Prahran High School Library, Prahran (1978); Becker House, Eltham (1979); Renovations and additions Cameron House, Beaumaris (1979); Renovations and additions Lovett House, Richmond (1979); Renovations and additions Sandler House, Mornington (1979)



Figure 6: Greg Burgess with text circle - Greg Burgess Archive



Figure 7: Greg Burgess Models - Greg Burgess Archive

### **Norman Day (1947-)**

31. Ward, 'The Urban Vernacular?'

Located on the first floor Ward describes Day's exhibition as "ironic" in terms of presentation.<sup>31</sup>

32. Peake, Drew, and Anderson, 'An Exhibition by Four Melbourne Architects: Three Reviews'.

Upstairs Day presented a more cheeky, more casual landscape, where nothing was fully argued or closed for discussion. His drawings were not labelled at all, one photo was cut to emphasize the curves in the road and, perhaps, to deemphasize the regimentation and tyranny of regular frames, while his models were tacky and precariously mounted on coloured boards and cornices.<sup>32</sup>

Prior to establishing his own practice, Day worked with Romberg & Boyd

since 1967 and was a director at the time of Boyd's death in 1971. He had a brief architectural partnership with John Davey (1971-1973) in parallel with this own practice. Day commissioned John Gollings to photograph several recent buildings, some unfinished, to be framed as per a traditional artist's display to be hung on the gallery walls. Other parts of the exhibition were models of his buildings mounted on fabricated classical plaster columns as if providing gravitas despite their cardboard fabrication. Other frames contained reprints of some of his writings. The catch had been his late request to Gollings for photographs, which was generously agreed to but required that they be taken at night as Gollings was busy all day on commercial duties.

33. Gollings to Day, 'Melb 4 Again', 19 July 2021.

Gollings and Day spent nights touring recent projects. The photographic process involved Gollings using his large format camera with an open lens while Day 'washed' the building façades with a high-powered, hand-held photographer's lamp, moving across the façade on instruction, constructing a 'painted' image (See Figure 8). According to Gollings, the buildings were photographed on 5 September 1979 using this different lighting aesthetic than the earlier images of Edmond & Corrigan's Resurrection Church (1976) and Freedom Club Child Care (1977) in Keysborough.<sup>33</sup>



Figure 8: Burfurd House Hawthorn (1979). Architect Norman Day. Photographer John Gollings. Norman Day Archive.

34. Day, *Modern Houses Melbourne*.

While Day included architectural projects as per other members of the Melbourne Four, there were several more opaque, cryptic, and handwritten inclusions in his catalogue poster. The first is a hand scrawled question mark next to Day's membership of the RAI and a series of RAI membership associations that ended in 1977-78. Day had edited *Architect Magazine* for the Victorian Chapter of the RAI 1976-77 under the management of Brian Zouch, who also published *Architecture Australia* (for the single-issue Day was editor, and Zouch also published *Modern Houses*).<sup>34</sup> Day was controversial in his editorial post for *Architect* by not adhering to what Hogben eloquently refers to as "positivistic treatment" of architectural content established by the

34. Day, *Modern Houses Melbourne*.

35. Hogben, 'MAINTAINING AN IMAGE OF OBJECTIVITY'.

36. Lumsdaine, 'RAIA Notice of Reprimand'.

37. Day, 'How an Architect Charges 1 1/2% and Lives'.

38. Corrigan, 'Letters'.

39. Day, 'Collins Street Conservation'.

federal council of the RAIA in 1963.<sup>35</sup>

Interestingly *Architecture Australia* was to include a reference to the *Four Melbourne Architects* in the edition of *Architecture Australia* following the exhibition. Instead, Day was issued with a Notice of Reprimand and fined,<sup>36</sup> for his report on architectural practices that undercut the recommended fee scale (at that time) of 6% to win commissions.<sup>37</sup>

In response Corrigan wrote in support to the objections of the article in *Architect 45*:

Several articles, particularly the 1 per cent article, give our critics ammunition to shoot at us. Well, we can be certain that no one was hit ... A final word on the issuing of high calibre ammunition to our critics. Is it true that the Council has a contract out on Mr N Day? There are rumours of disqualification from the Institute membership, de-registration, the whole box, and dice. Has HQ noticed he is the only full-time architectural journalist in Australia? ... If our side had a little more "live" ammunition, there might be less apathy and defection from the ranks.<sup>38</sup>

Day was a leading participant in the Collins Street Defence Movement established by Evan Walker, who used this as a move from architectural practice (with Jackson Walker) to politics.<sup>39</sup> Hence the inclusion of the 'I care about Collins Street' sticker (See figure 12). Finally, the image of Micky Conlan from the Fitzroy Football Club. Day was/is a passionate supporter of the Fitzroy Football Club. Conlan was included in this because Fitzroy had won the Amco-Herald VFL Cup at Waverly Park on 20 June 1978 where the idea of the exhibition was first discussed with Day and Corrigan in attendance. Day describes this event as the first time the exhibition was discussed between them. Projects on the poster were Day House Hawthorn (1971), Gunner House, Rowland Flat, South Australia (1971), Rowland Flat, Roet House, Red Hill South (1978), and the Day House Armadale (1978), included in the exhibition were Pizzey House, Kew (1977); Milne House, Malvern (1978), and the Burfurd House, Hawthorn (1979).



Figure 9: Images of the signage to Day and Burgess (left) and images from the Norman Day exhibit. © Edmond and Corrigan, School of Architecture and Design RMIT University

## Edmond & Corrigan

McCaughey wrote of Edmond & Corrigan's contribution as:

40. McCaughey, 'Architects Throw off the Greyness and Add Humor'.

Autobiography can shape an architecture, and so Edmond & Corrigan paper their rooms with their cuttings and clippings to make an anti-exhibit exhibition. (Andy Warhol design his retrospective in New York to be seen in nine-minutes. You can see Corrigan's in one). Yale gossip and their entry for the National Archives Building uneasily rub shoulders with each other.<sup>40</sup>

Edmond & Corrigan papered their gallery rooms with photocopies and drawings of text, plans, images, and memorabilia and showered a set of images on a projector loop of their projects. Architectural works on display included the Resurrection Church Keysborough (1976); Amenities Black, Nagambie (1977); St Josephs Chapel, Surrey Hills (1978); Resurrection school, Keysborough (1978); Childcare Centre Keysborough (1978); Barber House, Carlton (1979). Other projects on display were the Archives competition Project, Canberra; and the design development stages of an Industrial Park and high-rise development, Yarraville; and the clubhouse for Sale Football Club, Sale. In addition to these were drawings and sketches for set design and costumes.

To celebrate the opening night a cake was made to replicate the RAI Victoria Chapter award that Edmond & Corrigan won for their Resurrection School project in Keysborough.



Figure 10: Room with Edmond & Corrigan's display. ©Edmond and Corrigan, School of Architecture and Design RMIT University



Figure 11: Cake representing both sides of the Bronze Medal won in the RAIA Vic Chapter 1979 Awards for the Resurrection School in Keysborough. Image in the background on the wall is of Evan Walker presenting the Bronze Medal to Maggie Edmond. © Edmond and Corrigan, School of Architecture and Design RMIT University

### Influences?

41. Peake, Drew, and Anderson, 'An Exhibition by Four Melbourne Architects: Three Reviews', 11.

42. *Five Architects*.

In Philip Drew's review of the exhibition in *Transition*, he wrote:

Melbourne architecture has changes since the Tavistock Place exhibition of 1964 [sic] – indeed much of the conventional wisdom of the sixties has now been overturned. This is illustrated by the 'Four Melbourne Architects' exhibition. No doubt it had the New York 'Five Architects' in mind and seeks to establish a similar purchase for the Melbourne Four as the New York event.<sup>41</sup> In response to this comparison with group known as the 'New York Five' (NY5),<sup>42</sup> Day wrote:

43. Day, 'NY5 & 4MA - NDA 29 June 2021', 29 June 2021.

*Four Melbourne Architects* was the antithesis of the NY5. The only similarities between these two occasions is that they are about architects who are located in proximity to each other as groups and each group is signified by a number. The contrasts are clearer. NY5 shared common architectural beliefs, and they came together in 1969 to prescribe their manifesto which led to the publication of their (white covered) book in 1972 (there was no earlier exhibition).<sup>43</sup>

44. Day, 'Letter to John Andrews', 7 August 1979.

In a letter to John Andrews (then head of the Australia Council Visual Arts Board), Day wrote of the exhibition "I hope it will be the start of many other similar exhibitions in Australia. I might add, we don't see it as a touting for work thing, but rather a show of some new directions in architecture". This letter was attached to the application to the Australia Council for financial support from the exhibition.<sup>44</sup>

### 1970s – Modernism Passed

45. Venturi, Scott Brown, and Izenour, *Learning from Las Vegas*.

By the late 1970s, architects had developed an awareness of the failures of International Modernism as a vehicle for social and environmental change. The Venturi team in Philadelphia had described this shift in values, for urban design and architecture, in their publications *Complexity and Contradiction in Architecture* (1966) and *Learning From Las Vegas* (1972).<sup>45</sup> In the Australian context, Robin Boyd died on 16 October 1971, and his last building, Neptune's Fishbowl (Melbourne, opened on 24 November 1970), was the final vision of a singular vision Modernist building at that time, and it could be argued signalled the end of Modernism in Australia.<sup>46</sup>

46. Day and Day, 'Neptune's Fishbowl: Australia's First Post-Modern Building?'

47. Jencks, *The Language of Post-Modern Architecture*.

Modernism passed away in the 1970s through two iconic clinical interventions: one was the explosive demolition of huge social housing blocks represented by the Pruitt-Igoe housing scheme. Charles Jencks had triumphantly announced this expiration as having occurred in an explosive moment.<sup>47</sup>

### Conclusion

48. Webster, Day, and Raisbeck, 'Day in The Age: A Critical Observation of Architecture'.

This exhibition came about predominantly because the four architects, were aware of substantial changes to their profession and ambitious to describe a new vision for architecture, one related to place, people, and locale. The culture of global and International Modernism had ended. The exhibition was intended to describe, to the profession and general public, a realigned proposition for architecture that the participants proposed with their creative work, designed to establish a fresh paradigm for architectural practice and production.

These architects were largely interested in exploring and revising the orthodox modernism of those architects who had been trained prior to the mid-1960s, with an emphasis on the human condition,<sup>48</sup> and heralding in postmodernism in Australia. *Four Melbourne Architects* was the first of many exhibitions that followed during that period, which became vehicles for public engagement with this new architecture and those creating it, where collaboration, inclusion, and connectivity informed designers.



Figure 12: Catalogue poster (front) Peter Crone Four Melbourne Architects (Norman Day Archive)



Figure 13: Catalogue poster (front) Greg Burgess Four Melbourne Architects (Norman Day Archive)



Figure 14: Catalogue poster Norman Day Four Melbourne Architects (Norman Day Archive)



Figure 15: Catalogue poster Edmond & Corrigan Four Melbourne Architects (Norman Day Archive)

# Provocation, Ultra-Resistance and Representation: A Case Study-Based Research Course & the Student Exhibition 'Re-Presented'

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## Keywords

Architectural Education  
Pedagogy  
Heritage  
UQU Complex

## Abstract

The core premise of the paper focuses on approaching a specific case study as the subject and the object of an architectural research heritage course, in this case, the UQ Union complex (UQU). During the summer semester 2020 – 2021, thirteen students in the M. Arch program at the University of Queensland (UQ) studied and interpreted the tangible and intangible heritages of the UQU. Once an award-winning project back in the 1960s, the entire complex faced the threat of demolition by the university's proposed master plan in 2017. There is no doubt that the demolition proposal was an 'Ultra' decision. The process followed an 'Ultra' reaction in the form of a campaign for saving UQU, supported by hundreds of activists, UQ staff, students, and alumni. Therefore, an 'Ultra' synthesis emerged from this dialectic. Besides the pedagogical approaches of the course, the site's rich history shaped an important section of the paper. Given the spirit of the recent period, the 'ultra-temporal' and uncertain times caused by the COVID-19 pandemic created an ambiguous situation, and there is a major pause for the demolition proposal. The new response from the UQ administration was also briefly discussed at the end of the paper.

Within the course, the curiosity to have an in-depth understanding of a built environment transformed and evolved. Thus, the outcome was two exhibitions titled 're-Presented' as a result of this collective work. The course created the opportunity for students to think critically about the role of the UQU Complex within the new master plan and re-image its position in the university's future by their provocative proposals. These innovative and creative exhibition pieces went beyond conventional methods of documentation. The paper focuses on the students' journey and how they unpacked the site's history. It explains how their ideas re-presented a daily built environment that has dispatched from its past and alienated among its users. In summary, an 'Ultra' perspective, such as the one exemplified by the described course, comes back in a full circle.

## Pedagogical Methods and Utilised Materials for the Course

1. Ashraf M. A. Salama, and eBooks Corporation. *Spatial Design Education New Directions for Pedagogy in Architecture and Beyond*. (Burlington: Ashgate, 2015), 47.

The main focus of the course relies on critical thinking and creative representation. In order to achieve these goals, the structure of the lectures was oriented on fundamental arguments, such as 'collective memory', 'heritage', 'seeing things differently', 'interpretation' and 'reproduction'. Architecture as a discipline and a profession experiences a continuous process of transformation.<sup>1</sup> Architects are involved in diverse disciplines varying from engineering to different fields in art. With the emergence of new approaches and technologies, there is also a crucial rise for interdisciplinary and multidisciplinary fields related to architecture. From curating exhibitions to Computer Generated Imagery (CGI) and Virtual Reality (VR), from engineering to artistic works, architectural students are more involved in various fields that create the opportunity to be active in different professions. Division of labour and tendencies for professionalism also catalyses this process. Thus, this question comes to mind: What is the agenda of architectural education and how it is responding to all these changes? Did Architectural schools align their curriculums and programs with the recent transformations?

2. AR editos, "Radical Pedagogies in Architectural Education", 28 September 2012, <https://www.architectural-review.com/today/radical-pedagogies-in-architectural-education>

The offered course addresses the 'radical' approach as its principal agenda and guideline. Going back to its origin in Latin *radice*, the term refers to the root and reaches the foundations of the elements.<sup>2</sup> Therefore, students were challenged by thinking about the roots of terminologies at every stage of the course. Indeed, the radical approach empowered the students to have a critical perspective on the materials related to the course subject. In addition to the radical approach, active learning was also the other core tool. It raised the student engagements during the lecture and tutorial sessions. The dynamic nature of discussions catalysed the conversations and created the opportunity for students to share their ideas in a non-judgmental and open environment at every stage of the course. Generally, discussions started in paired groups and ended with a more extensive conversation among the whole cohort. These discussions included materials from course readings, short debates on keywords and terminologies, commenting and exploring tasks and ideas.<sup>3</sup> Terms such as 'heritage', 'collective memory', 'place vs space', 'abstraction', 'self-representation', 'alienation' were among these examples.

3. Ashraf M. A. Salama, and eBooks Corporation. *Spatial Design Education New Directions for Pedagogy in Architecture and Beyond*. (Burlington: Ashgate, 2015), 265.

4. Ashraf M. A. Salama, and eBooks Corporation. *Spatial Design Education New Directions for Pedagogy in Architecture and Beyond*. (Burlington: Ashgate, 2015), 265.

During the process, the instructor used to take the role of the facilitator for catalysing discussions. Active learning is one of the most effective alternatives regarding the one-way transfer of knowledge. In the case of lecturing, the amount of retained information starts to decline after ten minutes.<sup>4</sup> However, active learning develops a higher order of thinking in analysing, synthesising, and evaluating a broad spectrum of topics.<sup>5</sup> The high level of engagement and involvement resembles the famous quote from Confucius saying, "Tell me and I will forget, show me, and I may remember; involve me, and I will understand." The experimental nature of this pedagogical approach extended and resulted in dynamic and various outcomes for every lecture and tutorial session. Therefore, it created alternative methods in approaching the subject of the course in every student that developed their own unique idea and methodology in studying the case study. These readings of the UQU Complex depended on internal and external factors circulating during the course. It influenced the students' understanding of the case study as the subject and object of the course.

5. Ashraf M. A. Salama, and eBooks Corporation. *Spatial Design Education New Directions for Pedagogy in Architecture and Beyond*. (Burlington: Ashgate, 2015), 265.

## Theoretical Backgrounds

6. Maurice Halbwachs, *On Collective Memory*, ed. Lewis A. Coser (Chicago: University of Chicago Press, 1992). 1 – 34.

7. Cuarón, Alfonso, director. 2018, *Roma*, Netflix.

8. Michel Foucault. *The Order of Things: an Archaeology of the Human Sciences*. (London ; New York: Routledge, 2002), 3 – 18.

The course starts with the question of ‘what is memory?’, ‘how we remember the past?’, ‘what is the role of collectivity in human memory?’. All questions are followed by paired conversations in the classroom and finalised by a group discussion. The main goal is creating awareness about ‘collective memory’ from Halbwach’s point of view that human memory can only function within a collective context. It is always selective, and every different group can have their narratives from various incidents.<sup>6</sup> It is followed by making sense and connecting with the built environment and spatial mechanisms to form the memory. Later on, different approaches in restoration and conservation using some of the recent examples are covered. Using cinematography as a powerful tool to demonstrate the memory, students are asked to watch the movie *Roma*<sup>7</sup> and reflect their interpretation in any medium possible as their first warm-up activity. The second lecture, titled “Interpretation with Visual Materials”, gives a brief history of photography and discusses representation tools by referring the Flusser’s ideas about the image and imagination. The third and last lecture, titled “Abstraction and Self-Representation”, explores thought-provoking approaches and how to challenge the observers’ preconditioned perceptions of reality. This part finishes with a group discussion on the first chapter of “The Order of Things”<sup>8</sup> on *Las Meninas* by Michel Foucault.

9. Charles Merewether. *The Archive*. (London : Cambridge, Mass.: Whitechapel ; MIT Press, 2006)

10. Dr Jeffrey Rickertt is a librarian at UQ Fryer library.

As part of the active learning process within the second half of the course, all students are meant to cover one chapter of the book titled “The Archive, Documents of Contemporary Art”<sup>9</sup>, edited by Charles Merewether. Students share their interpretation and understanding of each chapter and get familiar with working on archives. Everyone takes the role of sharing the summary of the dedicated chapter, including the instructor himself. The later section highlights the importance of the case study regarding its tangible and intangible heritage, followed by two site visits and a lecture by the expert on the field. The guest lecturer, Dr Jeffrey Rickertt, also launched the Save UQU Complex campaign and lodged the heritage application of UQU Complex at Queensland Heritage Council.<sup>10</sup>

## Significance of the Case Study – An Overview

11. Alice Hampson, Janina Gosseye, “Healthy Minds in Healthy Bodies”, in *Hot Modernism Queensland Architecture 1945 – 1975*, ed. John Macarthur, Deborah van der Plaats, Janina Gosseye, Andrew Wilson (London: Artifice Books on Architecture, 2015), 239.

During the 1960s, University campuses in Australia were primarily the byproduct of a more national plan for ‘educating the masses’. As Hampson and Gosseye highlighted, this campaign relied on expanding two ‘new’ architectural typologies: the university campus and the public lending library.<sup>11</sup> Within the same period, the UQ Student Union (UQU) Complex was one of the few major developments on the St Lucia campus located outside the original Great Court, prefacing the eastern expansion of the campus (Fig.1). Designed in the 1960s by Queensland architect Stephen Trotter, the UQ Student Union Complex is characteristic of prevailing attitudes to the environment, equity and access, an exemplar of modernism at the same time as it integrated regional elements associated with the subtropical climate in South-East Queensland. The UQU Complex was highly regarded as a showpiece of a forward-thinking university, drawing the following compliment from the Vice-Chancellor of the time, Sir Fred Schonell: “We think it is a

12. Professor F.J. Schonell, letter to Messrs. Fulton, Collin & Partners, August 30, 1961.

13. Robinson, Clare. "Architecture in Support of Citizenry: Vernon DeMars and the Berkeley Student Union." *Journal of Architectural Education*, 70, no. 2 (2016): 236–46. <https://doi.org/10.1080/10464883.2016.1197677>.

magnificent building, both functionally and aesthetically, and we never tire of showing it to visitors from all over the world."<sup>12</sup> (Fig.2)

One of the most significant influences of the UQU Complex was transforming the concept of public space in Brisbane. These transformations occurred in other parts of the world within the university campuses as well, especially American universities. Spatialisation of politics in the public spaces was inevitable. UC Berkeley campus was a clear example. For the project architects DeMars, Hardison, and Halprin, the UC Berkeley campus was a combination of long-standing ideas about social education with the latest innovations concerning urbanism and civic participation.<sup>13</sup>



Figure 1: Student Union Complex under construction c 1959 (Source: UQ Archives, s909 p116a)

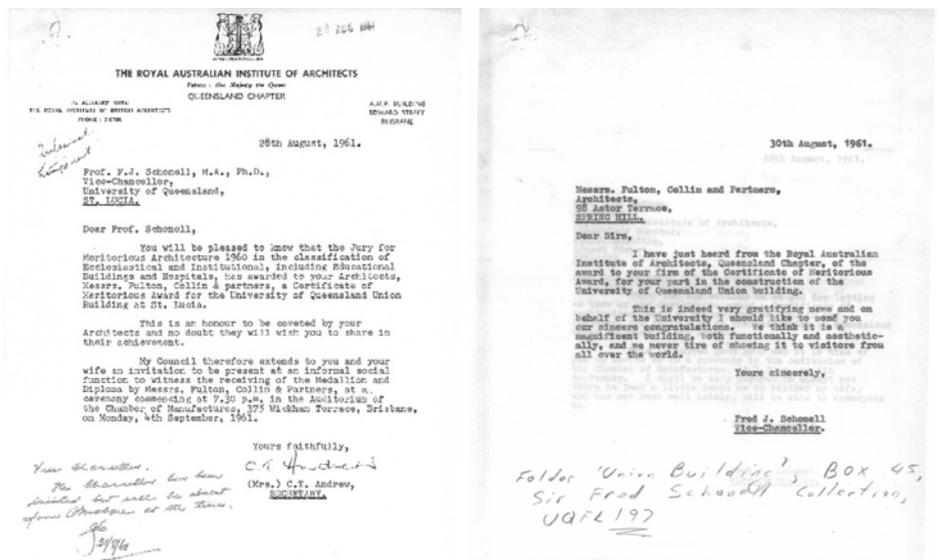


Figure 1: The letter of Royal Australian Institute of Architects to the Vice-Chancellor of time, Sir Fred Schonell, and his letter to the project's architect. (Source: "Folder' Union Building', Box 45, Schonell, F. Sir Fred J. Schonell Papers, 1941." Ide

14. Robinson, Clare. "Architecture in Support of Citizenry: Vernon DeMars and the Berkeley Student Union." *Journal of Architectural Education*, 70, no. 2 (2016): 236–46. <https://doi.org/10.1080/10464883.2016.1197677>

As Robinson framed for the UC Berkeley: "The distinction between cultural and political citizenship was important because the variety of "urban" spaces central to the architects' design concept allowed for spontaneous and spirited student citizenship that included both normative (cultural) as well as undesirable (political) student activities."<sup>14</sup> The same concept was applicable to the UQU complex.

The complex established a platform for mutual respect, where students from all races, classes, ideologies and ethnic groups could expect to be treated with dignity. This was a utopian dream for those at the time who were fighting for equality. Students could gather to practise freedom of speech and exercise their right to freely debate ideas, ideally, without judgement. The flexible character of the space enabled students to transform indoor and liminal spaces according to their needs. In its original format, the central space was open and flexible, creating a space suitable for gatherings. Later inclusion of fixed tables handicapped this type of activity. The whole complex, including the relaxation blocks, the refectory, music rooms and, more importantly, the Schonell Theatre, were pioneering approaches to leisure activities at the time for an Australian University campus. For generations, these experiences became memorable associations for UQ staff, students and alumni. (Fig.3)



Figure 3: Student Union Complex Ground Floor Plan (Source: Fryer Library Collection: Architect's Drawings & Plans, Folder 204, UQFL194)

15. For more information and details refer to: Anne Richards, *Book of Doors*, Toombul, Queensland: AndAlso Books, 2020.

16. Ali Rad Yousefnia, Kelly Greenop, Carroll Go-Sam, Chris Landorf, Mark Jones, "History of the UQ Student Union Complex (Indigenous perspective)", unpublished report, May 2021.

17. A suggested early name for the radio station was 4UM-FM, that is Forum FM, possibly in reference to the UQ Union Forum.

In addition to leisure and entertainment, the UQ Student Union Complex has strong associations with significant protests and political demonstrations in the 1960s and 1970s (Fig 4), especially resistance against racism toward Aboriginal and Torres Strait Islander people. The history of organised protests at the UQ Student Union Complex goes back to the 1960s. Although Joh Bjelke-Peterson's Country/National Party State government tried to limit marches and protests by imposing strict rules for permits, student groups and associations, such as the Vietnam Action Committee and the leaders of the Civil Liberties March at UQ successfully managed large gatherings at the UQ Student Union Complex and its Forum area.<sup>15</sup> On many occasions, these large gatherings marched from the St Lucia campus along Coronation Drive to Roma Street Forum in the city. Along with the anti-war demonstrations, such as the moratorium march in 1970, racial justice activities and resistance to racism became an inseparable part of the history of the UQ Student Union Complex.<sup>16</sup> One of the influential occupants of the UQ Student Union Complex was the radio station 4ZZZ,<sup>17</sup> which took the University of Queensland's students to a broad audience across Brisbane. With new FM radio technology,

18. Sinnamon, Myles, 2015. "Brisbane Radio Station 4ZZZ – 40th Anniversary." John Oxley Library blog, <https://www.slq.qld.gov.au/blog/brisbane-radio-station-4zzz-40th-anniversary>, viewed 2 June 2021.

19. Radical Times, 2021. "History of 4ZZZ"; <http://radicaltimes.info/PDF/4ZZZhistory.pdf>, viewed 2 June 2021.

4ZZZ created opportunities for simultaneous interaction with listeners during live programs. Since the first broadcast on December 8th 1975, 4ZZZ has fostered alternative music and provided a voice for cultural minorities and independent journalism.<sup>18</sup> The 4ZZZ agenda was reactive rather than prescriptive, responding to requests and supporting the development of unique and nationally significant band culture in Brisbane.<sup>19</sup>



Figure 4: Student Protest outside the UQ Student Union Complex in 1969 (Source: UQ Archives, UQA S177 p1390b)

## Results and Outcomes

### - Exhibitions

The alternative approach of the course vis a vis the offered methodological tools resulted in creative and, in some cases, new modes of representation for the students' final submissions. Compared to the conventional architectural drawings and representations, these new modes explored and experienced new and creative methods. Two exhibitions can be highlighted as the main outcomes of the course during the summer semester 2020 – 2021. On January 27th, 2021, the main exhibition of the course opened at the UQ school of architecture, Zelman Cowen building titled "UQ Union Complex: re- Presented". The exhibition's title was proposed and selected by anonymous voting among the students themselves. Each student was asked to describe their work in one paragraph presented as a didactic next to their exhibition pieces.

Although it is not possible to cover all works in this paper, some of the selected works are covered briefly. Fraser Galloway uses two different modes of representation and focuses on specific façade elements as a strategic tool for design principles of the UQ Union complex by the projects' architect. (Fig.5)

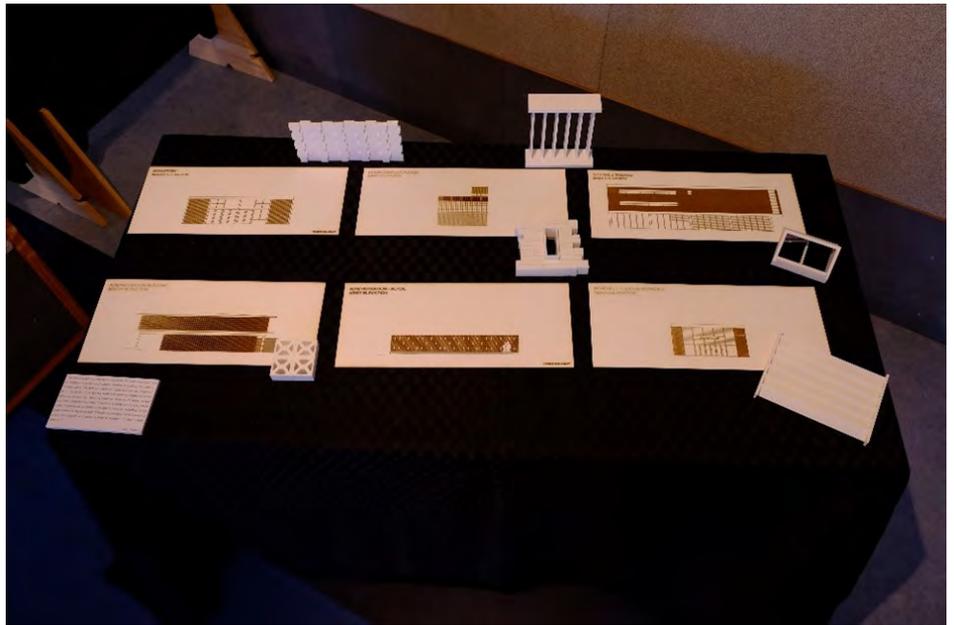


Figure 5: Façade elements of the UQ Union Complex. (Image by the author)

Galloway describes his work as “the following work examines the heritage of the UQ Union Complex through an investigation of the unique facade elements designed by the architect, Stephen Trotter. This particular aspect of tangible heritage was chosen as it forms the identity of the building, which holds great significance within the history of the university. Trotter’s approach to climate-specific design provided a well-functioning building within Brisbane’s sub-tropical climate and gave the Union complex a strong identity which contributed to the strength of the UQ Student Union. By displaying each 3D facade element alongside its elevation, it is clear how the parts work within the whole in the context of Trotter’s design principles.”

Another critical component for both exhibitions came from Thomas Webster. Webster used sound files from 444Z’s archives in order to highlight the essential role of the radio station during its broadcasting time from the UQ Union Complex. ‘Extending the Reach of Place’ is described as an “...exhibition piece consist(ing) of various audio recordings from the period in which the 4ZZZ radio studio broadcast from the UQ Union Complex. It demonstrates the effectiveness of audio broadcast in recreating the feeling of place, despite dislocation from the physical spaces. The arrangement of speakers correlates to particular social issues at the time or to particular places within the Union Complex. The overlapping and constantly changing sounds recreate an audio environment that someone would experience when moving through the various spaces of the Union Complex, and one feels like culturally and socially they are within that place.”



Figure 6: Dr Anne Richards, the author of 'A Book of Doors' visiting the Exhibition on Opening day with Thomas Webster and Adele Mammone (Image by the author)

20. The video played during the SAHANZ 38th annual conference as part of the author's presentation at day two, room three, Design Education and Practice session. Refer to conference website and recorded presentations for further information. <https://www.sahanz2021.com/>

As one of the most influential locations for protests and social demonstrations, the forum area was covered by several students as their focal point. YuJing (Shirley) Zhang illustrated the changes within the Forum area by using animation techniques and mixing different types of archival materials such as images, videos, maps, sound files for showing the structural vis a vis socio-cultural transformations happening around the UQ Union building.<sup>20</sup> She described her work as "This collage animation illustrates how the UQ Union Complex has evolved throughout the years as well as the history and student culture that comes with it. It demonstrates that the physical changes of the place had a significant impact on the activities of the Forum and why its days of glory did not carry through to today. Narration by an Aboriginal leader and activist Sam Watson, and Past student Di Zetlin. WARNING: Aboriginal and Torres Strait Islander people are warned that the following audio recording contains the name and voice of a deceased person."



Figure 7: Exhibition space and some of the student's works focusing on Schonell Theatre. (Image by the author)

Another critical location within the UQU Complex was the Schonell Theatre. The theatre was reflected in several exhibition pieces (Fig.7). In terms of its tangible heritage and architectural values, Lachlan Kennedy came up with a sectional model in order to focus on the spatial organisation of the theatre's interior elements. (Fig.8) He also used the exterior of the sectional model to show the posters of the events that took place in the Schonell Theatres' history. Kennedy describes his work as "the aim of this exhibition piece is to showcase the elaborate architecture found within the building's interior; where angled timber ceiling panels and arched brick colonnades to the side aisles contrast with the rectilinear external form of the building. In addition, original posters for productions, stage plays and musicals that have been held at The Schonell have been applied to the lower façade of the model and represent the rich cultural heritage of the site. Through layering this intangible heritage with the Stephen Trotter designed architecture, it is hoped that this exhibition piece will provoke a greater appreciation for both the building and its cultural significance."



Figure 8: Schonell Theatre Section 1:100. (Image by the author)

In another exhibition piece and student submission, Damien Baptiste focused on the intangible heritage and historical background of the Schonell theatre and juxtaposed it with the theatres' architectural elements. He titled his work 'The theatre of Memory' and described it as "...a three-dimensional interactive artwork which represents the tangible and intangible aspects of the Schonell Theatre. The artwork is made up of layers, each featuring manipulated materials representing the theatre. Each layer presents a cutout section of a larger image, and when viewed together, becomes the hero image from the play 'The Bacchoi', which was the opening production at the Schonell Theatre in 1970. The deconstructed photograph celebrates both the individuality of the independent members of the student union, as well as the power of the collective. It is only when the viewer is invited to engage with the work that perspective becomes a critical element in the success of the artwork." (Fig. 9 and 10)



Figures 9 and 10: 'The theatre of Memory'. (Image by the author)r)

#### - Media Impact

21. The full file of the broadcast on 4ZZZ can be found at: "[https://soundcloud.com/ian-curr/the-university-is-a-business-a-very-bad-business?fbclid=IwAR0kpts6cFzC8Od96UI87JKuVVWCZzCU\\_PNT-yfBQ10pxd99ez7krxJeHfQ](https://soundcloud.com/ian-curr/the-university-is-a-business-a-very-bad-business?fbclid=IwAR0kpts6cFzC8Od96UI87JKuVVWCZzCU_PNT-yfBQ10pxd99ez7krxJeHfQ)". Accessed in July 23rd, 2021.

22. Ian Curr, "<https://workersbusstelegraph.com.au/essays-2/analysis/pshift/>" Accessed in July 23rd, 2021.

Similar to the UQU saving campaign, both exhibitions got the attention of the local media. Both exhibitions were reflected in the eyes of the public on various platforms. On February 8th, 2021, Ian Curr interviewed the course coordinator and two students, Thomas Webster and Adele Mammone, for his program 'Paradigm Shift'.<sup>21</sup> 'Paradigm shift' is a radio program broadcasting on community radio 4ZZZ Fm 102 Fridays at noon. The co-host Ian Curr has an immensely active background in UQ Union back in his student years. He is one of the witnesses to all social, cultural, and political transformations taking place around the UQU Complex. The radio program identifies itself as "we challenge the assumptions of current society, to resist oppression and investigate alternative ways of living for a world based on justice, solidarity and sustainability."<sup>22</sup>

Alongside the interviews published on the programs' SoundCloud profile, the course coordinator joined the live broadcast at the radio station and answered the host's questions. At the same time, new discussions were raised through the dynamic nature of the debates. The later discussions about the UQU Complex created lots of uncertainties by continuous updates on related information.



Figures 11: Ian Curr standing next to his image in the Moratorium March of 1970 against Vietnam war used by YuJing (Shirley) Zhang for her project. (Image by the author)

- New approaches of the University towards the UQ Union complex after COVID - 19

23. Meherzad B. Shroff and Julian Worrall. "Building Upon: A Designer's Approach to Adaptive Reuse." In *Proceedings of the Society of Architectural Historians Australia and New Zealand: 37, What If? What Next? Speculations on History's Futures*, edited by Kate Hislop and Hannah Lewi, 500-514. Perth: SAHANZ, 2021.

24. Meherzad B. Shroff and Julian Worrall. "Building Upon: A Designer's Approach to Adaptive Reuse." In *Proceedings of the Society of Architectural Historians Australia and New Zealand: 37, What If? What Next? Speculations on History's Futures*, edited by Kate Hislop and Hannah Lewi, 500-514. Perth: SAHANZ, 2021.

COVID – 19 changed all aspects of life in 2020, challenged previous norms and shifted decision making processes. This process influenced the decisions related to many construction projects. From a heritage and preservation point of view, demolition is mainly considered one of the last options to create a clean slot for a new building. Within a comparative example to University campuses and Union Complexes, Meherzad B. Shroff's doctoral research demonstrates alternatives for redevelopment plans of the Union complex at the University of Adelaide. Shroff frames his work as it "seeks to put forward an alternative approach to those that emphasise a stable understanding of existing buildings as material artefact."<sup>23</sup> Instead of entirely demolishing the Union Complex, he suggests adaptive reuse. By studying the existing building, his design proposals collect the information from the existing buildings and built environment and conceptualise the possible scenarios within the new proposal.<sup>24</sup>

In the case of UQ, the post-pandemic era forced officials to re-evaluate the university's master plan, which was proposed in 2017. The previous plan included the demolition of the whole building for the UQU Complex at the St Lucia campus. UQ's new Vice-Chancellor, Professor Deborah Terry, went on air for an interview with ABC Radio Brisbane on July 8th, 2021. The host opened the conversation by saying, "Guess what happened? After years of campaigning to save the University of Queensland's Schonell Theatre, a decision has been made to preserve it. A controversial redevelopment proposal for the redevelopment of UQ Union complex at St Lucia campus looks like it has been scrapped and not it is back to the drawing board for the University of Queensland's administration." The host directly opened the conversation by asking the

question “what persuaded you to change your mind?” from the Vice-Chancellor. The Vice-chancellor mentioned the impacts of the COVID and the uncertainties happening in this period. Later on, she added: “... we took that opportunity to basically freeze our capital expenditure that is on projects that haven’t started, and that was a very appropriate decision to have made. That has allowed us to go back to the first principals. Because obviously, as we come out of this COVID situation, we are looking to welcome our students on the campus as quickly as possible to support them, and making sure that the student complex, which is such an important part of this campus, delivers for our students is something that we are committed to.” For the question of “Will the Schonell Theatre will be preserved?” Vice-Chancellor again highlighted about going back to the first principles and working with all parties especially UQ Union and alumni “to really understand how we should be redeveloping the student complex. It will be redeveloped and what we have committed to is in the redevelopment, and I am not going to pre-end now what it will end up looking like because we are not nearly at that stage. But we have committed to obviously that space will include the Schonell Theatre. It will include a drama studio. It will include facilities and spaces for UQ Union, which they will manage and control and of course, we are committing to ensuring that there is space like the Forum that is designed and works in a way that brings our students together.” Compared to the previous redevelopment plan in 2017, the early stages of the new decisions renders a probably better design proposal, and the later statements sound promising. It shows a significant shift within the university administration that all derived from the fast-changing nature of the circumstances in the post-pandemic era. It also shows that the new management started to value the local history by considering the tangible and intangible heritage of the UQU complex, which was the principal subject of the course examined by the students and manifested in two different exhibitions.

## **Conclusion**

The paper focuses on the student's journey and how they unpacked the site's history, how they came up with creative ideas in terms of representing a daily built environment that dispatched from its past and alienated among its users. The circumstances resulting from a worldwide pandemic were inevitable, and university management had to make a vital decision regarding the new norms and conditions of the post-pandemic era. Prior to the new Vice-chancellor's announcement, the course created an active learning space through the tangible and intangible heritage of the site. It enabled students to document the UQ Union building and complex in creative methods and raised awareness about the built environment. It also offered an experimental platform for the students to go back to the foundations of the norms, facts and terminologies and redefine them by having a radical approach. The 'Ultra' thesis of demolishing the UQ Union Building faced an 'Ultra' anti-thesis of saving the UQU complex campaign. Their clash opened the discussion for 'Ultra' and provocative synthesis for debates, which the offered course was part of it. Finally, it comes back in a full circle as new decisions are made by the new Vice-Chancellor and new hopes and promises about saving (even maybe partly) the UQU Complex and acknowledging its importance within the history of Brisbane and the University of Queensland.

# Designing a Critical Voice: Discourse and the Victorian Architectural Students Society (VASS), 1907-1961

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## Keywords

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## Abstract

Students are a necessary part of the architecture profession. Their training and preparation have long been key to maintaining the business and culture of architecture, and in doing so perpetuating traditional territories that control the institutionalisation of a profession. Students have also created their own associations, often mirroring, and at the instigation of, their parent organizations. More often than not though, in addition to acting as social binders and playing out the role of disciplinary 'club', these associations have developed a critical voice, urging change and injecting critique: in short, setting the basis for the framing of a local discourse.

Using its publications as primary source material, this paper explores the critical activities of the Victorian Architectural Students Society (VASS), which developed under the auspices of the Royal Victorian Institute of Architects (RVIA). VASS published its annual from 1908, which evolved by 1932 to become *Lines* and, then additionally in 1939, students Robin Boyd and Roy Simpson expanded VASS's publishing remit, producing the oft-controversial fold-away pamphlet *Smudges* that infamously gave 'blots' and 'bouquets' to new buildings. In 1947, VASS published *Victorian Modern*, Australia's first polemical history of modern architecture and in 1952, it was the first publisher of the influential journal, *Architecture and Arts*. This paper examines the shifting ambitions of VASS, its chief protagonists, the role of graphics and the deft blending of the social, satirical and the critical that eventually framed and shaped Victoria's architecture culture after World War II.

## Introduction

The training and preparation of students has long been essential to maintaining the business and culture of architecture. The architecture profession has a long history of careful management and control of its traditional territories and boundaries that has secured its institutionalisation and sustained its membership. In this regard, institutes of architects are no different from those associated with medicine and the law. Students within those professions have also created their own associations, often mirroring (and at the instigation of) their parent organizations. More often than not though, in addition to acting as social binders and playing out the role of disciplinary 'club', these associations, impatient with their elders, have developed a critical voice, urging change and injecting critique: in short, setting the basis for the framing of a productive local discourse.

Using its publications as primary source material, this paper explores the critical activities of the Victorian Architectural Students Society (VASS), from its inception in 1907 under the auspices of the Royal Victorian Institute of Architects (RVIA) to its uncertain demise around 1961. From annual journal to pamphlet-like broadsheet, from monograph to national journal, the publication ambitions of VASS reflected the anxiety felt by its members that the profession should do more to cultivate a vibrant local architecture culture. This paper examines the developing publication agenda of VASS, its chief protagonists, the role of graphics and the deft blending of the social, satirical and the critical that eventually framed and shaped Victoria's architecture culture after World War II.

1. M.H. Port, "Founders of the Royal Institute of British Architects", *Oxford Dictionary of National Biography* (online). See <https://www.oxforddnb.com/view/10.1093/ref:odnb/9780198614128.001.0001/odnb-9780198614128-e-97265>

2. J.M. Freeland, *The Making of a Profession: A History of the Growth and Work of the Architectural Institutes in Australia* (Sydney: Angus and Robertson, 1971), 104, 215.

3. Edward Bottoms, "The Purple Patch to Sexy machinery: 100 years of AA Student Journals", *AArchitecture*, 1 (Summer 2006): 4-7.

Historically, students had been of key concern to practicing architects and their subsequent professional bodies since the early nineteenth century. In England in 1817, for example, in the absence of formal architectural schools and the reliance on the Royal Academy's lecture series to 'educate', Thomas Leverton Donaldson (1795-1885), later founder of the Royal Institute of British Architects (RIBA) in 1834 and the first professor of architecture at University College London, organized an architectural students society to pressure the Academy for better provision for architectural training but it was a venture that met with little success.<sup>1</sup> In Australia, a group of architectural students met in 1888 to form the 'Queensland Articled Pupils' Association' and this was prior to the formation of the Queensland Institute of Architects (QIA) later that year. It was the same in South Australia: a 'Students' Association' was formed prior to the establishment of the South Australian Institute of Architects (SAIA) in 1886. Likewise in 1905 in New South Wales, the Architectural Students Association came into being independent of the local institute, until 1919 when IANSW formally took it under its wing.<sup>2</sup>

As architectural education became more formalized, student associations also formed within those institutions and some began to publish. Students at London's Architectural Association (AA), for example, published *The Purple Patch* or *The Tufton Street Tatler* from 1905-9, then with typically peripatetic interval, *Harlequinade* (1923-6), *Number 35* (1928-30) and between 1938 and 1939, four issues of *Focus*, which, in addition to contributions from students, included articles by Le Corbusier, Laszlo Moholy-Nagy and Naum Gabo amongst others.<sup>3</sup> From the outset, these AA student journals oscillated between,

4. Elizabeth Darling, "Focus: A Little Magazine and Architectural Modernism in 1930s Britain", *The Journal of Modern Periodical Studies*, 3, no. 1 (2012): 39-63.

5. "Exhibitions: TASK: A Magazine for the Younger Generation of Architecture" (online). See <https://www.gsd.harvard.edu/exhibition/i-mpei-at-the-gsd/>

6. Clive B. Fenton, "Plan, A Student Journal of Ambition and Anxiety", in Iain Boyd-Whyte, ed., *Man-Made Future: planning, education and design in mid-twentieth century Britain* (London: Routledge, 2007), 174-190.

7. Beatriz Colomina et al, eds., *Clip, stamp, fold: the radical architecture of little magazines, 196X to 197X* (Barcelona: Actar, 2010), 8.

on the one hand, jolly and satirical accounts of AA politics and, on the other, in the case of Focus, earnest entreaties for the AA curriculum to embrace modernist principles.<sup>4</sup> In the United States, Harvard Graduate School of Design (GSD) students launched *TASK* in the US summer of 1941. Like Focus, it too had a short life, with just six issues printed to 1945, with a final double issue in 1948. With war looming, *TASK* editors in their first issue stated that its aim was an "expression of students who realize that architects today are unaware of the rapidly changing needs of society or unable to answer them."<sup>5</sup> A similar sense of urgency for young voices to express their desires and discontent lay behind the spiral-bound *PLAN* (1948-50, 51) produced by the Architectural Students Association (UK).<sup>6</sup> These little student magazines were vital and different from other student or graduate-edited publications like *Perspecta* (1952-) at Yale and host of others thereafter, which emulated academic journals but included design criticism, architectural history and building reviews, and with contributions written largely by academic and critics and not the students themselves. In *Clip, stamp, fold: the radical architecture of little magazines, 196X to 197X*, Beatrix Colomina and her fellow editors highlight the significance of the 1960s "moments of littleness" and their legacy as "the surprisingly permanent but almost invisible record of the pulse of a moment" in their trans-Atlantic survey of radical pedagogies explored through the medium of the little magazine.<sup>7</sup>

However, the publication ventures of the Victorian Architectural Students' Society (VASS) between 1908 and 1961 were different: VASS was not aligned with an educational institution; its longevity as a society meant that its publications and their nature were diverse and attuned specifically to their times; and they were established, designed and written (at least from their beginnings) exclusively by students. As such, in terms of student activity before 1960, they represent a unique phenomenon, overlooked geographically and institutionally, and yet, with surprising international echo.

## VASS beginnings

The Victorian Architectural Students Society (VASS) of the Royal Victorian Institute of Architects (RVIA) was formed in early 1907. Rules for the society were drawn up and approved by the RVIA and a 'syllabus' (program) was printed. VASS held its first ordinary general meeting at the Institute Rooms at 57-59 Swanston Street, Melbourne on 14 May 1907, and in a celebratory mood, "Business was dispensed with for the occasion; several musical items were rendered, and an excellent supper was provided by Mr C.A. D'Ebro, Vice-President, who was the chairman for the evening."<sup>8</sup> At its inception, there was a paternal aspect to the RVIA's relationship with VASS. RVIA President Francis J. Smart declared that:

I would like to say one word about the internal development of the Students' Society. We have every reason to be pleased with the movement. The students have formed an improvement Society and are to hold regular meetings in this room, give essays, have debates and so forth, and visit works and places of interest. The younger men should remember

8. "Victorian Architectural Students' Society of the R.V.I.A.", *Journal of the Proceedings of the RVIA*, 5, no. 3 (July 1907): 97.

9. Francis J. Smart, "The Presidential Address for 1907", *Journal of the Proceedings of the RVIA*, 5, no. 2 (May 1907): 42.

that the members of the Institute are always ready to help them in any problems they may have to solve, and they need not be afraid to take advantage of this privilege.<sup>9</sup>

10. Robert Haddon, quoted in Smart, "The Presidential Address for 1907", 44.

RVIA member Robert Haddon agreed, believing that "the Society had done wisely in affiliating itself with the RVIA, and he felt sure that the Institute would be pleased to give every help to the younger men."<sup>10</sup> Over the next fifty years, that relationship would be reversed. VASS would, in many respects, urge change, innovation and reinvigoration upon their largely conservative elders, at times even acting as the institute's aesthetic and political conscience.

11. W.B. Griffin, "Architecture in American Universities", transcript of talk given to VASS and discussion afterward, *Journal of the Proceedings of the RVIA*, 11, no. 4 (September 1913): 170-176, 181.

VASS met every first and third Tuesday of the month, where competition designs were discussed, short papers were read by members and lectures were given by experts on various subjects. In 1907, VASS's first year, for example, there were guest lectures by Haddon on 'Arts and Crafts', 'Leaded Lights' by Mr Fisher, and one on heating by George Vincent. In subsequent years, VASS heard talks from John Monash on reinforced concrete (1909), Sydney Wilson on 'American Skyscrapers' (1912), while Mr Mather's lecture 'Notes on the Use of the Pencil' (1909) was cancelled. In 1913, Anketell Henderson lectured to VASS on 'Ornament and Race'. In the same year, Walter Burley Griffin lectured to VASS on 'Architecture in American Universities', after which "The proceedings closed with the toast of Mr and Mrs Griffin and the singing of 'Auld Lang Syne'".<sup>11</sup>

While these evenings suggest sober, respectful events, on other evenings debates were held amongst VASS members. Such topics in 1907 included questions such as what was the 'Best Classical Front in Collins Street', 'Should Skyscrapers be Permitted?', 'Should Verandahs be Affixed to Buildings of Our Principal Streets?' or even more prosaic, 'Are Radiators preferable to all other modes of heating?'. It was clear that the students desired a more vital form of discussion than that offered by the Institute calendar. Combined with social events, the formation of a VASS orchestra, annual 'Blueprint' balls, cricket matches against the RVIA, and tennis days at Lionel San Miguel's home in Mont Albert, it was little wonder that membership of VASS was strong in its early days, and strong enough to feel that it needed and could exercise a voice.

12. "Architectural Education at Melbourne University", *Journal of the Proceedings of the RVIA*, 11, no. 4 (September 1913): 163-166, 206; Arthur S. Williams, "Architecture at the University of Melbourne", *Journal of the Proceedings of the RVIA*, 12, no. 2 (May 1914): 82-84.

VASS became active. It was a force in architectural education pressuring the University of Melbourne in 1913 to introduce a design-based course there and appoint a Chair of Architecture,<sup>12</sup> which ultimately led to the establishment of the Melbourne University Architectural Atelier in 1919 and its building on the university grounds was designed by VASS member Gordon Sutherland.<sup>13</sup> VASS was also the generator of the idea for the RVIA to curate the 'International Architectural Exhibition' at the Allied Societies Trust Building, which was opened on 7 June 1927 by Prime Minister Stanley Bruce, and where more than 400 guests were present to view more than 400 exhibits from across the globe.<sup>14</sup> VASS organized an exhibition of drawings in 1936 at the Demonstration Theatre of the Metropolitan Gas Co. in Flinders Street, Melbourne, which included competition-winning flat-roofed house designs by VASS members W. Lambert Lee and Robert Coxhead,<sup>15</sup> and in 1939, it assisted with stands and exhibits at that year's Home and Building Exhibition. At the same time, VASS activities sometimes made it into the

13. "Opening of the Atelier", *Journal of the Proceedings of the RVIA*, 17, no. 2 (May 1919): 50-51; *Journal of the Proceedings of the RVIA*, 16, no. 5 (November 1918): 158.

14. W.H. Robertson, "The International Architectural Exhibition", *Journal of the Proceedings of the RVIA*, 25, no. 3 (July 1927): 81.

15. "Architectural Students Exhibition", *Journal of the Proceedings of the RVIA*, 34, no. 4 (September 1936): 131.

16. "Architectural Students' Aggressive Policy", *The Age*, December 14, 1931, 8.

17. "Architects Complain: Object to Government Intrusion", *The Age*, July 2, 1938, 16.

18. "Last Night's Dances: Architectural Students", *The Age*, August 31, 1935, 25.

daily newspapers. On 14 December 1931, for example, VASS retiring president Rae Featherstone was reported at the annual meeting as stating "that far too many and too rigid restrictions were being imposed on the students in regard to their studies and awards by the senior members of the profession" and that "Little or nothing had been done for their direct benefit, although in spite of the bad times [the Great Depression] the students had been working for the advancement of the ideals of the profession."<sup>16</sup> By contrast in 1938, notes appeared in the local press of a talk given to VASS by Otto Yuncken, urging young architects not to join the Public Works Department and other government agencies as these "departments carried out work which should rightfully belong to the private practising architects", indicative of a long-term hostility and protectionist stance pursued by the local Victorian profession.<sup>17</sup> In a lighter vein, VASS social activities were regularly reported in the public press, and notably in 1935, when at the annual VASS ball, held that year at The Embassy in Alfred Place, "The famous Egyptian pyramids, the three classic columns, a Gothic arcade, a row of slum tenements and the ultra-modern house all found a place in the impressive pageant presided over by the God of architecture" in a production staged by VASS member, Mary Turner Shaw.<sup>18</sup>

## Publications

Documenting all of these various activities was seen early on by VASS members as important and, as the years went by and as VASS became more confident, one of its most important legacies was a series of publications of diverse format. These were important not just for the privileged social picture they give of what it was like to be a young architecture student or graduate in Melbourne in the first half of the twentieth century, but also how important these publications were as an outlet for the graphic, written and intellectual skills of VASS members. They also show an increasing restlessness and impatience from the early 1930s as students recognised the growing gulf between the conservative nature of their educational institutions and the increasing adoption of modernism worldwide. They also give a sense of how local discourse produced by a younger generation was initially framed within the boundaries of professional etiquette and emulation as if in training for future professional behaviour. They also show when those boundaries were crossed and how productive that might be, a licence permitted to the young that allowed convention and orthodoxy to be challenged: sometimes successfully, sometimes with unintended consequences, leading sometimes to unsatisfying and dramatic denouement.

## An Annual Journal

VASS began discussion of producing an annual journal in 1907 and the first issue appeared in 1908. In style and format, the first twenty years of its publication as the *Journal of Proceedings of the Victorian Architectural Students Society of the RVIA* was marked by it mirroring its parent magazine, the *Journal of Proceedings* of the RVIA: it was a document of record. VASS member Hugh Peck's seal design (1910) of a Doric column was adopted as the main graphic element and also

19. "Presenting 'Victorian Modern'", *Smudges*, 6, no. 46 (July 1947): n.p.

cast as a badge to be worn at meetings. In 1932, the journal evolved and changed its title to become *Lines: a journal of architecture and allied interests*, continuing with this title until 1942, when publication ceased due to the hostilities of World War II. The annual became modern in look and content and the "slim, grim"<sup>19</sup> format of earlier issues was changed: in 1935, for example, *LINES* earned a simulated blueprint cover designed in competition by Robert Coxhead under the editorship of Tom O'Mahoney and Mary Turner Shaw.

Further graphic development came in August 1938 when *Lines* was edited by Roy Simpson and Peter Newell. Its cover, designed by Robin Boyd, featured a dramatic woodblock print of 'LINES' on its side silhouetted onto a green background – paralleled just a month before by Oliver Cox's design for the first issue of *Focus* in July. The 1938 issue of *LINES* opened with a page of quotes from Le Corbusier accompanied by the Ionic capitals now in jaunty woodblock followed by a diverse array of articles, from John Rowell on the Paris Exposition (1937), with accompanying images by Don Ward, Norman Mussen pleading for co-operation with the engineer, American W Newlon Green on modern approaches to landscape architecture, Robin Boyd's humorous piece "Charivari" as well as satirical extracts from *Pencil Points* and *American Architect*. In addition to reportage, quotation reprints and graphic art for the year's Blueprint Ball, irony and satire appear to have been VASS's carefully chosen and consistent tactics to make criticism of the profession.

20. Roy Simpson and Peter Newell, Editorial, *LINES 1939 +1940* (December 1939): 5.

21. "The Artists Embark", 12-13; "Architectural Gallery", 23-26; M. Turner Shaw, "We Went to Smyrna", 29-30; John Barry, "I was a Functionalist", 9-10, 38; Adrian Lawlor, "In the Wake of the Impressionists", 27-28, 39-40; Robin Boyd, "Further Development of the Species: A Vision", 8, in *LINES 1939 +1940* (December 1939).

22. LEA Orton, "Prefabrication", 17-20, 38; Peter Newell, "Bread and Butter Building", 15-16, in *LINES 1939 +1940* (December 1939).

In the 1939 edition of *LINES 1939-40*, the last before hostilities caused publication to cease, with an ominous cover depicting a graveyard of T-squares, editors Simpson and Newell wrote of "war in our time" and "that at the time of writing, it is evident that many of us are serving our country better in smocks than in khaki."<sup>20</sup> As well as the usual humorous articles, there were notes on a talk by textile designer Frances Burke, VASS's contributions to the 1939 Home and Building Exhibition, notes on Molly Turner Shaw's travels through the Gulf of Smyrna, John Barry's article, "I was a Functionalist", an article by art critic Adrian Lawlor titled "In the wake of the Impressionists", and grim reflections on the fate of modern architecture in Europe, especially in the "brave little countries" like Holland, Switzerland and Belgium, whose national pavilions had shown such modernist promise, as well as Robin Boyd's article "Further Development of the Species", predicting a dystopian future six decades for Australia, including Nazi occupation by 2010.<sup>21</sup> More accurate prophetically were Lloyd Orton's article on prefabrication and Peter Newell's "Bread and Butter Building", which argued for the validity and timely idea of a small homes bureau, realised ultimately with the establishment of the RVIA Small Homes Service in 1947.<sup>22</sup> There was also the noting of a new and different publication that had been launched by VASS earlier that year: *Smudges*. As its title suggests, it was very different from *LINES*. Not so much a little magazine but more like a pamphlet, *Smudges* had a very specific agenda:

23. *LINES 1939 +1940* (December 1939): 21.

*Smudges'* policy is twofold: 1. Within the profession, to increase interest in vital Architecture and the somewhat finer arts. 2. To endeavour to improve the general standard of design by the influence of open and unbiased criticism, which is, at present, available from no other source<sup>23</sup>

It was an agenda that would draw the ire of some members of the local profession but the admiration of others locally and internationally.

## Smudges

The first issue of the monthly broadsheet *Smudges* appeared in May 1939. Founding editor was Robin Boyd, who held the position until April 1942 and oversaw the production of 34 issues. *Smudges* was revived by VASS in April 1946 under the editorships of Neil Clerehan (April 1946–January 1949), Walter Gherardin (February 1949–50), Gherardin with Mandy Kelso (March 1950), Kelso (April–May 1950–June 1950) and finally, Helen O'Donnell and Greg Rosman (February 1951–March 1952). Unlike the A4-sized format of *LINES*, *Smudges* was printed double-sided on a single sheet of cheap paper that folded away to fit in a shirt pocket. Its format alone signalled ephemerality and vitality. During Boyd's editorship, the woodblock art was produced by fellow student John Barry with layout and typography by Boyd. Photographs were used sparingly, the first appearing in May 1940. After the war, the graphic format changed but only slightly – Barry's woodblocks were replaced by pen and ink caricatures and greater numbers of photographs, while Boyd's presence continued through his satirical cartoon advertisements for Insulwool.

24. Geoffrey Serle, *Robin Boyd: A Life* (Carlton, Vic.: Miegunyah Press, 1995), 52.

From the outset, Boyd and his fellow committee members who put each issue together,<sup>24</sup> set a challenge to readers and to the profession that had been set in *LINES* in 1937, when they asked whether "Maybe the quietly smug tendencies of the architectural profession and the affectations of so many buildings erected in the name of art are due to just that lack of public criticism". Boyd's first *Smudges* editorial reads like a clarion call to action:

25. Editorial, *Smudges*, 1, no. 1 (May 1939): n.p.

WE longingly await the day when some Great Publication, taking public duty to its heart, will offer regular, informed and utterly frank criticism of all major buildings. Meanwhile, we present these humble comments in all sincerity, and expectantly continue to await the Armageddon when the mysteries of design shall be honestly displayed to a waiting world...then we shall have less occasion to say – "Damn these clients and their bloody bad taste."<sup>25</sup>

26. "Tombs in Toorak", *Smudges*, 1, no. 3 (July 1939): n.p.

27. *Smudges*, 1, no. 9 (December 1939): n.p.

*Smudges*, in its first three years, made critique across all forms of cultural production in Melbourne at the time. Lively film, theatre, art and book reviews accompanied frank reviews of new buildings and issues facing building and construction across Victoria. In "Tombs in Toorak" in July 1939, Boyd lambasted the Bernard Evans-designed "hot-bed of Architectural corruption called Toorak Village", where "Pleasant buildings have been scrapped to make way for the Village idiot... There is no redemption in the most distinguished reproduction in the whole rotten row."<sup>26</sup> But the most eagerly awaited regular features of *Smudges* were the monthly 'Blots' and 'Bouquets', awarded to buildings, people, media outlets and even books. A 'Blot' for example, was given to Melbourne University's Architectural Atelier in December 1939 "for withholding design results of certain students and for the ill-mannered, ill-worded 'confidential circular' sent to them...".<sup>27</sup> In addition to criticisms of

28. "Blot of the Month", *Smudges*, 3, no. 26 (June 1941): n.p.

29. Robin Boyd, "Castle Towers", *Smudges*, 3, no. 30 (November 1941): n.p.

30. "Blot of the Month", *Smudges*, 3, no. 26 (June 1941): n.p.

31. "Bouquet of the Month" and "Blot of the Month", *Smudges*, 10, no. 66 (February 1951): n.p.

32. Jonathan Goh, 'Smudges: The Evolution of a Critical Voice for Modernism in Melbourne 1939-1952', Investigation Project, B.Arch, University of Melbourne, 2004, 11.

33. Neil Clerehan, "Blot of the Month", *Smudges*, 6, no. 43 (April 1947): n.p.

34. "Forum of Events: Lines and Smudges", *Architectural Forum*, 77, no. 2 (August 1942): 6; *Pencil Points*, 23, no. 4 (April 1942): 182.

Warren H. Radford, editor of *TASK*, extract of letter published in the editorial of *Smudges*, 4, no. 34 (April 1942): n.p.

35. Neil Clerehan (ed), *Smudges*, 6, no. 45 (May 1947): n.p.

Moderne-styled buildings, Boyd's special dislike for Tudor and Old English styles reached its zenith when *Smudges'* most notorious 'Blot' was awarded in June 1941 to Arthur Plaisted's castellated Castle Towers flats in South Yarra, which Boyd described as "as bad from a social viewpoint as it is ridiculous from an aesthetic viewpoint...it is as though a giant garbage tin had been shaken over Melbourne... [and] a particularly fruity, juicy hunk.. suddenly became dislodged and fell into the middle of one of the most snobbish retreats in the city."<sup>28</sup> A libel suit ensued and four months later Boyd was forced to publicly apologize. He did so in *Smudges* but, suitably tongue-in-cheek, he titled it in Gothic typeface.<sup>29</sup>

By contrast, 'Bouquets' were given to buildings designed by modernist heroes of the day like Roy Grounds (his Clendon Corner flats had "No fuss, no frills, no feathers"<sup>30</sup>), Geoffrey Mewton, Best Overend, Don Ward and Frederick Romberg, who scored a rare double in 1951, when his Hilstan flats gained a 'Bouquet', while 'Stanhill' flats was given a 'Blot' for, as S. Mcl (Stuart McIntosh) concluded for being "an exaggerated and unorganized jumble" and that "the idea of living in a monumental incubator does not appeal to us."<sup>31</sup> What is evident here is that student aesthetic opinions were not static nor were they unafraid to stir the pot, even in criticising their immediate elders. While certain common features persisted in *Smudges* such as the advocacy for all things modern, subtle shifts in direction occurred with each change of editor. For example, as Jonathan Goh has written, Neil Clerehan's contribution to *Smudges* has been underrated and under-acknowledged.<sup>32</sup> Clerehan continued the themes like the "struggle between private and public enterprise and the battle for prefabrication", and highlighted the immediate post-war concerns of material shortages and building restrictions. He was especially critical of the politics surrounding the 1947 scotching of the steel-framed Beaufort House in favour of the Myer House, which Clerehan gave a 'Blot' and described it as "A seven act, ten square 'prefabricated farce'".<sup>33</sup>

*Smudges* was well-received by students and within the local profession. There was also healthy criticism from architects and interested readers, which the editors were happy to publish. *Smudges* also received international acknowledgment: congratulations from Architectural Forum in August 1942 and the statement that "there has been no American student paper to match these fighting publications" while *Pencil Points* reproduced in full Boyd's article "Death of an Architect" in April 1942.<sup>34</sup> *Smudges* also had its imitators: *Angle*, published in the same folding pocket-sized format by the Sydney MARS group in May 1941 and *TASK*, published from summer 1941 by Harvard GSD students. While visually different in format and size, its editor Warren H. Radford acknowledged the impact made by *Smudges'* on planning *TASK's* content and sharpening its intellectual ambition.<sup>35</sup>

*Smudges* was unique in Australia in the period 1939-52, involving, as students, key figures who would go onto define Australian modern architecture in the 1950s and early 1960s. The list of names is too long but mention alone of James Birrell, Robin Boyd, Peter Burns, David Chancellor, Neil Clerehan, Stuart McIntosh, Peter McIntyre, Peter Newell, Leslie M Perrott Jr and Roy Simpson indicates national impact. There are also names like John Barry, Ronald Bath, Walter Gherardin, Mandy Kelso,

Ron Lyon and Helen O'Donnell whose later careers warrant further study.

## Victorian Modern

36. Neil Clerehan (ed), *Smudges*, 6, no. 45 (May 1947): n.p.

37. Robin Boyd, *Victorian Modern: one hundred and eleven years of modern architecture in Victoria* (Melbourne: Architectural Students Society of the Royal Victorian Institute of Architects, 1947).

38. Philip Goad, "Constructing Pedigree: Robin Boyd's 'California-Victoria-New Empiricism' Axis", *Fabrications*, 22, no. 1 (2012): 4-29.

In 1947, *Smudges* editor, Neil Clerehan, announced that VASS's annual journal *Lines* would not appear.<sup>36</sup> In its place VASS would publish a book: Robin Boyd's *Victorian Modern: one hundred and eleven years of modern architecture in Victoria*.<sup>37</sup> It would be the first historical account of the development of modern architecture in Australia. Commissioned by students, it was a venture that allowed Boyd, a former *Smudges* editor and recently appointed director of the RVIA Small Homes Service, free rein to explore his written and graphic skills, as well as craft a proposition for a regionalist modern architecture for Victoria, with his advocacy of the so-called Victorian Type. The idea had been Clerehan's. It was approved by a VASS Committee chaired by Frank Bell and the execution was Boyd's and at the time – globally – it coincided directly with Lewis Mumford's coining of the Bay Region Style and *The Architectural Review's* advocacy of Scandinavian-inspired New Empiricism.<sup>38</sup> For VASS, it was a public relations triumph and *Smudges* proudly proclaimed the book's significance:

39. "Presenting 'Victorian Modern'", *Smudges*, 6, no. 46 (July 1947): n.p.

Victorian Modern is not LINES. It is not a history book, nor a text book, nor a magazine. We believe it is a rather different and entertaining combination. It tells the story in words, photographs and drawings, of the Victorian Building as it has grown... It is not a complete history of every aspect of our mottled architectural past. It is concerned with the thin line of imaginative building that has been carried down to 1947. It tells the story of the architects, the personal story, and the buildings, the objective story. It is not LINES, the annual: it is a book which you will want to keep.<sup>39</sup>

While these disclaimers were honestly admitted, the truth was that Boyd's 'thin line', his carefully crafted argument of Primitives, Pioneers, Opulents, Decadents and Prophets of Victorian architecture, would have remarkable historiographic influence, casting a modernist bias across most Australian architectural histories until the mid-1980s. At the same time, VASS understood the depth of its achievement, announcing unashamedly:

40. "Presenting 'Victorian Modern'", n.p.

The Students' Society believes it is the first students' body to produce any comprehensive work on their future profession. That this is done by the same body that has been accused of dragging that profession in the dust, must surely be taken as a miracle of our times.<sup>40</sup>

## Architecture and Arts

In March 1952, in *Smudges*, which was then edited by Helen O'Donnell and Greg Rosman, VASS member Peter Burns announced the end of the broadsheet in its foldaway form. It was to be replaced by a new publication: a magazine-format of around 24 pages to be edited by Burns, produced bi-monthly and with the new title of *Smudges – ARCHITECTURE AND ARTS*. Burns was clear about the new VASS

venture and the larger readership that was sought:

41. Peter Burns, untitled article, *Smudges*, 11, no. 71 (March 1952): n.p.

It is hoped with the new publication to give to the student, the practitioner and any interested person, a short and concise account of current thought, trends and achievements in the field of art in Australia.

Arts outside architecture are included, for as you are well aware, architecture is the most complete of the arts, and must always have the others in attendance.<sup>41</sup>

42. Paul Hogben, "Architecture and Arts and the Mediation of American Architecture in Post-war Australia", *Fabrications*, 22, no. 1 (2012): 30-57.

In July 1952, the first issue of the new VASS publication appeared. The word *Smudges* had been deleted from the title: it was now simply *Architecture and Arts*. The stylised abstract art-influenced cover design by Burns and the reversed title clearly indicated an intellectual debt to the Los Angeles-based journal *Arts and Architecture*, which as Paul Hogben has written, Burns openly acknowledged.<sup>42</sup> The production team comprised entirely students: Burns was editor, James Birrell, Norman Lehey and Helen O'Donnell were listed as sub-editors, Balwant Saini was the journal's photographer, Andrew McCutcheon handled finance and business, and Amos Rapaport, later one of the founders of Environment-Behaviour Studies (EBS) was in charge of distribution. The first issue delivered a blend of discourse, new work and historical documentation. In addition to a new house by Douglas Alexandra, an article by Ron Rayment on two nineteenth century brick towers (Melbourne's Old Spotting Tower and Coop's Shot Tower), there was the transcript of "A Three Sided Debate: Are we at the beginning, peak or end of an architectural era?", with protagonists, Robin Boyd, Roy Grounds, Frederick Romberg and RG Parker, all then teaching at the University of Melbourne.

The next issues were equally rich in local content and discourse. Articles on furniture designer Clement Meadmore, artist Leonard French, potter Harold Hughan, abstract sculpture, modern textiles and Olympic stadia were matched with ruminations on style by James Birrell, including his competition design for the Australian-American Memorial in Canberra (1949) and his Narrabundah Infants' School (1952), houses by Osborn McCutcheon and David Chancellor, and an article on "People and Planning" by John Bayly. Balwant Saini's cover for the second issue (September 1952) was a brilliant arrangement and photographic study of Meadmore's cord chairs.

43. Peter Burns, c.2002, recounted by Doug Evans. Email correspondence to the author (30 June 2021). See also Doug Evans (ed), *A Hand Passing through Art and Architecture: Peter Burns* (Bulleen, Vic.: Heide Museum of Modern Art, 2004), 5.

44. *Architecture and Arts*, vol. 1, no. 2 (September 1952): n.p.

45. Built Heritage Pty Ltd, 'Kenneth McDonald (1927-1996)', *Dictionary of Unsung Architects*. [https://www.builtheritage.com.au/dua\\_mcdonald.html](https://www.builtheritage.com.au/dua_mcdonald.html) (accessed 4 July 2021).

However, after just five issues, in September 1953 there was an editorial coup. According to Peter Burns, legal pressure was applied and he was forced to resign.<sup>43</sup> Kenneth McDonald (1927-1996), already an architect, had taken on the role of advertising in September 1952<sup>44</sup> and a year later, he ousted Burns and took over as editor. Thereafter VASS ceased its association with *Architecture and Arts*. McDonald edited the journal until 1963 when he sold it to others and the journal finally folded in 1967.<sup>45</sup> Despite its tempestuous beginnings, *Architecture and Arts* served an important and unique role in post-war Australian architectural discourse. It was not affiliated with the RVIA nor an educational institution: it filled a gap, actively fostering a nationwide design culture, albeit becoming largely a commercial venture funded like its Californian predecessor, through advertising and subscription. Significantly, it had come into being through student initiative.

## Afterwords

46. Neil Clerehan, "Housing News from Everywhere", *The Age*, October 7, 1957, 8.

47. *Smudges*, 12, no. 71 (November 1961): n.p. Reference to Vol. 2, no. 4 of *Slate* suggests that, at the very least, two volumes of the news-sheet appeared in 1957 and 1958.

While VASS had arguably burnt its fingers with *Architecture and Arts* and put *Smudges* to bed, another 'little magazine' of an entirely different form appeared a few months later in November 1952. *Cross-Section* (1952-71) was published by the Department of Architecture and Building at the University of Melbourne and edited by Robin Boyd. It continued the drawing-related title line of *Lines and Smudges*, both of which had played off *Pencil Points* (which had disappeared from nomenclature in 1945). Five years later, in October 1957, as a fifty-year anniversary venture, VASS attempted another 'little magazine'. Called *Slate* (1957-9) it appears to have survived for just two years and research to date has not unearthed a single physical copy. Its appearance was noted by Neil Clerehan in the popular press and he referenced an article entitled "The Thirties – A Reassessment" by Hugh Flockhart and the editorial, "We Too are Good" written by young English architect John Bicknell shortly before he returned to England.<sup>46</sup> Recorded too but elsewhere were articles in *Slate* by Don Fulton on architectural education and Philip Sergeant on 'New Brutalism'.<sup>47</sup>

Then, in November 1961, *Smudges* – phoenix-like - reappeared but only for one issue and published not by VASS but by the Melbourne University Architectural Students Club (MUASC). Edited by Peter Corrigan and distributed by Colin Eggleston (who later went into television writing and directing for Crawford Productions, with credits including *Homicide* and *Matlock Police*), this issue of *Smudges* took aim across several fronts. The editorial by 'J. Kennedy' (almost certainly Corrigan writing under the pseudonym of the US President) entitled, "An Agonizing Reappraisal", reflected on *Slate* that:

48. J. Kennedy (Peter Corrigan), "An Agonizing Reappraisal", *Smudges*, 12, no. 71 (November 1961): n.p.

the entire series came to nothing but pedantry and pomposity... *Slate* will be ruefully remembered for the sheer banality of its architectural expression and its wilful failure to promulgate standards of design.<sup>48</sup>

49. Kennedy, "An Agonizing Reappraisal", n.p.

Elsewhere the editorial delivered an historical account of *Smudges*: its formative years under Boyd (1939-41) "awash with enthusiasm and causes", its immediate post-war era when it was edited by "that Laughing Cavalier, Neil Clerehan", which "leaves an Impression of Jewelled Journalism and true militancy", to its 1952 demise at the hands of "Mr Burns' grandiose display of egoism." Corrigan was, in 1961, acutely aware of the historical role which *Smudges* had played in developing criticism in Melbourne. A 'Bouquet' of the decade was awarded to the firm of Grounds, Romberg and Boyd "for their giant contribution to the creation and acceptance of a legitimate public architectural image" and a 'Blot' of the decade to "our Ex-Lord Mayor [Bernard Evans]. Unquestionably his Big Four: Copolov's Shop front; 505 St Kilda Road; Ampol House; Heart's Desire Home, have maimed public taste for at least another twenty-five years." The editorial concluded with a reprint of an extract from *Smudges*' first issue in 1939, whose first line announced that "Criticism is the prerogative and stimulant of Art" and whose last bemoaned that "Maybe the quietly smug tendencies of the profession and the affections of so many buildings erected in the name of art, are due to just that lack of public criticism." With this claim for "HISTORY", Corrigan had formally closed the door on VASS's agenda for discourse.<sup>49</sup>

50. J.M. Freeland, *The Making of a Profession: A History of the Growth and Work of the Architectural Institutes in Australia* (Sydney: Angus and Robertson, 1971), 215. Though the RVIA had been a foundation member of the Royal Australian Institute of Architects since 1929, it was reluctant to renounce its formal status and independence until 1967.

51. "Congress on Architecture", *Sydney Morning Herald*, August 3 1960, 5; "NZ Students for Congress", *Sydney Morning Herald*, August 9, 1960, 21.

52. Further detailed research is required on the genesis and content of these student congresses. A preliminary overview can be found in Byron Kinnaird and Barnaby Bennett, *Congress: Architecture Student Congresses in Australia, New Zealand and PNG 1963-2011* (published online, 2011). See: [http://www.barnabybennett.com/downloads/Freerange/Congress\\_Booklet\\_June2011.pdf](http://www.barnabybennett.com/downloads/Freerange/Congress_Booklet_June2011.pdf) The 1966 Perth congress is one of the best known. See Ken Adam et al, "Education Theme at Students' Convention", *Architecture Today* (June 1966): 5-10 and also Andrew Murray and Leonie Matthews, "Geodesic Domes and Experimental Architectural Education Practices of the 1960s", in P. Hogben and J. O'Callaghan (eds), *Proceedings of the Society of Architectural Historians, Australia and New Zealand*, 32, Architecture, Institutions and Change (Sydney: SAHANZ, 2015), 435-445.

According to JM Freeland, VASS was still in existence in 1971<sup>50</sup> but in reality it had all but disappeared by the time of Corrigan's *Smudges* tribute cum public flogging of its 1950s successors in 1961. A key reason for the society's demise was that with increasing student enrolments in architecture state-wide and with a post-war building boom, architectural student clubs were growing within educational institutions and the significance of a student body directly associated with the profession had become diffused and arguably less relevant. Instead, the architecture student clubs located within universities, began to organise student congresses nationally, one of the first being that organized in 1960 by architecture students at the University of New South Wales. Inspired by their visit to a student congress organized in 1959 by architecture students at the University of Auckland, the UNSW students reciprocated with a conference in August 1960 with the theme of 'The Quest for Ideals' and invited other students from interstate.<sup>51</sup> Shortly afterward around 1962, the Australasian Architectural Students Association (AASA) was formed and important student congresses were held in Australia and New Zealand between 1963 and 1971 with focus on topics such as the social aspects of housing (Auckland, 1963), low-cost housing (Sydney, 1964), education (Perth, 1966) and environment (Auckland, 1971), with invited speakers including Aldo van Eyck, R. Buckminster Fuller, Cedric Price, Sim van der Ryn amongst a host of others.<sup>52</sup> It was not until 1998, that an institute-sponsored student society re-emerged with the establishment of SONA (Student Organized Network for Architecture).

The charting of the publication activities of VASS between 1907 and 1961 can be seen as a special moment in Australian architectural history, where the profession gave its blessing to younger members to actively develop a culture specifically directed towards fostering the parent organization's future existence. That the history of VASS overlaps with the increasing formalization of architectural education in Victoria, the increasing regulation and institutionalization of the profession with registration in 1923, and the reluctance of the RVIA to join federally with other state-based institutes (only renouncing its status and coming under the umbrella of the RAIA as a state chapter in 1967) is no accident. The demise of VASS also needs to be seen against the exponential growth of student numbers after World War II and a pan-Australasian wish for students to come together and talk about their discipline and resist being bound by the jurisdictions of the profession. It suggests that the impetus for and the basis for discourse is complex, but ultimately rooted in the institutional framings – social, legal, educational and intellectual – that continue to govern the discipline of architecture.

# Written into Existence: Publications and the Perceived Narratives of Gregory Burgess's Architecture

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## Keywords

Media  
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## Abstract

This research contributes to the influential work of Melbourne-based Architect, Gregory Burgess. Awarded the RIAA Gold Medal in 2004, Burgess is best known for celebrating human values through design and for his spiritual methodologies, organic aesthetic, and work with Indigenous landowners. While Burgess has initiated very little writing, his work has been the focus of numerous articles published within a variety of journals, newsletters, magazines, and books including those from the construction industry which are often overlooked in journalistic reviews. This paper investigates discussions of architecture in publications through lenses such as intended audiences and physical medium, which consequentially develop narratives and form perceived relationships between an architectural project, an architect, and reader.

Conducted as archival research within Gregory Burgess's anthology of saved publications, the examination and cataloguing of over 230 publications that mention him and his work date from 1979-2013. The breadth of the collection provides publications which range from local timber fabrication companies to Russian journals reviewing organic architecture, the majority in which the architect and the work was discussed without consultation from the design team. As a robust collection was maintained by the architect himself, general issues of discovering and accessing publications including those which fall within the digital dark age can be accessed and provide a fuller historical perception of the built work.

The discussions of and narratives formed within this literature portray Burgess and his work in conscientious manners through the written word targeted for specific audiences: the construction industry, the trained architect, and members of the general public. Often, rather than contributing to architectural journalism or critique in a meaningful way, prominent projects and their broader themes become a vehicle for the author to promote their own voice and ideas. The findings argue that the different relationships an author has experiencing an architectural space demonstrates a broader picture of the architectural industry and the ways that historical publications can generate a perception of a designer and their designs.

## Introduction

1. Naomi Stead, *Semi-Detached: Writing, representation and criticism in architecture*, (Melbourne, Australia: Uro Media, 2012), 5.

The written word is linked to the communication and comprehension of architecture, ranging from technical detailing to flourishing descriptions of the human experience. These words have and will continue to provide distinctive points of reference within the wide body of knowledge that has documented the architecture industry. Within the profession, manifestos and literature record schools of thought and changes within modes of practice while newspapers and journals connect communities with their local urban fabric, creating a place for meaningful public engagement and providing a method of translating design semantics. Regardless to proximity to the architecture industry, every person experiencing a space has their own valid expertise in architecture and their own way of describing and critiquing it.<sup>1</sup> Whether in a book or on a single sheet of paper, the written word bypasses geographical and material boundaries, allowing information about static structures to be disseminated at a global scale, centuries before digital born content expedited the same process.

There has been a shift in the methods of consumption and dissemination of information. One prominent example of this is the way in which pictures are increasingly used to replace words completely as a narrative tool. Striking visual imagery has always been associated with the design profession, yet description or a contextualization is often required to make sense of it to an observer. While sublime experiences might be difficult to relay through diction, the factual information of what something is made of and the rational of it can easily be recorded in text. Beyond imagery, explanatory statements that accompany visual experiences pass along information to a consumer, highlighting digestible snippets of knowledge to enrich or influence the architectural experience.

2. Terry Kuny, "A Digital Dark Ages? Challenges in the Preservation of Electronic Information," *IFLA 63rd Annual Meeting*, (Copenhagen, 1997).

Shifts in media consumption and the advent of digital platforms have developed new methods that make content quicker and easier to generate and consume. However, a lack of editorial assessment, the classification of an audience, and a curatorial eye make current design-related content difficult to sort through. A major disruption in communication occurred within the digital dark age which makes a certain era of writing difficult if not impossible to locate.<sup>2</sup> The distribution of new content and the ability for reference and filtering lacks order, which is why this specific collection is unique. Rather than focusing on an era or theme, a filter containing "Greg Burgess" as a search topic was embedded in the archival materials. It is in the aspiration to disseminate knowledge that the findings of this research are based in. Through the lens of Gregory Burgess' architecture, an examination of the variety of publications and authors which choose to feature him, and his work demonstrate a wide array of the architectural industry.

The method employed here involved developing an index of all the publications included in the recently formed Greg Burgess Archive. This involved reviewing and categorizing pieces of literature in a systematic format, similar to what a standard library collection might gather for metadata. As the research was exploratory in nature, the catalogue developed simultaneous to the investigation and required unique identifiers to be included due to the architectural content matter. The

current metadata index includes 238 unique literary artifacts with 12 fields categorizing relevant information including information such as name and issue of a publication, title of the article, author, year, as well as relevant observed information such as projects mentioned and the medium in which the writing is situated. Additional research on publishers and observational analysis of the publication itself provided the information required to categorize each piece into who an intended audience may be.

## Audience

3. Jessica Kelly, *Speaking of Buildings: Oral History in Architectural Research*, (New York, Princeton Architectural Press, 2019), 81.

The determination of audience is crucial to the consumption process, it can shape the way published material is curated and key words are indicative of the target audience of an editor and author. By grounding the writing in this context, each publication becomes a method of orienting information and distributing a body of knowledge to create meaning of architecture solely dependent on their place within the discourse.<sup>3</sup> For the purpose of developing a catalogue, the publications are categorized into four different intended audiences: the public, design experts, construction industry, and academic/historical. Each grouping serves a unique purpose, and all provide insight and information on what was being oriented to, and consumed by, the varied stakeholders that make significant impacts on our built environment.

The publications developed for and by design experts comprised the largest component of the collection with 109 artifacts, aligning with the intent of a collection documenting architectural projects. Journals and magazine aimed at those with architectural backgrounds or with interest in the specificities of architecture make up the largest portion of the documented work through Greg Burgess projects included in titles such as *The Architectural Review*, *UIA International Architect*, and *Space & Society: The international journal of architecture*. As an architect practicing within Australia, the publications produced by The Australian Institute of Architects at the national and local chapter often discussed Burgess's work as it was completed. Similarly, landscape architecture specific publications discuss several projects in which Greg Burgess Architects was involved, where Taylor Cullity Lethlean was the landscape designer.

4. John Devenish, "Filling in the Gaps," *Medium Density Housing in Australia*, (Canberra, RAlA Education Division, 1986), 50-60.

5. Office of Victoria, "Good Design Local Government," Issue 4, (2008).

Some might consider the content aimed at design professionals as the most critical content to review because of the industry respect associated with the exclusive curatorial nature of such magazines but the archival collection provided content associated to various other fields worth including in architectural discourse, resulting in the development of audience as a tool for categorization as a focus of this research. One subcategory that the research identified within the design profession were those tailored to, or developed by, government groups. Books such as *Medium Density Housing in Australia* discuss the Ministry of Housing infill project that Burgess and other architects in the 1980's were involved in<sup>4</sup> or newsletters issued from the office of the Victorian Government Architect such as *Good Design Local Government* (Issue 4) which outline how well-designed structures contribute to the objectives of local council.<sup>5</sup> These types of publications intend to inform and influence a specific audience, one which ultimately effects

capital spending by municipalities. The curatorial choices of projects in publications such as these are likely to make a significant impact on informing the design of future public buildings, where case studies act as a foundation to derive a design from rather than providing unbiased precedents for a new project.

6. "Brambuk Living Cultural Centre," *Wood World*. Australian Timber Organization, (1990).

7. "The Great Cover Up! What are Builders and Architects trying to hide?" *Roots*, (1994), 32-34.

One sector which is often overlooked within historical architectural research is the information embedded within the construction industry. With 11 publications dedicated to or generated by product manufacturers, building materials, or specific to construction and the industry, this category provides specific insight to the work of Burgess and the relationships established within a practice. Most often, these publications highlight the innovative uses of timber within projects such as Brambuk Living Cultural Centre and Box Hill Community Arts Centre. In 1990, *Wood World* highlighted Brambuk Living Cultural Centre as a magnificent architectural achievement that received a variety of recent awards, the audience is engineering and construction focused as the majority of the information is quoted from the engineer on the project, Peter Yttrup. He discusses specific methodologies such as the use of segmented ridge beam construction to create the organic shaped roof, grey box poles for roof support, and that all curved timber were steam bent on site.<sup>6</sup> This unique approach to using timber was also used as a case study in *Roots*, in which the article aims to debunk timber as being perceived as a low-grade construction material that lacks aesthetic qualities mainly due to the commercialization of timber frame construction used in the boom of suburban homes from the decades prior. The author advocates that rather than covering up wood as a structural material, native Australian hardwood should be highlighted in projects. Noting timber being used as a visual element in the designs of Alistair Knox, Burgess receives accolades for the use of ironbark poles in Brambuk with the bark still on it. The critical tone of the article shines through in the discussion by stating the poles reveal "an inspired use for what might otherwise have been a fence post."<sup>7</sup>

A particularly personal letter from Bruce Bell of Laminated Timber Supplies Pty Ltd in 1993 includes an album of 24 photographs from the construction site during the timber installation and two magazine article clippings from the Box Hill Community Arts Centre project. The letter appears to be marketing for future work by asking Burgess to consider them again when a contractor requires 'the expertise and use of a quality engineered timber products,' but earnestly states "hopefully your work to date will stir the imagination of the construction industry creating a new surge of timber buildings in Australia." While a practicing designer might consider custom methods to be a costly nuisance for construction, the letter indicates respect for Burgess as a person and the design of the building in mentioning he wishes to recognize the "unique and imaginative design using timber structure as a practical, yet very much an art form building." In the personal correspondence between subcontractor and architect, sincerity for craftsmanship brings to light the way material industry professionals perceive a project.



Figures 1: Photos within a scrapbook depicting construction of the Box Hill Community Arts Centre.

8. Stephen Crafti "From Mars," *Steel Profile*, April, (2008).

Other construction industry publications such as *Steel Profile* and *Specifier* outline a project with brief information on the design practice where products are the main intent of the publication. While seemingly objective, visually impressive projects act as case studies to sell services and products. Publications like this inevitably act as glorified product guides for other designers to take inspiration from and use products in the future. In a specific feature issue titled as "100 architectural innovations" the Victorian Space Science Education Centre designed by Burgess is included. The intent for product marketing is obvious when stating the specific steel components used from BlueScope product lines, including a testimonial from Burgess noting that "COLORBOND® steel provides a sense of movement – it allows you to wrap and twist shapes."<sup>8</sup> Images and text description of spaces highlight steel as structural and an aesthetic material, making the choice of this specific material inseparable to the award-winning design of the building.

Publications in which architecture is included but the content is situated within a larger historical context, or those developed within academic settings including those intended for students learning are categorized as "historical" or "academic". While this section only consists of 14 artifacts, it situates Burgess's architecture within a broader societal context rather than confined to a specific time and place generally outlined in journal articles. Examples of this includes books such as *Holiday Business: Tourism in Australia since 1870* which include Brambuk Living Cultural Centre and Uluru Kata Tjuta Cultural Centre or case studies within a PhD *The Architecture of Liturgy* that include the Church of St. Michael and St. John in Horsham. Although architecture or design is not always a central focus established in these literary settings, a broader historical scope can contextualize a building from a different perspective and provides a platform to discuss architecture outside of design-centric media.

The last category outlines media developed for the public, such as

those likely consuming the information as a form of entertainment or pop culture, or as part of another, broader topic. While some of the catalogued articles are situated in more design-focused magazines such as *Australian Kitchen Trends*, others like *The Australian Financial Review Magazine*, *The Monthly*, and *The Australian Magazine* are publications which document Burgess's architecture in the context of the Australia culture. In this type of public sharing, a reader does not necessarily have a discerning eye on the specifics of consumption and thus the content shifts to being eye catching, becoming easy and pleasant to consume, considering editors aim for increase popular interest to consistently drive sales. The mainstream quality of these publications does not warrant the content to be overlooked, but rather the opposite. By noting these articles as being a part of pop culture or daily news intended for consumption by the general populous, architects and their designs become embedded within a cultural zeitgeist.



Figures 2: Australian Financial Review Magazine with taped on annotations

## Mediums

It is worth considering how the methods in which information is disseminated have consequences on the way they are consumed and who they are consumed by. For example, newsletters and pamphlets are intentionally short, which make them more appealing as a quickly digestible form of media. Books and journals on the opposite spectrum are associated as being more time consuming due to their length, yet their content is typically richer and oriented to those who will be reading the specific marketed content.

Defined by their printed content distributed over a regular period, magazines and journals are the most common type of publication located within the catalogue. Associated with having a regular and consistent output and wide distribution, these likely accrue the most readers as well as acclaim for project inclusion. Burgess's collection includes 61 unique magazines from both local and international

9. Arian Mostaedi, "Burraworin Residence Flinders," *Sustainable Architecture: Lowtech Houses*, (Barcelona, 2004), 50-59.

10. Tamara Winikoff, *Places not Spaces: Placemaking in Australia*, (1995), 39, 42-46.

publications such as *A+U*, *Vogue Living*, and RMIT's *Transitions*. Numerous books were also saved for inclusion of Burgess's work, with many sporting glossy pages filled with striking architectural imagery in the form of a decorative coffee table book. While photography books such as *Beach Houses* or *Another 100 of the World's best houses* include very little actual written content, they provide a platform for visually impressive or unique work to be shared in an accessible manner. The addition of a lesser known architect within aesthetic-centric bindings places Burgess at an international table for his work to be visually consumed. Other books are more text-heavy and written for those within the design profession. *Sustainable Architecture: Lowtech Houses* outlines the construction of the Burraworin House noting the innovative use of radial cutting as a method to reduce the amount of wood needed for projects,<sup>9</sup> while *Places not Spaces: Placemaking in Australia* discusses Box Hill Community Arts Centre and Brambuk Living Cultural Centre as public building case study projects that successfully integrated the community to the design process for a rewarding finished product.<sup>10</sup>

Among the books and magazines, other archival material included pamphlets from award ceremonies, printed information from speaking at conferences, gallery or exhibition guides that would have accompanied a physical installation or event, newsletters from smaller foundations, and a few letters; one in which an appliance company is writing in hopes to use the Earth House as a set for a commercial.

## Evaluation

Quantification of a project demonstrates prominence simply through a repeated representation, showing that critically curated editorial content warranted Burgess's work for repeated discussion and display to readers. While approximately 49 distinct projects are mentioned throughout the collection of publications, the quantity of times a specific project was considered can cause it to stand out amongst others. Brambuk Living Cultural Centre and Uluru Kata Tjuta Cultural Centre were most frequently identified at 53 times each. The next most published projects were significantly less discussed, Eltham Library at 22 times and the Sidney Myer Music Bowl Renovation at 18 times.

The publications within the collection date back to 1979 and end in 2013, covering 34 years of architectural practice. Within that time frame, 1981 and 1982 were the only years where there is no record of publication on the practice. The year in which the largest quantity of publications exist is in 2004, which coincides with Greg Burgess receiving the RAIA Gold Medal award. In 2008 there are 19 artifacts, some of which discuss the recently completed Victorian Space Science Centre, while various other projects such as Uluru Kata Cultural Centre, Burraworin House, and the Mansfield Information Centre are discussed in different capacities. 1996 aligns with completion of Uluru and dominated the collection from this year. Over the nearly 50 years of Greg Burgess Architect in practice, despite a significant transition of journalism and architectural media shifting to a digital platform, the quantity and consistency of physical published pieces demonstrates an ongoing presence and relevance to all aspects of the architectural practice.

## Authors

11. "Towards a community architecture of wholeness," *Architecture into Millennium* 3, (1993), 19-22.

Often authors did not personally know Burgess yet there are a handful of recurring authors, all of which who were Australian based. Familiar names in the dissemination of Australian architectural history such as Philip Goad and Rory Spence frequently provided content including the work of Greg Burgess Architects. Stephen Crafti, Melbourne based author of *A Pocketful of Beach Houses* and *Beach Houses*, shares contemporary design in a more visual manner and would likely reach a different audience with these than the other authors would have. Image-based publications provide an accessible route to consuming design, one which doesn't require words. When situated within a specific lens such as "beach houses", the reader is able to easily digest visual information, understanding that the images and projects they are viewing are selected intentionally to fit within this margin. Within the collection are some of Burgess's own writing and written word from speaking at conferences, these appear to act as a tool used to communicate his philosophy explaining the practice and approach to design. One which made several appearances in the early nineties was *Towards a community architecture of wholeness*. This call to action outlines architecture as a tool that can peel back cultural layers and through time can heal and introduce senses into the spirit and desires us to learn from and protect the nature-integrated wisdoms of the remaining indigenous cultures of the world.<sup>11</sup>

## Geography

12. Philip Goad, "Isolation and Introspection: Fortune and Folly of Australian Architecture," *Casabella: International Architectural Review* 550, (1989), 50-52, 58-59.

The collection of 238 artifacts can be pared down into 152 unique publications, as over the years several journal titles would discuss Greg Burgess Architects. Of these 152, 44 are based internationally and the remaining 108 are Australian. Inclusion in international publications demonstrate that although Burgess and his work was based solely within Australia, it had global influence and impact. These publications also provide information towards what other countries and design scenes were considering and how the work of an Australian fit into that. Several international architectural publications like German based *Mensch + Architektur* featured Greg Burgess' work in issues focused on the notion of organic architecture. Another based in Milan, *Casabella: International Architectural Review*, featured the Catholic Church in Horsham and the Johnson House alongside numerous other Australian designs, accompanied by text from Philip Goad titled "Isolation and Introspection: Fortune and Folly of Australian Architecture."<sup>12</sup> Articles that place the idea of contemporary Australian design within international architectural publications come across as seemingly self-aware and strategically situate the globally under-represented projects of down under to a wider audience.



Figures 3: Russian magazine Табулет displaying Peninsula House and Burraworin House

There were numerous Australian and Melbourne-based publication which included projects designed by Burgess, but over the years one with various similar sounding titles such as *Architectural Review Asia Pacific* and *The Architectural Review* existed under the conglomerate of Australian Design Review published 18 articles featuring his projects. Existing outside of the formal boundaries of the Australian Institute of Architects, these magazines proved to be more accessible to the public. The consumption of media is reinforced by the ways in which the projects are presented within them; visually-forward with an approachable amount of text provided by a knowledgeable source. Usually including several pages of photographs, architectural plans and sections and never a full page of text, *The Review* was a platform for imagery and descriptive text to outline an experiential and spatial understanding of the two-dimensional media set in front of a reader.

## Findings

13. Alan Hill, "Continental Drift: Trust your instincts and follow a new path; Australia has a wealth of experiences to explore," *Vogue Living* Dec/Jan, (Australia, 1996), 190-193.

Beyond the formal categorization used to develop a catalogue of archived publications, certain key pieces discuss Burgess and his architectural works in ways that highlight topics that warrant additional review. For example, several articles portray Australian culture as tourism, in which Burgess is included in various capacities in which his architecture aided in the formation of this notion. *Vogue Living* includes Uluru Kata Tjuta Cultural Centre as a tourist destination as a worthy destination to explore, in which the Centre acts as a destination for those who arrive to leave with new knowledge of place.<sup>13</sup> In February of 1994, Qantas Airline's in-flight magazine, *The Australian Way*, discuss the Brambuk Living Cultural Centre as a culinary destination worth arriving at in the Grampians. Nestled between an advertisement for the Old Melbourne Hotel and an article on cricket's eternal appeal, the article discusses Claude Forell tasting the culinary traditions of the Koori people. The journalistic intent of the piece is clearly for providing a food-based experience, with very little mention of the architecture beyond

some text describing the functional uses of the "Brambuk Centre" and describing it as a "curve, ground hugging building with an undulating red-brown roof," and a nonchalant mentioned as having won several architectural awards of national merit.<sup>14</sup> The introduction to architecture however brief can provide impact and intrigue required for those not interested in design to want to learn more.

Innovative construction as being difficult to communicate is another reoccurring theme within articles. An author discussing the construction of the Uluru Kata Tjuta Cultural Centre within *The Owner Builder: The Australian Home Builders Magazine* appears to be both impressed and flummoxed with the design and shares that there is "a certain amount of frustration in trying to share" experience of the building with readers. This is both contradicted and reinforced when they state that "the casual observer may not take the time to fully appreciate the effort gone into making the design worthy of the cultural importance of the site" but rather the way the building fits "delightfully" into the surrounding geography. Articles such as this by an impartial observer of a construction site, writing within a publication oriented to individuals who are interested in learning about construction methods provides relevant commentary on the complex design.

Lastly, what bias is inherent to an architectural publication collection when saved by the architect themselves? As the research was limited to physical copies within an individual collection, there are bound to be missing publications whether intentional or not. Overall, the indexing process is not necessarily an evaluation on architectural discourse, but rather an exploration on the mediums, methods, and audiences which architectural publications could focus on through the lens of a specific architect. Although Burgess's architectural practice involved the written word it did not depend on it to be situated alongside it like similar locally known Melbourne practitioners such as Robin Boyd and Norman Day. Burgess, rather, represents the wider demographic of practitioners who design projects that gain commendation and followed by a desire to be shared.

Future explorations in this realm of research could delve into specific projects and qualitatively assess the ways in which various industries share the same content, or perhaps focus on locating what hasn't been collected which has the possibility to unearth the criticism and commentary that was deemed not worth maintaining as part of the permanent collection used for indexing. Specific to Burgess and his work, we can investigate how design projects are reconceived for local tourism, for international trends in organic architecture, and in the woes of the timber industry. An archival collection of historical publications demonstrate that a designer is not limited to being discussed in architecture practice-specific publications, but rather in a wide gamut of industries and situated in historical contexts as framed by the interests and experiences of an author.

# ULTRA

## **Positions and Polarities Beyond Crisis**

### **SESSION 2: *Local and Regional Modernisms***

# Healing Modern Architecture's Break with the Past: Musings around Brazilian Fenestration

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## Keywords

Modernism  
Brazilian Architecture  
Tropical building  
Brise-soleil  
Barrie Biermann  
Identity

## Abstract

This paper focuses on the role of Brazilian architects in emancipating Modern Architecture from overly limiting orthodoxies. In particular, this study follows direct, if weak influences across the Pacific to Australia and stronger ones across the South Atlantic to Southern Africa, where Brazilian ideas found fertile ground without being filtered through Northern Hemisphere mediations. Official delegations of architects from Australia and South Africa went to Brazil seeking inspiration and transferable ideas achieved mixed success.

Central to the theme of this essay is a recently discovered and unpublished manuscript. It is the work of Barrie Biermann who, upon graduation from the University of Cape Town sailed across to Brazil in 1946 to gain first-hand knowledge of the architecture that had achieved worldwide renown through the 1943 *Brazil Builds* exhibition at the Museum of Modern Art in New York (MoMA).

Biermann's close observations and discussions with several of Brazil's leading architects helped him develop a fresh narrative that placed recent developments in a continuum linked to Portuguese colonial architecture that had taken lessons from the 'East'. Published in a very abridged form in a professional journal in 1950, it lost much of the charm of the original, which, in addition to imaginative theoretical speculation, is enriched by evocative, atmospheric sketches, water colours and photographs.

This study shows that South-South connections were quite independent and predated the influence of 'scientific' manuals of 'how-to build in the tropics' that proliferated from metropolitan centres in the mid-1950s, preparing for decolonization but perhaps also motivated by ambitions of engendering other forms of dependence. Brazilian ideas and examples of built work played an important role in bringing vitality to some of the architectures of Africa. They also engaged with crucial issues of identity and the production of buildings celebrating values beyond the utilitarian.

At the 1939 New York World's Fair, Brazil's pavilion, designed by Oscar Niemeyer and Lucio Costa, challenged the orthodoxies of modern architecture. Previously outlined in 1932 by Philip Johnson in his introduction to MoMA's catalogue for '*Modern Architecture: International Exhibition*', Modernism's orthodoxies were further elaborated by Alfred H Barr in explaining the exhibition's objective was to:

1. Alfred H Barr, 'Introduction', *Modern Architecture: International Exhibition*, New York: MoMA, p. 15.

...enable the visitor to understand what is meant by the International Style and how it differs from the modernistic or half-modern decorative style, which with the persistence of the revived styles of the past, has added so much to the confusion of contemporary architecture.<sup>1</sup>

In his 'Historical Note' Johnson extrapolated on the style's advances beyond when:

2. Ibid, Johnson, 'Historical Note', p. 19.

"...Architects indulged in arbitrary curves, zig-zags and fantastic decoration, breaking down all formal discipline, traditional or structural..."<sup>2</sup>

Heroes of Johnson's exhibition were Mies van der Rohe, Le Corbusier, J.J.P Oud and Walter Gropius, whose 'International Style' celebrated clean unornamented rectangular forms with copious glazing on the same plane as the external walls.

3. Caption to Plate IV, 'Brazil', *Architectural Review*, vol. XLXXXVI, no. 513, 1939.

Brazil's pavilion challenged orthodoxy in two respects; firstly, in plan the mezzanines deployed confident 'arbitrary curves' and secondly, glazing on the South façade was masked by an assertive sun-breaker. The latter was promptly dismissed by the *Architectural Review (AR)* as purely ornamental; 'a unit of display rather than of function...'<sup>3</sup>

4. Philip Goodwin, *Brazil Builds*, New York: MoMA, 1943, p. 7. The original publication, now out of print, can be downloaded from the MoMA site: <https://www.moma.org/calendar/exhibitions/2304>.

However, by 1943 such misunderstandings gave way to adulation after MoMA's ground-breaking *Brazil Builds* exhibition that focused on: 'Brazilian architecture, especially their solutions for the problem of controlling heat and light on large exterior glass surfaces.'<sup>4</sup>

5. Ibid., Sun-shading in general, pp. 84-89, MES, pp. 106-111, AEB, 112-115.

In Rio and elsewhere prominent buildings had already expanded the vocabulary of modern architecture by challenging the 'International Style's' aesthetically motivated dream of large, unprotected glazing and flush façades. From 1936 shading devices of various types were being developed for Costa and Niemeyer's Ministry of Education and Health (MES) and the brothers Roberto ABI headquarters, where vulnerable Northern façades were protected with horizontal and vertical Quebra-Sol (Brise-soleil) elements.<sup>5</sup> Earlier, in 1935, Luiz Nunes had used a sun-screening of precast 'cobogós' for Olinda's water tower.<sup>6</sup>

6. Ibid., p. 158.

7. 'Brazil', *AR*, v.95, 1944, pp.58-83.

The 1943 MoMA exhibition was a great success. The parts that travelled to wartime London received rave reviews in *AR*, the first of many celebrating Brazilian architecture's freshness and sophistication.<sup>7</sup>

## Australia Flirts with Brazil

Departing before wartime hostilities ended in May 1945, an official 'mission' left Australia crossing the Pacific in a converted Liberator

8. C.V. Howard, *Architectural Mission to the Americas...* Report, Melbourne, 1945, [https://nla.gov.au:443/tarkine/nla.obj-99537218].

bomber, '...to obtain and assimilate first-hand knowledge of the very valuable contributions America and Brazil have made in the architectural field.'<sup>8</sup>

Sanctioned by Prime Minister Chifley, it was led by the Government's Chief Design architect, C. V. Howard.

9. Ibid., 30.

In Brazil they met officials and architects including Niemeyer finding it 'difficult to justify the use 'of sun-breakers both horizontal and vertical in large city buildings', preferring retractable blinds as far more economic and serviceable.<sup>9</sup>

Brazil's outdoor lifestyle also seemed inconceivable for Australians:

10. Ibid., 31.

Along Copacabana beachfront there are fifty or more open air cafes... If we had a similar set-up along our Pacific Beach Front our daily north-easterly would cause a lot of trouble and the first strong southerly would wreck everything.<sup>10</sup>

11. 'House at Sydney...Seidler...', *AR*, v.115, 1954, 317-321.

Fleeting 'fact-finding' missions were probably not ideal for learning from different cultures. Even Harry Seidler's short stint working for Oscar Niemeyer gave him experience he transferred to his first Australian project and influenced his later, mainly domestic work. It could however be argued that the emulation was superficial rather than absorbed sufficiently to contribute to the genesis of an Australian architectural identity.<sup>11</sup>

Northern hemisphere publications also played their part in stimulating Australian designers to look beyond accepted British colonial models such as verandahs to shield tropical buildings from the sun.

12. W R Bunning, *Homes in the Sun...*Sydney: Nesbit, 1945.

Walter Bunning, in his 1945 booklet *Homes in the Sun*, invoked two Brazilian examples appropriate for Australian dwellings.<sup>12</sup> He illustrated both the MES sun-breakers and Bernard Rudofsky's São Paulo Arnstein house (1941) featured in *Brazil Builds*.<sup>13</sup> He found the São Paulo house, with its multiple courtyard gardens, entirely appropriate for a hot climate: 'In such an arrangement living out of doors would be a delight.'<sup>14</sup>

13. Goodwin, 1943, pp. 106-111 & 170-173 respectively, illustrations in Bunning 1945, 58-59 under 'Climate'.

14. Bunning, 1945, p. 59, caption to image 111.

15. Karl Langer, *Sub-tropical Housing*, Brisbane: UQ, 1944.

Houses along similar lines were proposed for Queensland by Karl Langer in *Sub-tropical Housing* (1944)<sup>15</sup> using integral pergolas, courtyards and walled gardens to enhance lifestyles tuned to the climate.

16. Numerous articles and whole issues were dedicated to Brazil in the architectural press of UK, Europe and the USA between 1943 and 1960 – for example:

Widely available technical literature on how to build in the tropics only began to appear in the mid 1950s, long after many solutions had been developed in Brazil – for example:

Maxwell Fry & Jane Drew, *Tropical Architecture in the Humid Zone*, London: Batsford, 1956.

*Olgay & Olgay, Solar Control ...*, Princeton: University Press, 1957.

O.H.Koenigsberger et al., *... tropical housing and building*, London: Longman, 1974.

By the 1950s these vocabularies of sun-protection, born in Brazil, had entered the vernacular of commercial and public buildings in Australia particularly in Queensland. But apart from Harry Seidler's city towers, few aspired to any iconic identity taking comfort instead in an international language of safe blandness.

17. John Macarthur et al. (eds.), *Hot Modernism – Queensland Architecture 1945-1975*, London: Artifice Books, 2015.

Before the mid-1950s examples of inventive solutions were circulating widely in journals and monographs on Brazilian and other Latin American architectures. Simultaneously publications on 'building science', originating locally, in Britain, the USA and elsewhere, provided recipes for shading devices tailored to specific latitudes.<sup>16</sup> The convergence of science and a rapid growth in multi-story building construction resulted in solutions purged of cultural or regional character.<sup>17</sup>

By the 1960s, some designers recognized the limitations of the deracinated, techno-scientific approach and hungered for other architectural dimensions.

Following this spirit, Stephen Trotter was awarded the 1963 Australian Sisalcraft Research Scholarship in Architecture to visit countries with warm climates. In his published report, *Cities in the Sun*, he outlined his motivation:

18. Stephen E. Trotter, *Cities in the Sun*, Brisbane: St. Regis-A.C.I. Pty Ltd, 1964, pp. 1&2.

We Australian Architects, unlike our Colleagues in Southern Europe and South America, have no suitable national traditions to guide us in this environment. We can learn many of the fundamentals of ideal tropical and sub-tropical building from communities who have thrived for centuries in climates similar to those of Australia... As well as seeking technical solutions to buildings in this environment we have also to provide emotional solutions. The latter are the hardest to achieve.<sup>18</sup>

Trotter assembled personal observations focusing mainly on façades and methods of coping with ventilation, the sun and glare. He visited Brazil, Spanish-American countries and parts of Asia. Importantly, his profuse illustrations, photographs and marginal sketches display a continuum of past and present and distil thoughts from actual lived experience.

Reflecting on his wide-ranging pilgrimages to hot, dry and warm, humid regions, he concludes:

19. Ibid., 32.

Very little has been written on the physical, historical and psychological aspects of Tropical design by architects brought up in tropical environments. Most work in this field has been carried out by European born and trained architects carrying out commissions in tropical regions.<sup>19</sup>

### **South Africa Embraces Brazil**

20. Roger C. Fisher et al. (eds.), *Architecture of the Transvaal*, Pretoria: University of South Africa, 1998.  
Graham Owen, '...Architecture and Apartheid...' *JAE*, vol.42, 1989, 3-23

In the 1930s, South African architecture was emerging from an ideologically charged past which fell into two broad colonial traditions: the Dutch, with its baroque gables, thatched or flat roofs and whitewashed walls, established in the Cape in the 18th Century and the British, with its ubiquitous verandahs and varying architectural styles in tune with the latest fashions.<sup>20</sup>

After the Boer war (1899-1902), Cecil Rhodes encouraged Herbert Baker to use Cape Dutch architecture as a reconciling vehicle of national identity. However, Baker and others brought Imperial Edwardian baroque to their public commissions, exemplified by the Union buildings in Pretoria.

But by 1925 European modern architecture was being discussed in the *South African Architectural Record (SAAR)* and in the 1933 a group of young Transvaal architects established direct links with Le Corbusier and published a manifesto, *zerohour*, showcasing their own work alongside European masters. In this publication even the sponsors'

21. Rex Martienssen et al., *zerohour*, Johannesburg: privately printed, 1933.

22. Fisher, 1998.

advertisements adhered to a strict graphic style.<sup>21</sup>

In contrast, a conservative tendency favoured August Perret, while the stream of emigres from Europe brought less constrained expressionist versions with them.<sup>22</sup>

In 1945, an official delegation similar to Australia's went to Brazil and, upon returning, the President of the South African Institute of Architects addressed his audience:

23. 'Address of the President-in-chief, Mr. D. St. C Lightfoot', SAAR, June 1946, 145.

Most of you have probably seen illustrations in a book called "*Brazil Builds*". There are certain aspects of this work in plan and design that are extremely interesting, but I trust South African Architects will beware of attempting to copy this type of work without taking the climate and other conditions of our country into consideration before doing so... The standard of architectural design, and particularly the standard of the building finish of our jobs, is equal to anything I saw during my travels.<sup>23</sup>

Interestingly, official members of both Australian and South African missions to Brazil found the enormous 'Quintadinha Hotel' in Petropolis the most memorable building. Their Brazilian hosts clearly missed no opportunity to show off this extravagant confection of French and Brazilian baroque to visitors from countries impoverished by the austerities of world conflict.

24. Gus Gerneke, 'From Brazil to Pretoria', in Fisher, 1998, 197-230.  
Marguerite Pienaar, '...Norman Eaton Legacy...' UPretoria, MArch, 2013.  
Marguerite Pienaar, '...Lessons from Brazil...', *Paranoá* 18, 2017, online: <https://periodicos.unb.br/index.php/paranoa/article/view/11780/10350>.

However, the South African delegate Norman Eaton, had a clear agenda that concerned his commission to design the Ministry of Transport building in Pretoria. By 1944, his scheme was sufficiently developed to seek out Niemeyer and other Brazilian architects' advice on sun-shading. As a perceptive designer he also recorded details of Roberto Burle Marx's landscapes and Copacabana's paving in his sketchbooks.<sup>24</sup> Eaton's Ministry project featured solar screening systems based on those at the MES as well as roof gardens inspired by those of Burle Marx. The project was abandoned in 1948 with a change in Government.

But talk of Brazil was in the air and Maxwell Fry, on a fleeting visit to Johannesburg from West Africa, was interviewed by enthusiastic students in 1945:

25. Gilbert Hubert and Sydney Abramovitch. 'Interview with Maxwell Fry', SAAR, May 1946, 131. [Interview 29-11-1945].

He spoke next of the considerable interest which the recent publications of Brazilian architecture had aroused. He deprecated this, as he felt that Brazilian architecture epitomised that inhumanity which South African architecture was leaving behind. He was confident, however, that Brazil would grow out of this stage. His comment on the Education and Health Ministry's building was brief and pithy. "I get as much pleasure in looking at a honeycomb."<sup>25</sup>

26. Shelagh Nation, 'The background... Hellmut ... Stauch', UPretoria, MArch, 1985, 28 & 103-4.  
Arthur Barker, '...Brazilian Modernism...' *Paranoá* 18, 2017, online: <https://periodicos.unb.br/index.php/paranoa/article/view/11781/1035>.

Earlier, in the 1920s, Helmut Stauch who studied in Berlin under Bruno Taut and Heinrich Tessenow took advantage of family connections in South-West Africa, where he constructed farm buildings in Windhoek's forbidding desert climate after making extensive studies on orientation and sun control.<sup>26</sup> Returning to Germany briefly, he worked with Marcel Breuer and Walter Gropius on housing projects before going back to Southern Africa in 1934. In Pretoria his skills as a modernist were in

demand. By 1948 Stauch decided to enrich his experience by seeing Brazilian architecture at first hand and meeting Niemeyer. There he was impressed by the master's capacity to make large creative moves but less so with his capacity of carrying projects through to detail.

After his return to South Africa, Stauch was commissioned to design a headquarters for the South African Meat Board (SAMB), his first design for an important public building at a time when the apartheid regime was seeking a new style of architecture in the hope of communicating a forward-looking break with the past. Although Stauch's building faithfully almost replicated MES's stately fifteen levels on four floors, it was acclaimed in SSAR:

[SAMB] clearly points to what can be done to free official architecture from the heavy hand of convention and outmoded tradition.

27. 'Editorial', SAAR, September 1952, 211.

...we have an official building which is a happy expression of formal architecture in contemporary terms, a building which is bright and colourful to the observer and comfortable for the occupants ... It is a worthy addition to a city already well endowed with good architecture.<sup>27</sup>

28. 'The Meat Board Building, Pretoria', SAAR, September 1952, 212.

... it clearly reflects the architects' deliberate policy of creating an atmosphere both gay and friendly and an environment of comfort and concentration.<sup>28</sup>

29. Nikolaus Pevsner, 'Johannesburg...', *AR*, vol. 113, 1953, 382.

Pevsner, on a visit to South Africa in 1952-3, praised Stauch's building as an 'extremely encouraging case'.<sup>29</sup> He also appreciated Johannesburg's modern, post-war flats in Hilbrow, which he dubbed:

30. *Ibid*, 381-2.

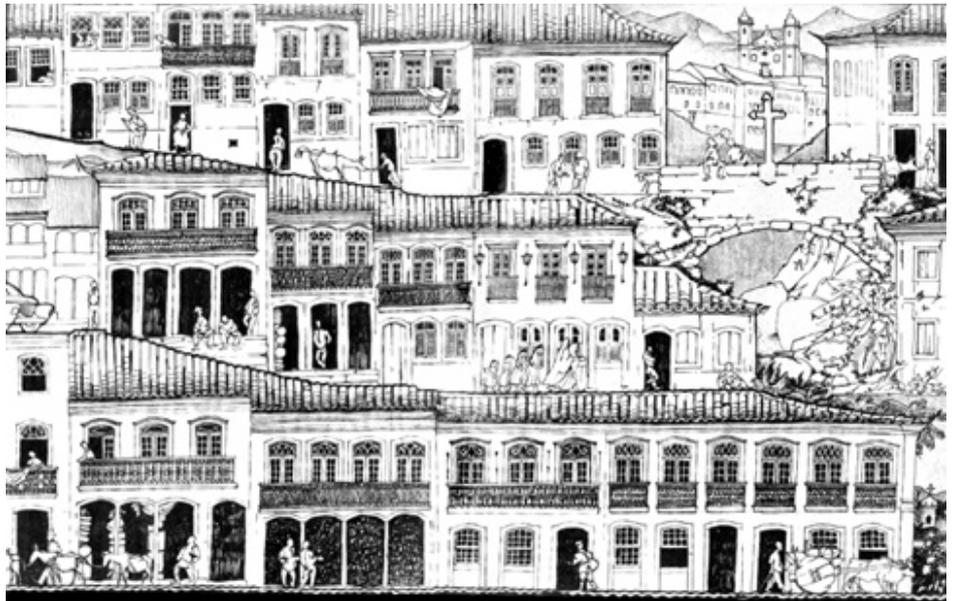
'a little Brazil in the Transvaal'... all of the same species of modern... They have horizontal windows, recessed or rectangularly projecting balconies and somewhere or other, projecting frames. The projecting frame is the hallmark of Johannesburg at this time. It reached the town with Rex Martienssen's own house ... The popularity of the motif may well be due to its wide acceptance by Brazil and the sudden fame won by Brazilian buildings thanks to Mr. Kidder Smith's gloriously illustrated *Brazil Builds* of 1943. ... The result is most impressive. Nowhere in England and indeed nowhere known to me in Europe or North America, can such a consistently up-to-date neighbourhood be seen.<sup>30</sup>

31. C. Polwarth, '... Barrie Biermann ... Architectural Culture...Southern Africa', UNatal, MArch, 1994.

South African interest in Brazilian architecture, particularly among the younger generation, went beyond replication. Keen to understand its cultural background, Barrie Biermann, a third-year architecture student at Cape Town University in 1944, used his Helen Gardiner Travel Memorial Travel Prize, [awarded 1944, presented 1946] unpaginated manuscript.

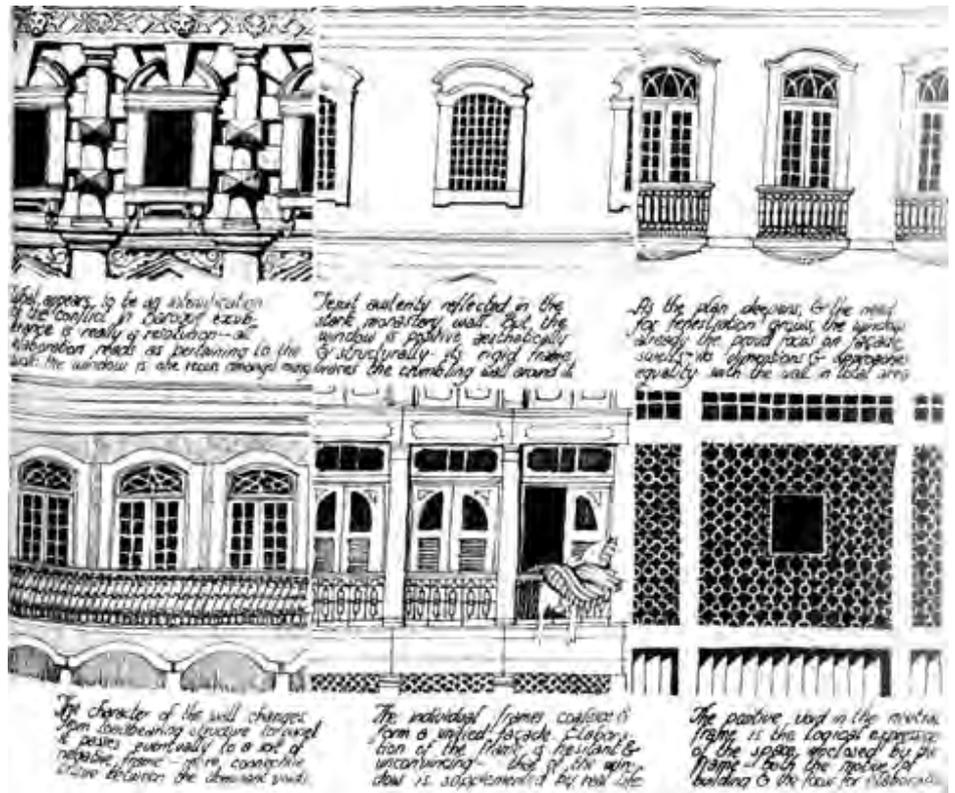
South African interest in Brazilian architecture, particularly among the younger generation, went beyond replication. Keen to understand its cultural background, Barrie Biermann, a third-year architecture student at Cape Town University in 1944, used his Helen Gardiner Travel Scholarship to make his way across the Atlantic to Brazil as a deckhand on the *Albatross*, a twin-masted schooner.<sup>31</sup> Without limiting time constraints he could widen his interests to speculate on the evolution of Brazilian façades. His manuscript report, submitted long after his return, is an exquisite document of beautiful water-colours, drawings, photographs and diagrams with a personal but intensely perceptive narrative.<sup>32</sup>

32. Barrie Bierman, 'Observations on Fenestration in Brazil', *Report Helen Gardner Memorial Travel Prize*, [awarded 1944, presented 1946] unpaginated manuscript.



Figures 1: Barrie Biermann's drawings from the 1947 manuscript 'Observations on Fenestration in Brazil', illustrating his theory on the evolution of façades. The report has numerous drawings like these along with watercolour sketches. The part covering modern buildings uses photographs, some of these featured in his article with the same name, published in the *South African Architectural Record* in July 1950. Figures 1, 2 & 3 by kind permission of Susanné and Guillaume Liebenberg, heirs to Barrie Biermann and copyright holders.

Biermann based his study on close observation of Portuguese colonial architecture, with its distinctive framing of openings and corners with wrought stone, surrounded by plastered rubble masonry united by large amounts of lime mortar. This labour-intensive coastal vernacular relied on burning seashells for lime. In inland regions of Brazil where lime was unobtainable, timber framed buildings with wattle and daub maintained the expression of framed openings. Biermann constructed a narrative of evolutionary progression detecting that as urban sites became narrower, the plastered masonry panels between the frames eventually disappeared, resulting in façades composed almost entirely of framed openings. (Figs. 1 & 2.)



Figures 2: Here Biermann illustrates the stages of architectural evolution where frames progressively cease to be ornamented incidents in the wall and become neutral architectural elements framing a 'positive void', here shown as one of the bays in Lucio Costa's Parque Guinlé housing project in Rio de Janeiro.

In Biermann's account, the frame, which had hitherto been the bearer of architectural embellishment, became neutral while the field within the frame became a 'positive void' charged with taking on many duties, not only addressing practical issues of privacy, daylighting, sun-control and ventilation but carrying a multiplicity of other roles as the primary elements of architectural expression. Biermann's caption to an illustration of Lucio Costa's recently completed Parque Guinlé apartments states: 'An exquisite example of the positive void ... this block of flats ... represented the highest stage of development of the *conditioned wall* in multi-storied work...'; adding:

33. Barrie Bierman, 'Observations on Fenestration in Brazil', *Report Helen Gardner Memorial Travel Prize*, [awarded 1944, presented 1946] unpaginated manuscript.

Indeed, of all the modern architects in Brasil whom I had the opportunity of meeting, Lucio Costa alone was both theorist and designer. It must be admitted that his influence on his contemporaries is great, a fact they themselves acknowledge; but while at the time of my visit his use of the multi-purpose panel was the most refined, neither the theory nor the design initiative of the conditioned wall came directly from him. The new elements evolved independently in the hands of many men. The brothers Roberto in Rio have consistently developed the fixed "fin" which they first applied in the ABI building, while Dr. Rino Levi in São Paulo has for a long time been developing the grille and the conditioned wall as such. At the time when I was in São Paulo his treatment of the conditioned wall seemed to me to be the furthest advanced.<sup>33</sup>

Remarking that Levi designed intuitively, Biermann says he:

34. Barrie Bierman, 'Observations on Fenestration in Brazil', *Report Helen Gardner Memorial Travel Prize*, [awarded 1944, presented 1946] unpaginated manuscript.

would as like as not be surprised that any theory could be demonstrated in his work ... In the design of his own house the form and function of these new elements are very well exemplified. Both for privacy and orientation the house turns its back on the streets, and the unbuilt area of the site is interrelated with the rooms as garden courtyards, on the lines of the Arnstein House (*Brazil Builds*) nearby.... The conditioned wall serves to relate the interior rooms to the exterior rooms, and both to the street. "House without Windows" is my own phrase. The Rino Levi house represented at the time of my visit (1946) the foremost example of the decline of the window and the emergence of the conditioned wall, and the success of the element in that context seemed to me to be a sufficient justification of, and provided the motive for, this report.<sup>34</sup>

35. Barrie Biermann, 'Observations...excerpts from the report...' SAAR, Jul. 1950, 151-162.

Bierman worked his way home on another, less glamorous sailing ship and in 1950 published an abridged version of his report in SAAR in which he reflected further on what he had learnt in Brazil, expanding on lively conversations with Vilanova Artigas on roofs and gables and his reflections on the rapid evolution of the quebra-sol in the work of the brothers Roberto.<sup>35</sup> He reported that, in the ABI building, where the vertical fins were retained by projecting slabs at each level it was found that the heavy elements, trapped heat and could be replaced with lighter, detached fins to provide:

36. *Ibid.*, 159.

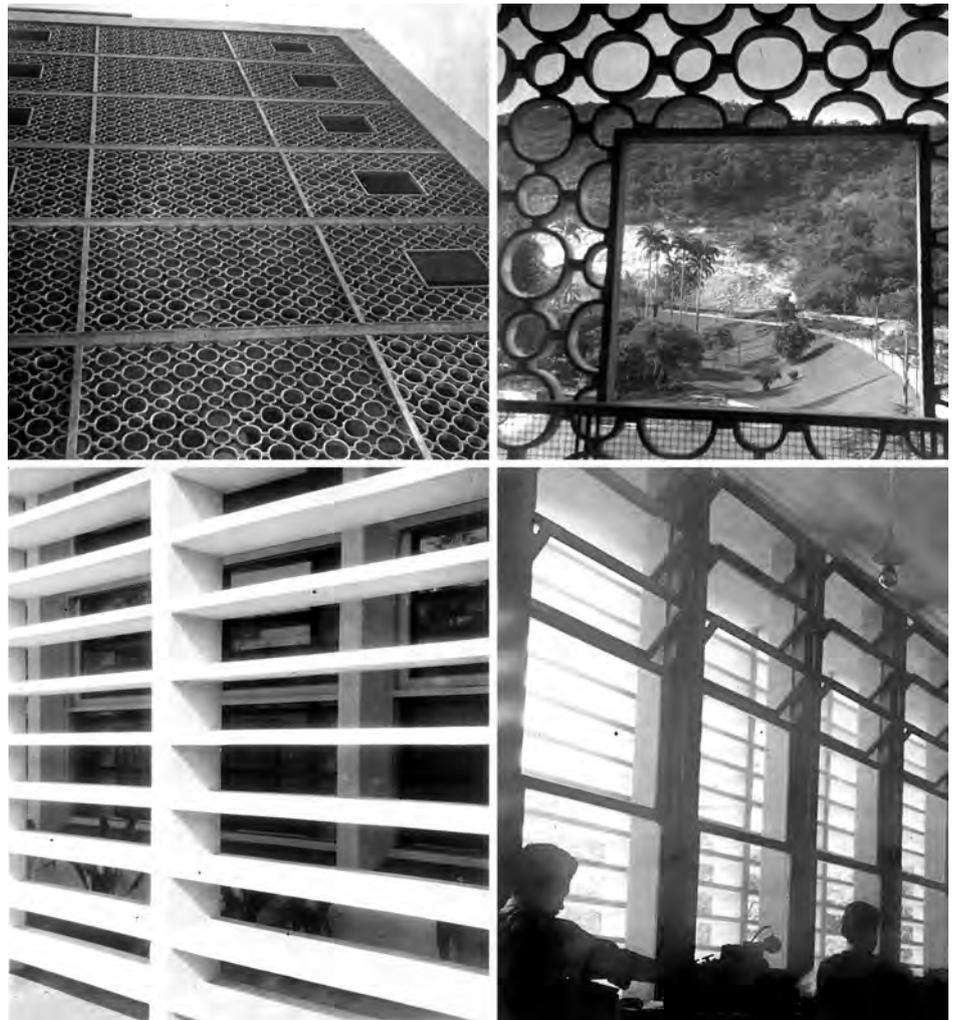
... a movement of cooler air in front of the glass wall ... Thus the new element began to take final shape in one form — a projecting mask, free of the façade proper, which is the glass wall of the enclosed space.<sup>36</sup>

He speculated that conditions would improve further if, instead of paving:

37. *Ibid.*

...the provision of a vegetable "cooler" — densely growing plants on damp ground — immediately in front of the façade is a refinement which awaits advances in town planning practice.<sup>37</sup>

He had seen such arrangements in Rino Levi's house and published a section of the multi-layered façade showing the cooling vegetation between a quebra-sol grille and the window.



Figures 3: Images from Biermann's manuscript showing buildings photographed by him on his visit to Brazil covering recent developments (1947). Many of the photographs are of buildings completed since the MoMA *Brazil Builds* exhibition of 1943, including those above. Top row, External and internal view of screen walls in ceramic 'claustra', Parque Guiné by Lucio Costa. Bottom row: external and internal view of screening to a factory office in São Paulo by Rino Levi: the 'Conditioned Wall' – note the planting between the screen and windows.

To encourage South African architects to think critically about their own unique material and climatic circumstances he suggested that:

38. Barrie Biermann, 'Observations...excerpts from the report...' SAAR, Jul. 1950, 162.

... by adopting techniques like these, which render their buildings eminently habitable by relying on the operation of simple physical laws without the aid of fallible and expensive mechanical contrivances such as fans, blinds, air-conditioning systems and the like, architects can render the community a better service.<sup>38</sup>

Biermann reflected on the cultural heritage of Brazilian architects and how this had favoured the development of their ideas:

The essence of the new architectural forms in Brazil may be expressed in the terms "partial enclosure" or "modified enclosure," or, better still, "conditioned enclosure"; while their successful appearance and performance can only be ascribed to clear thinking (good design) and

39. Barrie Biermann, 'Observations...excerpts from the report...' SAAR, Jul. 1950, 154.

boldness...The conventional European concept of modified enclosure is an enclosed volume with modification achieved by poking one or more holes in the enclosing envelope. In the East, or rather among the Eastern peoples, with their experience of tropical climates, the business of enclosure has been more subtle, and the walls of their buildings have often tended to be veils rather than blankets. The Portuguese have through various channels absorbed some of these Eastern influences, and in their South American colony these found fertile soil for growth.<sup>39</sup>

Bierman's subsequent career as a distinguished teacher, author and academic was wide-ranging and inclusive. In his short, 1955 *Boukuns in Suid-Afrika*, all contributors, Dutch, British and Indigenous, were included. In the design of his own house in Durban, he explored tuning spaces to benefit from subtle readings of orientation, breezes and rainfall, paralleling ideas of warm climate architects such as Geoffrey Bawa and Anjalendran in Sri Lanka.

40. Lucio Costa, 'Documentação necessária', *Revista do Serviço do Patrimônio Histórico e Artístico Nacional*. (RSPHAN) v.1, 1937, 31-40.

Bierman's ideas may also have been reinforced in discussions with Lucio Costa, who had argued in 'Documentação Necessária' that to ground modern architecture in Brazil it needed nourishment from vernacular and colonial precedents.<sup>40</sup>

## Conclusion

41. Clinton Harrop-Allin, Norman Eaton: Architect...Cape Town: Struik, 1975.

42.

43. Sylvia Ficher & Marlene Milan Acayaba, *A quatro mãos: Arquitetura Moderna Brasileira, 1978-82*, *Revista de arquitetura e urbanismo*, 2011. <https://mdc.arq.br/2011/03/29/a-quatro-maos-arquitetura-moderna-brasileira-1978-82/>.

Enthusiastic Southern African architects in the 1950's, after replicating Brazilian forms somewhat uncritically, took a deeper look. Norman Eaton for example, drawing upon his experiences and sketchbooks from Brazil and East Africa, developed a widely eclectic and personal portfolio stretching from moderately fictional 'restorations' of Cape Dutch architecture to romantic borrowings from indigenous cultures.<sup>41</sup> Perhaps the most original response to what he learnt in Brazil was Netherlands Bank in Durban (1961) where the whole structure is enveloped by a superbly conceived suspended, glazed terracotta sun-screen echoing Brazilian cobogós or Indian Jaalis. Also in Durban, Izzy Benjamin created spectacularly lively, Brazilian inspired apartments and hotels.<sup>42</sup> Much of this inventive building occurred before the mid-1950s 'How to build in the Tropics' reports and manuals descended from the Northern Hemisphere with its remote and authoritative 'Building Science'. Inspired by Brazil, whatever their failings, South African architects had wider agendas to honour, most beyond the reach of reductive techno-scientific and formulaic solutions.<sup>43</sup>

44. Udu Kultermann, *New Directions in African Architecture*, London: Studio Vista, 1969, 97-114

Elsewhere in Africa, environmental control in modern buildings embraced values that resonated with their locations. Architects who had chosen to live and practice in Africa rather than fly in and fly out, included Pancho Guedes in Mozambique, Amyas Connell and Ernst May in Kenya, Anthony Almeida in Tanzania, Julian Elliott in Zambia and in partnership with Philippe Charbonnier in Congo/Zaire.<sup>44</sup> These and others adapted to local circumstances, available skills and social circumstances. Some strove to honour local cultures in their work while being in touch with architectural developments elsewhere in Africa and further afield.

In 1955 MoMA hosted Henry Russell Hitchcock's *Latin American Architecture since 1945*, finding exemplary buildings holding their own against those in the USA and Europe. Young architects in those countries had built prodigiously, with confidence and verve while Europe was still recovering from WWII and the USA was feeling its way into modern architecture:

45. HRH, [Introduction], *Latin American Architecture since 1945*, New York: MoMA, 1955, 29

The original publication, now out of print, can be downloaded from the MoMA site: <https://www.moma.org/calendar/exhibitions/2436>

Architecture is still very much an art in Latin America. The articulate elements in the community ... expect more from architects than purely "functional" solutions. Public authorities in particular clearly turn to architecture as a principal expression of cultural ambition.<sup>45</sup>

A year later, Henrique Mindlin published his comprehensively illustrated, *Modern Architecture in Brazil*, with a laudatory preface by Siegfried Giedion:

46. Sigfried Giedion, 'Brazil in Contemporary Architecture', in: Henrique Mindlin, *Modern Architecture in Brazil*, Rio/Amsterdam: Colibris, 1956, IX.

It is a good sign for our civilization that it is spreading from more than one center. Creative work suddenly appears in countries which in earlier periods would have remained provincial. Finland and Brazil: how is it possible that these countries that have been lying for such a long time on the outskirts of civilization show such a high architectural standard? ... No doubt, without creative architects there can be no creative work ... What is lacking in many other countries, however, is the financial support and the clients, governments and administrations which do not hamper real talent.<sup>46</sup>

However, when Giedion updated *Space, Time and Architecture* in 1962, he ignored Brazil, in contrast to his effusive promotion of Alvar Aalto whose work took on the role of humanizing modern architecture while somehow blending with orthodoxy.

47. Report on Brazil – 'Max Bill', *AR*, vol. vol.1 116, 1954, 238.

For those who felt empowered to pronounce on what was acceptable in modern design, perhaps Max Bill's intervention in São Paulo in 1953 captures the spirit of Europe's attempt to reassert its dominance of modern architecture's trajectory: 'Today most [Brazilian] applications of Free-form shapes are purely decorative. As such they have nothing to do with serious architecture...'<sup>47</sup> Bill asserted that Brazilian architects had subverted the function of the brise-soleil along with pilotis by applying them indiscriminately as decorative elements. He excoriated Brazilian architects for striving for effect and 'self-expression', straying from Architecture by avoiding their responsibilities as practitioners of a social art.

48. Sigfried Giedion, '...New Monumentality...'; in: Paul Zucker, *New Architecture and City Planning*, New York: Philosophical Library, 1944, 549-568.

Nevertheless, Brazil's next surge onto the stage of world architecture was with Brasilia, rising to the occasion by providing some answers to Giedion's 1944 perceived deficit in Modern Architecture of 'Monumentality'.<sup>48</sup> Lucio Costa contributed confidently to the debate that followed:

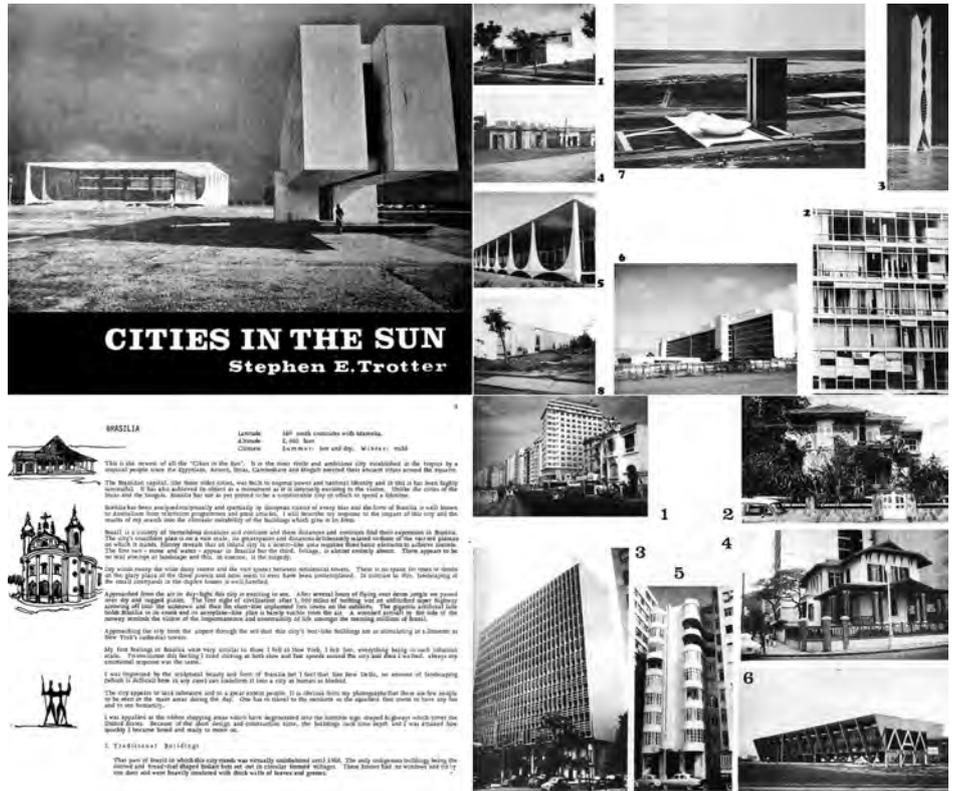
From the moment architects ... apply themselves ... to the study of the problems of architectural expression, ... becoming imbued with a passion to conceive, to plan and to build - from this moment, their wholly functional works will respond to the higher

49. Lucio Costa, 'In search of a new monumentality', *AR*, vol.104, 1948, 127.

purpose animating them and will express themselves in appropriate plastic terms, acquiring ... a noble and dignified grace. Architects will then have unconsciously attained monumentality.<sup>49</sup>

50. Hugo Segawa, *Architecture of Brazil, 1900-1990*, Heidelberg: Springer, 2013.

Between 1936 and 1960, Brazilian architects not only extended the language of Modern Architecture to include practical methods for dealing with warm climates, they also addressed issues of identity and approaches to monumentality that helped colleagues in Africa and elsewhere find pathways to local relevance in their work.<sup>50</sup>



Figures 4: Cover and a selection of pages about Brazil in Stephen Trotter's *Cities in the Sun* report. By 1963, parts of Brasilia were newly built. In this phase of Brazilian modern architecture, Oscar Niemeyer and others developed an approach to monumental representative buildings, enhanced by Lucio Costa's overall plan. Brasilia was all new, including the favelas which sprang up as the city was being built – photograph 4 in the mosaic top right. On the bottom row, Trotter, like Bierman looks at buildings from various epochs. Both were seeking to understand the architecture of Brazil and other places as part of a cultural continuum. By kind permission of Paul Trotter.

# **Fresh Air and Sunshine: The Health Aspects of Sleepouts, Sunrooms, and Sundecks in South Australian Architecture of the 1930s**

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## **Keywords**

Health  
History  
Modern  
Architecture  
Housing

## **Abstract**

This paper explores some of the public health ideas which were expressed in South Australian architecture in the early twentieth century with a focus on their physical manifestation in residential building types. In particular, the incorporation of sleepouts and sunrooms and the elaboration of these spaces from enclosed verandah to purpose-designed room for exposure to fresh air and sunshine will be discussed. The exterior space of the sundeck or rooftop terrace will also be examined in relation to healthy open-air living. Utilising a historical interpretive method three case studies drawn from South Australia in the 1930s will be examined in detail. These buildings are the Yelland Residence, Hyde Park by Keith Yelland (1936); an apartment building complex, 'Retten', at Glenelg, (1938), by Harold T. Griggs; and the Hardy residence, at Netherby, (1938), by Russell S. Ellis. Primary archival material, including architectural drawings, specifications, and correspondence, has been drawn upon and contextualised using published contemporary sources on both health and architecture.

## Introduction

At the turn of the twentieth century, public health was one of the main concerns of not only the medical profession, but also architects, planners, and sanitary reformers. Together the professions looked forward to a time when diseases, especially infectious diseases and epidemics, could be controlled and quality of life would be improved through public health measures and improved environmental conditions. Australia, which suffered from similar disease outbreaks and causes of mortality to many counties across the globe, looked to Britain, Europe, and America for their lead in the field of public health, with local architects anxious to play their part in designing places for improving the health of all citizens. This was a time when architects and town planners were active in public health, publishing plans in medical and sanitary journals and delivering lectures to gatherings of health experts as well as the interested public.

Many building designs of the twentieth century had their planning, aesthetics, services, and materials influenced by architects' understandings of the medical concerns, theories, and treatments common at the time of their design. Access to fresh air and ventilation was championed as essential to healthy living and was one of the aspects of design linking public health and architecture. Additionally, exposure to sunlight both outside and inside buildings was recognised as beneficial in the promotion of general health and wellbeing. Of the prevalent diseases, tuberculosis remained a major concern until the latter half of the twentieth century, and as such its impact on health and place debates was significant. This paper aims to contextualise the public health and architecture relationship in the early twentieth century in South Australia, especially focussing on tuberculosis as an airborne infectious disease. Three case studies from South Australia in the 1930s will be explored using a historical interpretive method and focussing on some of the features designed to enable access to fresh air and sunlight, specifically purpose-designed sleepouts, sunrooms, and sundecks in residential buildings with the health rationale behind their planning, materials, services, and expression evaluated.

Methodologically, Wilbert Gesler's concept of 'therapeutic landscapes', has been used as a guiding framework to ground this paper by analysing 'natural, built, social and symbolic environments as they contribute to healing and wellbeing in places.'<sup>1</sup> This paper also explores the role public health knowledge played in the design of these buildings. A further aspect of analysis examines 'architecture [as] a form of medical technology', a proposition which has been extended to the analysis of the case studies selected.<sup>2</sup> This theoretical framework, which builds on the notion that buildings and environments can be interpreted as places of 'therapeutic action' and '*les machines à guérir*' – 'curing machine[s]'<sup>3</sup> demonstrates how they could be perceived as 'not simply the place of the cure, but also an instrument of the cure itself.'<sup>4</sup>

Among the limitations of this paper is its reflection of understandings of health and disease as they were during the twentieth century. Some of these perspectives are now understood as well-intentioned but misguided, constructed on imperfect, biased, or flawed knowledge. By reflecting on the understandings of the time the intention is to explain

1. A. Williams, *Therapeutic Landscapes* (Aldershot: Ashgate, 2007), 1-2.

2. A. Adams, K. Schwartzman, and D. Theodore, "Collapse and Expand: Architecture and Tuberculosis Therapy in Montreal, 1909, 1933, 1954," *Technology and Culture* 49, no.4 (2008): 911.

3. M. Foucault, "The Politics of Health in the Eighteenth Century" in *Power/Knowledge: Selected Interviews and Other Writings 1972-1977*, ed. C. Gordon, (New York: Harvester Wheatsheaf, 1980), 180.

4. S. Elden, "Plague, Panopticon, Police," *Surveillance and Society*, 1, no.3, (2003): 245.

how these medical ideas were in part responsible for the designs of the historic buildings that we are familiar with today, rather than evaluate the efficacy of their health effects.

## Public Health and Architecture in the First Half of the Twentieth Century

5. B. Fletcher and B.F. Fletcher, *A History of Architecture on the Comparative Method*, (London: Batsford, 1905); B.F. Fletcher, "The architecture of the twentieth century from the point of view of public health," *Journal of State Medicine*, (January 1901): 10.

6. B.F. Fletcher and H.P. Fletcher, *Architectural Hygiene; or, Sanitary Science as applied to Buildings*, (London: Whittaker and Co., 1907); B.F. Fletcher and H.P. Fletcher, *The English Home*, (London: Methuen, 1910).

7. W. Eassie, *Healthy Houses: A Handbook to the History, Defects, and Remedies of Drainage, Ventilation, Warming, and Kindred Subjects*, (London: Simpkins, Marshall and Co., 1872); F. Nightingale, *Notes on Nursing*, (London: Harrison, 1860); B.W. Richardson, *Hygeia: A City of Health*, (London: Macmillan and Co., 1876).

8. World Health Organization. "Tuberculosis Key Facts", 2021, <https://www.who.int/news-room/fact-sheets/detail/tuberculosis> accessed online 2 February 2021.

9. P. Warren, "The Evolution of the Sanatorium: The First Half-century, 1854–1904," *Canadian Bulletin of Medical History*, 23, 2 (2006): 462.

10. J. Collins, *The Architecture and Landscape of Health: A Historical Perspective on Therapeutic Places 1790-1940*, (Abingdon and New York: Routledge, 2020).

11. J. Collins, "Life in the Open Air: Place as a Therapeutic and Preventative Instrument in Australia's Early Open-Air Tuberculosis Sanatoria," *Fabrications* 22, no.2, (2012): 214.

12. G.C. Cook, "Henry Currey FRIBA (1820–1900): leading Victorian hospital architect, and early exponent of the 'pavilion principle,'" *Postgraduate Medical Journal*, 78, (2002): 352-359.

13. Collins, "Life in the Open Air".

14. A. Bashford, *Imperial Hygiene: A critical history of colonialism, nationalism and public health*, (London: Palgrave Macmillan, 2003), 71.

One of the most well-known names to architectural historians, Banister F. Fletcher, architect and co-author of the reference work, *A History of Architecture on the Comparative Method*, in an address to the Congress of the Royal Institute of Public Health in Scotland in 1900, stated that 'architecture is public health in its broadest and possibly its best sense'.<sup>5</sup> He imagined a future where disease would be lessened and the health of the population would be improved, in part through architecture and planning, a subject he also tackled in books *Architectural Hygiene and The English Home* which took a health-based or sanitary approach to planning, materials and construction and which he co-authored with his brother.<sup>6</sup> Fletcher was not alone in his thinking, his address reflected the concerns of many architects, health professionals and reformers, and reiterated several ideas which had gone before including those from Florence Nightingale, William Eassie and Benjamin Ward Richardson.<sup>7</sup>

One disease, tuberculosis, remained the major public health concern until the latter half of the twentieth century, and as such, its impact on architecture and planning was significant. Pulmonary tuberculosis, consumption, or the white plague, is an infectious bacterial disease with symptoms of coughing - sometimes with sputum or blood - chest pains, weakness, weight loss, fever and night sweats, and is spread through airborne droplets from the throat and lungs of infected persons.<sup>8</sup> Until the mid-twentieth century there was no cure, no vaccine, and limited medical or pharmacological treatments, and the 'open-air treatment' was the most widely accepted way of managing patients. This treatment involved living as much as possible in the fresh air with the belief that it would aid blood circulation to the lungs and improve the overall health of sufferers.<sup>9</sup> The open-air treatment also encouraged good nutrition, isolation of the ill, good hygiene, exercise, and education, where possible at sanatoria for limited inpatient stays. The architectural expression used for tuberculosis sanatoria ranged from the Gothic inspired to the English vernacular to the modern, with adaptation of local architectural styles occurring across the world. Large sanatoria with narrow linear wings were popular across Europe, while in America, cottage style sanatoria in village like settings became the favoured solution.<sup>10</sup>

South Australia followed the international open-air movement with the first sanatorium purpose-designed for the open-air treatment opened in 1895 at Kalyra, Belair, in the hills above Adelaide followed by Nunyara Private Sanatorium in 1902.<sup>11</sup> These sanatoria followed the pavilion plan in which long rectangular buildings allowed for cross ventilation through large windows on either side of the ward.<sup>12</sup> However multiple bed wards were not ideal when dealing with infection control and Nunyara substituted private bedrooms.<sup>13</sup> The verandah, already a component of Australian building, was used at both sanatoria as it allowed exposure to as much fresh air as possible both day and night, with bedrooms opening out to the verandahs through large windows and doors.<sup>14</sup>

15. J. Collins and P. Lekkas, "Consumption crusade: the influence of tuberculosis on the emergence of town planning in South Australia, 1890-1918." *Planning Perspectives*, (2021), DOI:10.1080/02665433.2021.1902848.

Health reformers and town planners reflected the popularity of open-air living in their work and called for light, air and space in housing, school, and suburb design, both to counter the severity of tuberculosis but also to aid in its prevention.<sup>15</sup>

### Sleepouts for Health in South Australia

16. "Dr Borthwick Interviewed," *Advertiser*, (2 August 1901): 6.

17. "Consumption," *South Australian Register*, (10 September 1898): 9.

18. "Tuberculosis" *Coolgardie Miner* (11 April 1914): 1.

19. "Nursing a Tuberculosis Patient at Home", *The Australian Woman's Mirror*, (6 June 1933): 28.

20. W. Ramsay Smith, "Twelve Years' Experience of Compulsory Notification of Pulmonary Tuberculosis in South Australia," (Adelaide: Government Printer, 1913), 5.

21. P. Baldwin, "How Night Air Became Good Air, 1776-1930," *Environmental History* 8, no.3, (2003): 412-429.

22. A.C. Stempel, "The Small House in South Australia," *Australian Home Beautiful* (1 August 1935): 28-32.

With the acceptance of the open-air treatment for tuberculosis and the popularity of sanatoria, outdoor sleeping became medically advised behaviour, not only for treating tuberculosis but for general good health. South Australian Medical Officer of Health, Dr Thomas Borthwick praised the South Australian climate for allowing both natural ventilation of homes and windows being able to be left open overnight in both summer and winter.<sup>16</sup> Newspapers also advocated that anyone with tuberculosis should sleep outside, encouraging sufferers to 'live practically in the open air all the year round',<sup>17</sup> imploring people 'Do not be afraid of fresh air. Remember, that night air is not harmful. Allow a free circulation of air through the house at night - especially through sleeping rooms.'<sup>18</sup> The *Australian Woman's Mirror* magazine recommended that, '[t]he best place for [the tubercular patient] is a small fly-proof chalet fitted with good blinds. Next best is a sleeping porch, again with blinds, but failing either, an airy room with windows facing south and east.'<sup>19</sup> By 1913, the Chairman of the Central Board of Health and Head of the Health Department of South Australia, physician Dr William Ramsay Smith reported on South Australia's experience with tuberculosis at a conference held in Washington in the United States of America stating that, "'Sleeping out" at home in the free fresh air and alone is becoming fashionable among all classes'<sup>20</sup> The fresh air of the night was perceived as health giving across the world,<sup>21</sup> and by the 1935 it was stated that 'the Adelaidean is a lover of the open air.'<sup>22</sup>

23. W. Ramsay Smith, "Report on the Control of Consumption in South Australia", (Adelaide: Government Printer, 1911), 16.

Despite the upbeat reporting of the fashion for open-air living, the grim reality of the lives and habitations of many tuberculosis sufferers was stark by contrast. Documentation of tubercular patients sleeping in the open-air can be found in the 'Report on the Control of Consumption in South Australia' compiled by Ramsay Smith in 1911. Enclosed verandahs were mentioned in several of the cases. In that of a 22-year-old female, it was recorded that: 'The patient sleeps in the front verandah at present, which is enclosed with canvas. Mr. P. [her father], by Dr. B.'s advice, is building an iron room in the yard for the patient'. Several cases in the report show how in desperate situations those who were renting accommodation had no recourse to such adaptations and many suffered and died in substandard dwellings. In the case of a 27-year-old male, the report reads: 'He had a cough and expectoration. ... he slept in a tent on the lawn at the rear of the house.' In another case, a female of 21-years, '[w]as at Nunyara Sanatorium for one month. ... [and now] [t]he patient is sleeping in the same bed as her sister, 18 years of age, and does not understand she is suffering from consumption. I advised her to sleep in a separate room ... or if possible to sleep out of doors.'<sup>23</sup> Not only did the enclosure of verandahs enable sleeping in the fresh air, but with the annexation of extra rooms, it addressed overcrowding, a contributor to transmission of airborne disease within the home.

Sleeping in open-air also helped to combat the problem of heat and

24. "Garage and Sleep-Out Time: Build Now," *Mail*, (16 October 1937): 30.

25. "The Sleeping-Out Craze," *Building*, (12 July 1911): 86.

26. "Correspondence," *Register*, (15 November 1928): 5; "Queries from Readers Answered," *Advertiser*, (15 November 1939): 7.

27. "Correspondence," 5.

28. "Construction of Fly Wire Screens," *Mail*, (10 October 1936): 27; "Week-End Thefts," *Advertiser*, (18 May 1937): 13.

29. Baldwin 2003: 421.

30. A.C.S., "The Home Maker's Page," *Advertiser*, (15 November 1939), 7; "Architect Builds Own Home," *Mail*, (4 January 1936): 10; "Modernity in Home Planning," *Mail*, (23 July 1938): 34.

31. J. Adelaide, "Period Home or Modernist," *SA Homes and Gardens* (1934).

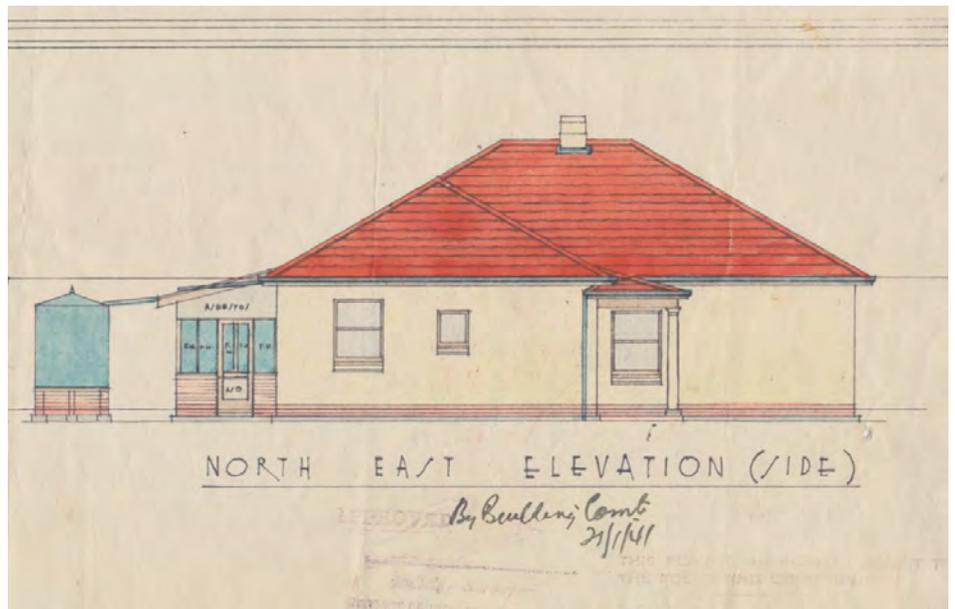
32. "More Enterprise in House Design," *Mail*, (16 April 1938).

33. J. Clare, "The Californian Bungalow in Australia," *Historic Environment*, 1 (1989): 19-39.

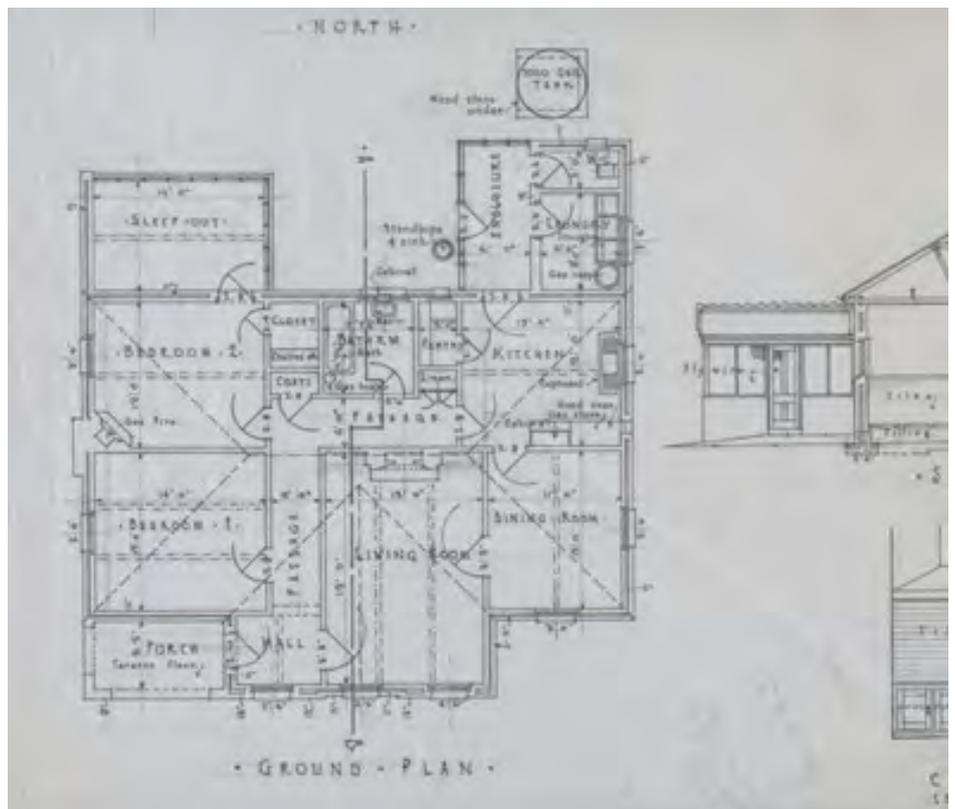
stuffiness within homes in the South Australian summer. As the *Mail* wrote in 1937, 'In the Spring, householders' thoughts turn to the building of sleep-outs' citing the need 'to ensure cool nights' during summer.<sup>24</sup> The early twentieth century 'sleeping-out craze', as *Building* magazine termed it, led to sleepouts being seen as almost essential.<sup>25</sup> Sleeping out became a regular topic of discussion in local newspapers during the 1930s, especially in terms of advice for do-it-yourself handymen.<sup>26</sup> The enclosure of existing verandahs by the homeowner was recommended to readers as a something they could achieve with timber framing lined with asbestos sheeting and 'gauze' flywire.<sup>27</sup> In South Australia, the 'fly menace' during summer was one of the rationales for enclosing the sleepout in flywire, but this also admitted another potential problem, that of house burglars which became regular concern for homeowners.<sup>28</sup> The exclusion of mosquitoes was a further anxiety with some diseases known to be transmittable through this vector.<sup>29</sup>

While the variation in materials from the main house to the sleepout may to today's eyes seem to imply they were a later addition or alteration, it was not uncommon for them to be purpose-designed as an integral part of original designs in the 1930s.<sup>30</sup> South Australian architects whose designs for freestanding houses and flats incorporated sleepouts in their original plans included Gordon Beaumont Smith, Harold Griggs (Figure 1), Russell Ellis, and Lawson and Cheesman Architects. An example is the home which architect Keith Yelland (1900-1973) designed for his brother Dene in Hyde Park in 1936 which included a sleepout at the rear of the house with part flywire walls to enable the flow of fresh air (Figures 2 and 3).

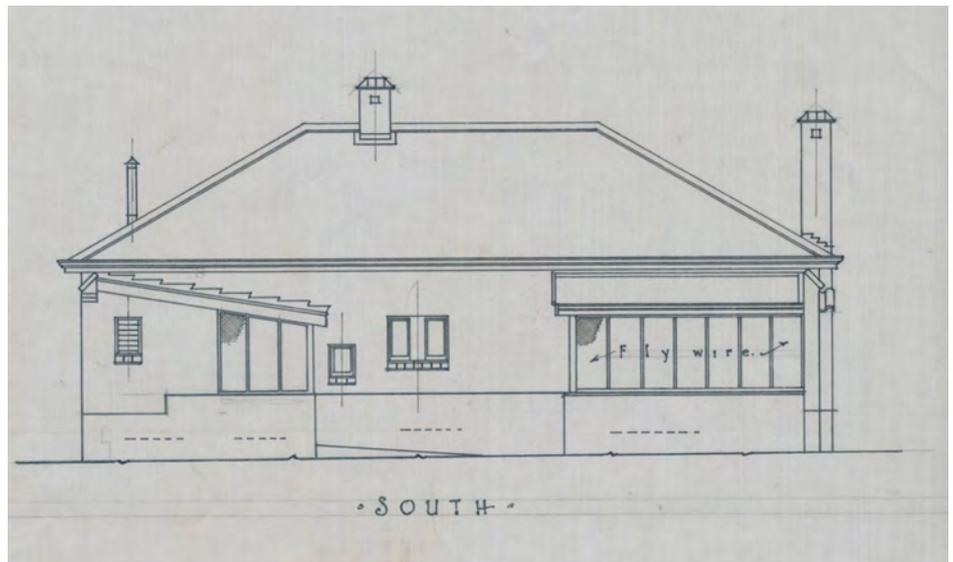
The Yelland House is Spanish Mission in appearance, a style which was perceived to be suitable for the South Australia by columnist John Adelaide, 'because of the fact that it has been evolved in a Mediterranean climate which closely approximates our own.'<sup>31</sup> Despite this, Adelaide architects reportedly ultimately saw the bungalow as more suitable.<sup>32</sup> The sleeping porches which were commonly found on Californian Bungalows reflected the practice of outdoor sleeping which *Building* magazine estimated extended to fifty percent of Australian houses by the early twentieth century.<sup>33</sup> The architect's drawing of the Yelland house shows how the sleepout at the rear of the opened directly from a bedroom with two walls of double brick and two of lightweight framed construction infilled with sheeting and flywire with a skillion roof of corrugated sheeting. The size of a small bedroom, the sleepout measures 14 feet by 9 feet. However, sleepouts could be found in complexes of flats as well as freestanding houses and were promoted as a 'modern' element of residential design with the modern architectural language also enabling their incorporation.



Figures 1: Typical sleepout at rear of maisonettes, Grassmere, 1940, by Harold T. Griggs, architectural drawing, Griggs collection, S167/746, Architecture Museum, University of South Australia.



Figures 2: Dene Yelland House, Hyde Park, 1936, by Keith Yelland, plan, architectural drawing, Russell and Yelland collection, S98, Architecture Museum, University of South Australia.



Figures 3: Dene Yelland House, Hyde Park, 1936, by Keith Yelland, rear elevation, architectural drawing, Russell and Yelland collection, S98, Architecture Museum, University of South Australia.

### Sunrooms and Solaria

34. R. Unwin, *Cottage Plans and Common Sense*, (London: Fabian Society, 1902).

35. R. Lee, "We Are All Sun Worshippers These Days," *News*, (18 May 1938): 9.

36. Lee, "We Are All Sun Worshippers These Days", 9.

37. "New Cult of the Sun – Has your house a solarium?" *Advertiser*, (14 July 1937): 13.

38. Lee, "We Are All Sun Worshippers These Days", 9.

39. Times, 11 May 1922 cited in R.A. Hobday, "Sunlight Therapy and Solar Architecture," *Medical History* 41, no.4 (1997): 466.

40. "Sunlight and Tuberculosis", *The Australian Woman's Mirror*, (4 October 1927): 17.

41. G.S. Jones, "Australia and Civic Art: A Factor in National Life," *Architecture*, 2, no.4, (October 1917): 85-89.

42. Hobday, "Sunlight Therapy and Solar Architecture."

43. "Retten Flats," *Advertiser*, (11 May 1939): 17.

44. M. Cooper-Dobbin, *Harold T. Griggs: The People's Architect*, Architecture Museum Monographs, (Adelaide: University of South Australia, 2010).

At the turn of the century architect and town planner Raymond Unwin had recommended that 'every house should turn its face to the sun, whence comes light, sweetness and health.'<sup>34</sup> With their roots in part in hospital solarium, the adoption of sunrooms in domestic settings was widespread in the 1930s both in Australia and abroad. Sunbathing was seen as a fashionable part of a healthy lifestyle with newspapers in 1938 claiming 'We are all Sun Worshippers These Days'.<sup>35</sup> While phrases such as getting one's 'daily doses of sunlight'<sup>36</sup> and the 'New Cult of the Sun' peppered the media,<sup>37</sup> the sunroom was seen to be a 'concrete recognition of this ... [and an] adjunct of most modern houses.'<sup>38</sup> British surgeon and tuberculosis specialist Sir Henry Gauvain was a great advocate of heliotherapy, stating that 'Sunlight stimulates and enlivens, it is of help in almost all conditions'.<sup>39</sup> The effect of sunlight on forms tuberculosis other than pulmonary, as well as diseases such as lupus and skin ulcers was praised in the Australian press with bathing dresses and seaside sunbathing promoted.<sup>40</sup> In the modern period sunlight was also seen as 'a germ killer'<sup>41</sup> and the penetration of sunlight into buildings was deemed important as it could kill many bacteria living in dust particles even though it had no effect on diseases such as tuberculosis while they survived in the patient.<sup>42</sup>

In 1938 in the beachside suburb of Glenelg a block of six 'modern' flats called 'Retten' were designed for businessman Alfred Netter by architect Harold Griggs (1899-1902).<sup>43</sup> The cement rendered block contained six flats, three on each floor, with each of the individual flats comprising a living room, bedroom, kitchen, bathroom and sleepout, with some also having a sunroom or solarium. While sleepouts were predominantly located at the rear of the home with fresh air the goal, sunrooms were placed on any side of a residence which could gain direct sunlight, including the front, and were glassed in rather than using mesh screens. Griggs designed in many styles, including the modern<sup>44</sup> and within his body of work are many houses which include sleepouts, sunrooms

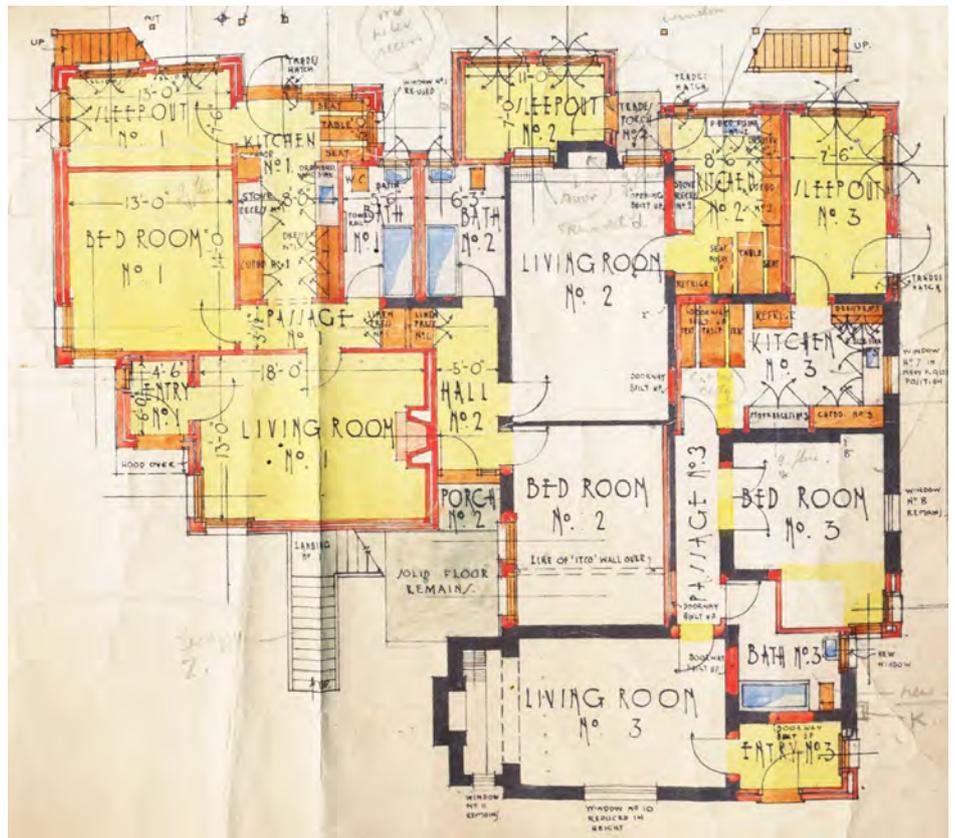
45. Harold T. Griggs collection, S167, Architecture Museum, University of South Australia.

46. "Retten Flats", 17.

and solarium as part of their original layout.<sup>45</sup> In 'Retten' (Figures 4 and 5) it was the solarium which gained much attention from the press. In a full-page advertising feature for the flats published in 1939 the plate glass enclosed solarium was described as 'Pre-eminent ... that spacious glass-enclosed area which surmounts the building, and from which one has an uninterrupted view of the coastline, out to sea, and the distant hills.'<sup>46</sup>



Figures 4: Retten, Glenelg, 1938, by Harold T. Griggs, undated photo, private collection.



Figures 5: 'Retten' Flats, Glenelg, 1938, by Harold T. Griggs, first floor plan, Griggs collection, S167/546, Architecture Museum, University of South Australia.

The activities which sunrooms were designed to cater for were generally recreational in nature with 'reading, writing, sewing and games' among them. In 1938, the furniture which was recommended for a sunroom included cupboards for:

47. "Make Most of Sunroom: Healthy Place for Varied Activities," *Mail*, (4 December 1937): 47.

'folding bridge table and chairs, one for drinks, a drawer for cards and games, a hinged flap at which one can write a note, with pigeonholes above for writing gear, a plug for wireless, plugs for lamps, plug for radiator, and plug for telephone.'<sup>47</sup>

48. 'Deepacres,' North Adelaide," *SA Homes and Gardens*, (2 August 1943).

49. "Make Most of Sunroom: Healthy Place for Varied Activities," 47.

50. G. Mewton, "Modern and Medieval: An Australian's Impressions of Architecture in Other Countries," *Australian Home Beautiful*, (2 January 1933), 14-16.

51. "New Cult of the Sun – Has your house a solarium?" 13.

Sunrooms have also been documented as playrooms for children.<sup>48</sup> As lounging or sitting was a suggested activity, it was recommended that fenestration cater for this, with 'ideal windows ... low down near the floor so that one can get a good view even from a low chair or lounge mattress.'<sup>49</sup> In 1933 Geoffrey Mewton in the *Australian Home Beautiful* reported that 'in Germany and other countries in Northern Europe the desire for sunlight is astounding. Everywhere there are large windows or long horizontal rows of them.'<sup>50</sup> However there were notes of warning sounded in the press against the 'holus bolus' adoption of the sunroom or solarium with the Australian climate, especially during summer, the main inhibiting factor.<sup>51</sup>

## Sundecks and Terraces

The solarium on the top floor of the flat roofed 'Retten' opened by way of French doors onto an adjacent sundeck. In a typescript on 'Flat Roof

52. H.Griggs, 'Flat Roof Constructions' typescript, c.1940, Griggs collection, S167/687, Architecture Museum, University of South Australia.

53. Fletcher, "The architecture of the twentieth century from the point of view of public health," 18, 17.

54. Lee, "We Are All Sun Worshippers These Days," 9.

55. M. Campbell, "From Cure Chair to 'Chaise Longue': Medical Treatment and the Form of the Modern Recliner," *Journal of Design History* 12, no.4 (1999): 327.

56. Mewton, "Modern and Medieval," 14-16.

57. W.Blackett, "The Centenary Homes Exhibition. A Critical Survey of the Plans and Designs," *Australian Home Beautiful*, (1 December 1934): 11-13.

58. E. Johnston, "Horizontalities: A New Note in Domestic Architecture," *Australian Home Beautiful*, (1 June 1935), 6-9, 48.

59. "A Modern House with Homely Character," *South Australian Homes and Gardens*, (1 October 1942): 16.

60. "Modern Home Erindale," *South Australian Homes and Gardens*, (1 November 1940): 20.

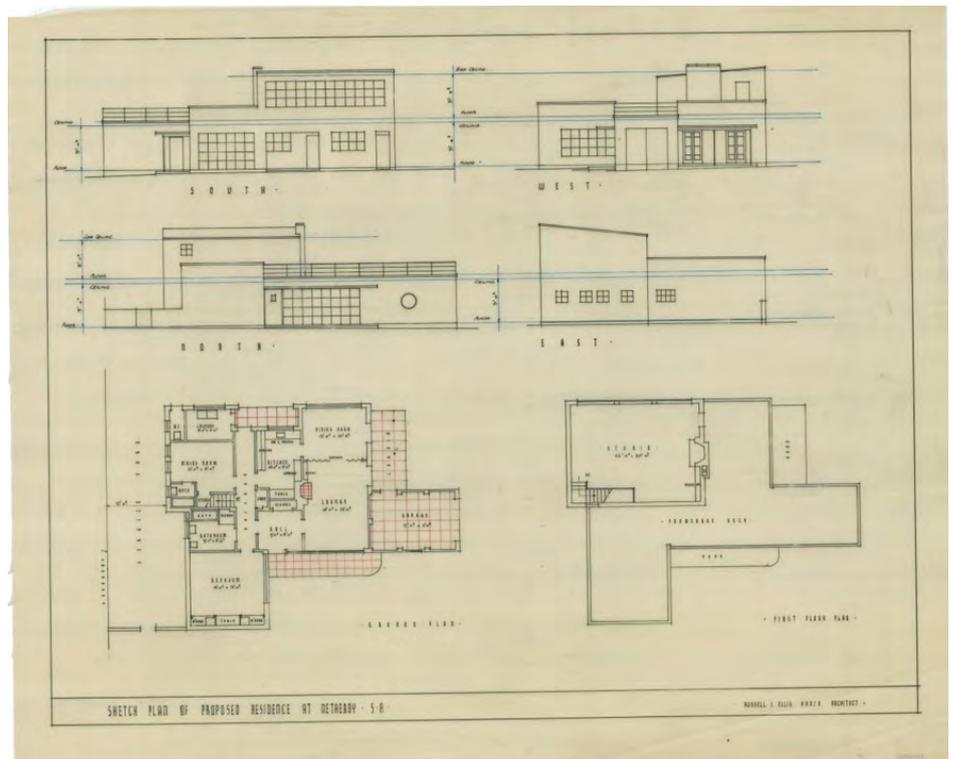
61. L. Bird, *Russell S. Ellis: Pioneer Modernist Architect*, Architecture Museum Monographs, (Adelaide: University of South Australia, 2007).

62. R. Ellis, "Thoughts on Planning the Immediate Post-war Home," *South Australian Homes and Gardens*, (1 September 1945), 28.

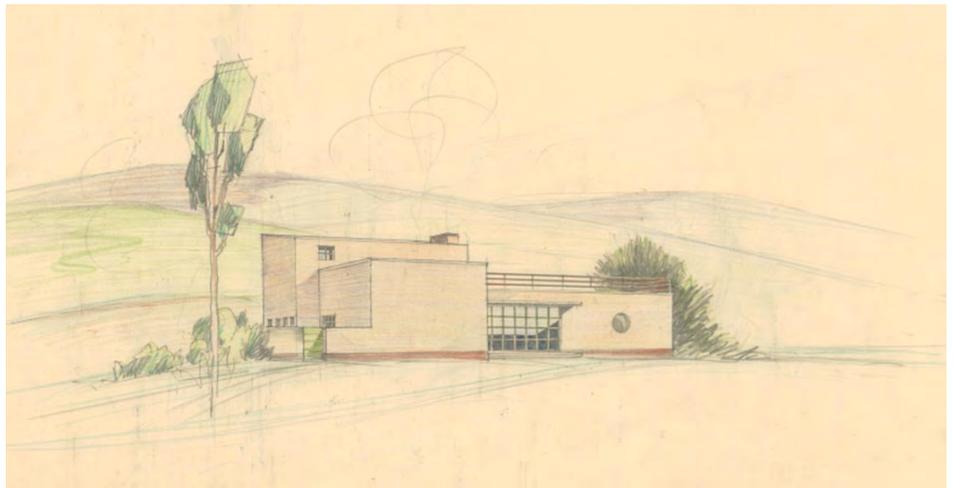
Construction', Griggs states that 'Healthy homes depend on sunshine, light and air', suggesting that tennis courts, play areas, or promenades could be uses of rooftops.<sup>52</sup> This echoed Banister Fletcher's 1900 address in which flat roofs were proposed as spaces which could be used as playgrounds, gardens, terraces and for sports, as well as for taking 'afternoon tea on the roof', in the 'cool breezes generally obtainable at the height of a five-storey house, with a view.'<sup>53</sup> The movement towards leisure was reflected by society columnist Ruth Lee, who in 1938 wrote, 'It's all part of the new era that is dawning to enjoy life more, to stop in our everyday rush and see the good things of life that are within our reach - sunlight and gardens and peaceful relaxation.'<sup>54</sup> The rooftop sun deck at 'Retten' proved popular, as a subsequent alteration demonstrates with the addition of a small deck outside of a first floor flat.

Flat roofs, sundecks, terraces and balconies featured in many modern houses, enabling the 'modernist enthusiasm for health and sun worship' experienced on holidays to continue on the return home.<sup>55</sup> In 1933, Mewton, in the *Australian Home Beautiful* explained that in Europe 'Most of these new houses have flat roofs ... Sometimes there are roof gardens, but mostly the roofs are used as loggias and for sun bathing.'<sup>56</sup> The popularity of the sundeck can be seen in the home designs entered in the Building Industry Congress of Victoria, Centenary Homes Exhibition competition of 1934, which received wide publicity across the country, with South Australian architects including Russell Ellis entering designs. Overall, the designs were perceived to be following modern trends, with architect W.A.M. Blackett noting that 'The chief element of difference is the wide adoption of the flat roof, a very desirable feature as affording useful space for sunning and exercise.'<sup>57</sup> The following year, the term 'open air deck' was used by *Australian Home Beautiful* writer, Esmé Johnston,<sup>58</sup> recalling the terminology popularised with open-air treatment for tuberculosis. As well as their use during the day for sunbathing and recreation, sundecks were also seen as able to function for the purpose of sleeping out at night.<sup>59</sup>

Sundecks located on top of flat roofs were praised in South Australian home magazines as utilitarian features which appealed to 'home-makers who are devotees to the healthful out-of-door living cult'.<sup>60</sup> One of the practitioners of modernism in South Australia, was Russell Ellis (1912-1988) who has been noted as being responsible for some of the early examples of modern homes in the state as well as period or conventional designs.<sup>61</sup> Ellis' Hardy house at Netherby featured the functional planning Ellis was to praise in a series of articles he wrote for *South Australian Homes and Gardens* in which he advocated open plan layouts and large windows in service of the 'ideal of open, healthy living'.<sup>62</sup> The Hardy house which was designed for artist Audrey Hardy in 1938 provides an example of the modern sundeck roof terrace. Enclosed by a metal railing the expansive sundeck was labelled on the plan as a 'promenade deck' and accessed from the upper floor studio space (Figures 6 and 7). The Hardy house exemplifies how the planning of space, use of new materials, minimal ornamentation, open, light, and bright spaces, coalesced into the aesthetic associated with modernism and healthy living.



Figures 6: Hardy residence, Netherby, 1938, Russell S. Ellis architect, elevations and plans, architectural drawing, Ellis collection, S89/24, Architecture Museum, University of South Australia.



Figures 7: Hardy residence, Netherby, 1938, Russell S. Ellis architect, perspective, architectural drawing, Ellis collection, S89/24, Architecture Museum, University of South Australia.

## Conclusions

63. P. Overy, *Light, Air and Openness*, (London: Thames and Hudson, 2007), 9.

By the mid twentieth century modern houses were displaying what architectural historian Paul Overy called a 'preoccupation with cleanliness, health, hygiene, sunlight, fresh air and openness.'<sup>63</sup> The qualities which were deemed necessary to improving public health such as increasing the penetration of fresh air into the home were foreseen by earlier architectural commentators, with the architectural elements necessary predicted in some of the medical visions from the turn of the century. In houses and flats, large openable windows and doors, abundant ventilation, verandahs and balconies, narrow wings, adequate

space around houses, outdoor courtyards, and landscaping, were all architectural responses to health concerns around air flow, with the open-air sleepout perhaps the most apparent resulting design solution.

It has been found that while the Australian climate is a contributing factor behind the incorporation of sleepouts, sunrooms and sundecks, health was equally a driving rationale behind their integration in residential buildings. The desire for what was seen as germ killing sunlight was also enabled through large expanses of plate glass, lack of eaves, and the incorporation of sundecks and solariums. This research has also demonstrated that while the materiality of sleepouts and sunrooms can sometimes point to them being a later alteration or addition, some of them were part of original plans by architects specifically designed for purpose. For those who couldn't afford to have architect designed sleepouts and sunrooms, there was encouragement and instruction in local home magazines and newspapers to help people design and build their own DIY version.

Many of the health-related design features in buildings of the early twentieth century have shaped the way we think of modern architecture, with abundant access to fresh air, open spaces, and plenty of sunlight all demonstrating this. While the understandings and context for these buildings has changed dramatically since they were designed and built, the legacy of their existence, and the imprint they have left in our environments, histories and memories remains. It is worth considering how once diseases such as tuberculosis were conquered in Australia through pharmacological treatments and vaccines, one of the initial purposes behind the use of sleepouts, sunrooms and sundecks for healthy open-air sleeping and living, changed, and these spaces became more associated with leisure and comfort, especially in relation to climatic variations. During the early twentieth century architects engaged with the medical profession, municipal councils, public health officials, and homeowners, to design places that aimed to enable health as well as prevent disease while medical scientists were working on the search for treatments, cures, and preventative measures to take the global population through the century.

# A Transformation of Leisure in the Architectural Imaginary: Could the Tiny House Movement Learn from Megastructuralism?

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## Keywords

Megastructuralism  
The tiny house movement  
Leisure  
Architectural imaginary

## Abstract

Architecture culture inevitably revolves around the idea of leisure including its many connotations, such as recreation, reproduction, education, entertainment etc. As a concept, it not only corresponds to many spheres of everyday life, but also designates how time is being or should be spent via functions associated with architecture (such as leisure parks), through challenging architectural imagination (experimentation with pavilions or museums) as well as discourse built around particular examples of architecture.

In the post-war world, leisure society was a prominent expression and had direct effects on architectural production through cultural centers, educational facilities and a vast range of public spaces that were meant to serve all individuals of society. On the other hand, leisure, arguably, is now being replaced by other ideas such as well-being or happiness. It is possible to observe a shift from a societal imaginary onto an individual one.

This paper takes this shift in ideas around leisure and traces its possible extensions in the architectural culture via two trends in architecture: Megastructuralism and the tiny house movement. While the megastructuralists of the 1960s imagined self-sufficient cities and communities, the tiny house movement of the past decade has been looking for self-sufficiency through singular houses/households. Departing from major texts such as Fumihiko Maki's *Collective Form* (1964) or Reynar Banham's *Megastructures* (1976) to old and new critical articles on the tiny house movement, this paper investigates references to leisure and ideas around it. It explores the tiny house movement and the megastructuralism; mapping their parallels in responding to crises of their era, their ways of experimenting and challenging architecture's limits and finally aims to address what the two movements may display about one another as an attempt to enhance present architectural theory.



Figures 1: A scene from the movie Nomadland. Fern and in front of the parked vans.

63. P. Overy, *Light, Air and Openness*, (London: Thames and Hudson, 2007), 9.

The Oscar winning movie *Nomadland* (2020, by Chloé Zhao, Fig. 1) tells the story, or rather accompanies the journey, of sixty-year-old van-dweller Fern, who lost her house due to the shutting down of a company village, now on the road across Northern American landscapes, working in temporary jobs to survive. As the fictional character Fern travels, the viewer is introduced to many people cast as themselves, and hears their stories of why they ended up being on the road. Some describe their economic desperation, some talk about a yearning for traveling, while a majority implies how the healthcare system or the social security mechanisms have failed them beyond their understanding. While the nature of work is changing, so are the conditions of a steady job and retirement plans, along with the modes of leisure and its connotations, all of which an individual's life is built on.

The movie displays an answer to a crisis. It depicts the story of a kind of dwelling and working which stems from social and financial desperation that many across the globe can relate to. One of the reasons behind why Fern's journey resonates in other cultures is the fact that the forms of leisure have been transforming, while the work-leisure separation has been diminishing. Fern's story is not solely a story of the loss of a house, a loved one or of financial desperation; it is also the story of a new way of life based on a new arrangement of leisure-work relationship. Work options are temporary, possibly mobile, not secured, unpredictable, nor are they equally accessible by everyone. The structures to hold these activities, thereby, also transform and adapt, taking their place in the architecture culture. The tiny house movement of today's world and Megastructuralism of the 20th century-architectural world can be seen as such attempts, shaping and shaped by leisure.

1. Henri Lefebvre, *Critique of Everyday Life Vol. 1*, Translated by J. Moore, London-New York: Verso Books, 1991.

2. B. Hunnicutt. "The History of Western Leisure, inside A Handbook of Leisure Studies." In *A Handbook of Leisure Studies*, edited by C. Rojek, S.M. Shaw, A.J. Veal, New York: Palgrave Macmillan, 2006. Chris Rojek, *The labour of leisure: The culture of free time*. London: SAGE publications, 2010. Veal, A. J. "The Elusive Leisure Society, School of Leisure" Sport and Tourism Working Paper 9, Sydney: University of Technology, available at: <http://datasearch.uts.edu.au/business/publications/lst/index.cfm> and at [www.leisuresource.net](http://www.leisuresource.net), 2009.

3. Henri Lefebvre, *Critique of Everyday Life Vol. 1*.

Leisure is an ambiguous concept. It encapsulates ideas such as entertainment, amusement, play, and vacation as much as education, reproduction, recreation, healthy living or simply well-being. It is a matter of the everyday with an extensive political implication.<sup>1</sup> Leisure is traditionally defined as the contrast of work, but extends beyond it with a cultural connotation of its own, representing and represented by existing relations.<sup>2</sup> Furthermore, it may produce and reproduce present asymmetries in the world.<sup>3</sup> Despite the ambiguity around the word leisure, I claim that taking leisure and ideas around it at the center can help explore architecture culture – in this case the tiny house movement and Megastructuralism – from a unique perspective. In this context, leisure is something beyond the idea of freedom and responsibilities;

it refers to activities, a division of time as much as particular spaces associated with the concept. Leisure serves architecture in the profession's responding to crises, it can trigger architectural experimentation, and designate words and meanings delivered about the two architectural trends. The change in reception of leisure – especially throughout the 20th century – may as well imply a change in architecture and its imaginary.

### The Changing Leisure, Changing Architectural Imaginary

4. William Davies, *The happiness industry: How the government and big business sold us well-being*. New York: Verso Books, 2015.

5. Robert Snape, John Haworth, Sandie McHugh, and Jerome Carson. "Leisure in a post-work society." *World Leisure Journal* 59, no. 3 (2017): 184-194. doi.org/10.1080/16078055.2017.1345483

The postwar period circa 1950s and the 1960s witnessed a time in which the theory of leisure society was prominent. This theory would foresee a future without mandatory work for citizens based on technological advances of the era. With the welfare state policies of the period, many geographies experienced the discourse around leisure facilities that could ideally be accessible by every member of that society. The recent decades, on the other hand, have witnessed the elimination of the word from the political conversation as much as from the everyday. The word, it is possible to claim, has been replaced by words such as happiness and well-being, focusing on the individuals rather than a societal condition.<sup>4</sup> Some scholars even argue that well-being is a more efficient concept to study people's "quality of life" rather than the mid-20th century understanding of the term leisure.<sup>5</sup> May this shift in the social imaginary, from a societal one to an individual one, have any parallels with a shift within the architectural imaginary?

6. Manfred B. Steger and Paul James. "Levels of subjective globalization: Ideologies, imaginaries, ontologies." *Perspectives on Global Development and Technology* 12, no. 1-2 (2013): 31. doi:10.1163/15691497-12341240.

7. The word imaginary, in this context, separates from the word ideology. Imaginaries appear as common sense, they are the accepted and embedded forms of ideologies (Steger and James, 2013).

This paper uses the expression architectural imaginary for a particular purpose. Unlike in architectural imagination, here the emphasis is to include the idea of social, as in social imaginary, which can be described as "patterned convocations of the lived social whole," in which meanings, ideas and sensibilities, or maybe even tendencies are deemed self-evident.<sup>6</sup> The idea of crisis cannot be thought about without a social imaginary, a dominant set of views of the world that appear as absolute to people.<sup>7</sup> Has architectural imaginary, in terms of attempts to solve a crisis of the modern world, went from Megastructuralism to singular tiny houses, from a holistic scope on to an individualistic one? The way these two trends try to answer crises and the way their contrasting design approaches are responding to these crises as well as an attempt to propose what to make out of such contrast are what follows in this paper. Can the tiny house movement learn from Megastructuralists of the past century, can the tiny house movement teach architectural theory new ways of viewing Megastructuralism?

### Two Trends: The Tiny House Movement and Megastructuralism

The tiny house movement is one of the many ways in which architectural imaginary tries to find a solution to modern day crises ranging from financial inadequacies to taking action to reduce carbon footprint; from a quest to escape the big city to an attempt to live off the grid. Just as Nomadland's Fern switches to a van life as a solution to her problems, seemingly many people are looking for ways to survive or nurture their everyday, where it gets difficult to tell if the change is obligatory or voluntary. Even though the tiny house movement has its

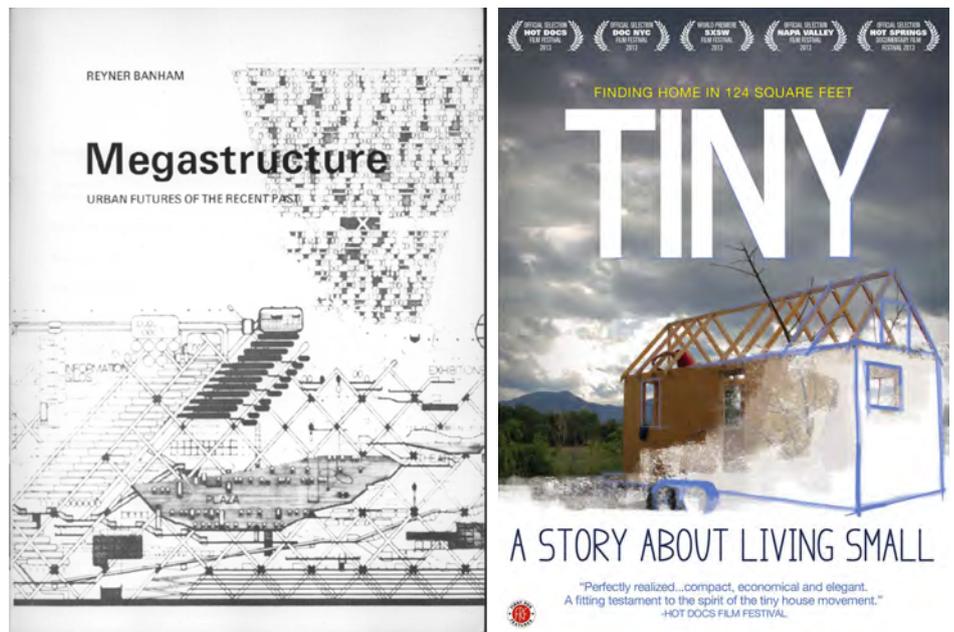
8. Jasmine Ford, and Lilia Gomez-Lanier. "Are tiny homes here to stay? A review of literature on the tiny house movement." *Family and Consumer Sciences Research Journal* 45, no. 4 (Baltimore: American Association of Family and Consumer Sciences 2017): 394-405. doi.org/10.1111/fcsr.12205

roots as far back as in the 19th century with the famous book *Walden* by Henry David Thoreau, it appears to have escalated with the 2009 global financial crisis. However, literature on the tiny house movement is rather scarce. They are either limited to "how to's" and "practical tips" for building, including physical and material descriptions; or they are, with a partly critical tone, written by people outside architecture. That is to say, written material on the tiny house movement is mainly lacking theorization from within the field of architecture<sup>8</sup> (Ford and Gomez-Lanier, 2017).

As the tiny house movement proposes a new way of living as a solution to a diverse range of problems of the modern day, it bases its premise on a fundamental shift in the way people live. Considering the limited literature on the subject, this paper will compare this radical premise with the Megastructuralism of the post-war era, a movement, an *ism*, an attempt to propose another radically different architecture for an ever changing world and its problems. The two movements or trends, as a part of architectural imaginary may appear as categorically different and incomparable at first glance. While Megastructuralism was about imagining entire cities with gigantic scale, the tiny house movement concentrates on single households with a search of a minimum in size and scale, as well as the way of living. Yet, this contrast between the scopes of their respective imaginations will help view the other from a clearer perspective. A systematic approach to compare and contrast both trends will help articulate literature, especially on the tiny house movement with an architectural theoretical view, as well as on megastructures rethinking the premises of the day in terms of what they correspond to decades later.

### **Two Trends Responding to Crises (Crisis in the World, Crisis within the Field)**

The two trends in architecture, the Megastructuralism and the tiny house movement represent two particular architectural imaginaries (Fig 2). They are architectural imaginaries as they respond to crises of their time, but their way of answering is different from one another. The focus on leisure displays two trends' ideas about self-sufficiency, nature and their conception of work.



Figures 2: Reyner Banham's book *Megastructure: Urban Future of the Recent Past* and a poster documentary on Tiny Houses from 2014.

9. Ford, Jasmine, and Lilia Gomez-Lanier. "Are tiny homes here to stay? A review of literature on the tiny house movement." 394.

10. Heather Shearer and Paul Burton. "Towards a typology of tiny houses." *Housing, Theory and Society* 36, no. 3 (2019): 298-318. doi.org/10.1080/14036096.2018.1487879.

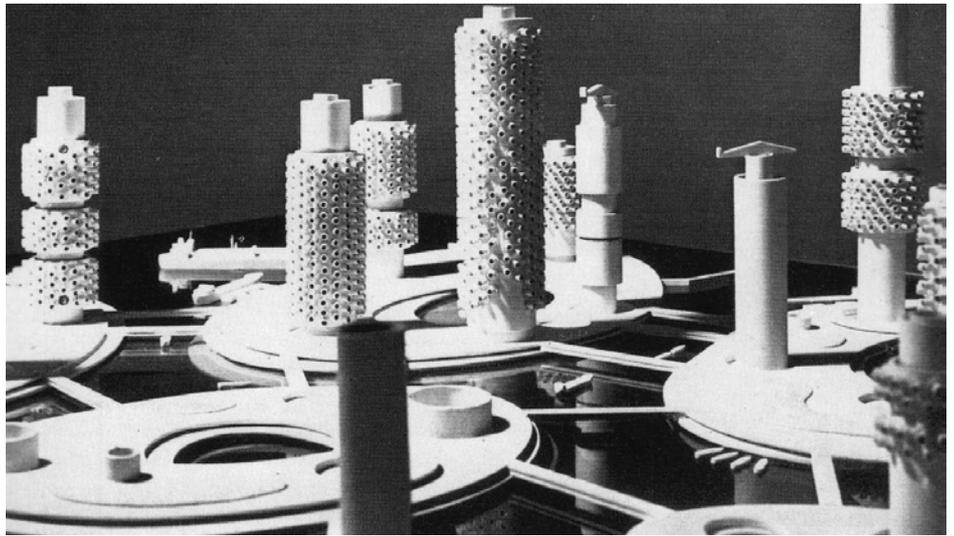
11. Hesselberth, Pepita. "The Grid as Structuring Paradox: A Case of Tiny Living." *Soapbox*, 1(2), 119-138.

13. Todd Gannon. "Introduction" In Reyner Banham, *Megastructure: urban futures of the recent past*. Newyork: Monacelli Press, 2020, 4.

14. Reyner Banham, *Megastructure: urban futures of the recent past*. London: Thames and Hudson, 1976, 11.

The tiny house movement advocates that "homeowners can reduce the environmental impact and increase affordability by reducing their spatial footprint," mainly through "minimizing, de-cluttering and downsizing."<sup>9</sup> It responds to two crises simultaneously: the environmental crisis via reducing carbon footprint and the economic crisis through minimizing living / building costs. These two crises combine and appear as a counter-cultural response that intends to step away from conspicuous consumerism.<sup>10</sup> The motives behind the movement are about a change in lifestyle with the premise to be self-sufficient.<sup>11</sup> In many cases, tiny houses, despite their mobility, are meant to be located in relatively remote places; staying away from the city, making the premise of self-sufficiency an absolute necessity.

While the idea of self-sufficiency within the tiny house movement often focuses on singular households, the Megastructuralism of the post-war era covered entire towns, if not complete cities. Megastructuralism was a radical phase within the architectural world in which as Todd Gannon puts it, such a structure would be "a massive usually extensible building or building complex that comprises a permanent structural frame supporting demountable programmatic units," which was meant to serve as a "counterproposal to orthodox modern architecture".<sup>13</sup> Many of these Megastructuralist projects were "dominant progressive concepts of architecture and urbanism" that recognized crises around intricate issues that Reyner Banham lists as "pollution, crime, congestion, dysfunctions of municipal services and the rest of the litany of Nekropolis."<sup>14</sup> Of course, Megastructuralist projects do vary in context, approach and scope, often according to the geography. This was the mid-20th Century following the Second World War, which made the existing circumstances of different geographies and countries even more distinct. The Japanese Metabolist projects proposed entire cities on the sea due to scarcity of land (Fig. 3), while within Italy megastructures were to create a cultural leap to solve existing urban problems.



Figures 3: An example to Megastructures: The Marine City projects by Kiyonori Kikutake designed between 1958 and 1963, Japan.

15. There are exceptions to this assertion. Paolo Soleri's project Arcosanti, for instance, is a striking example that practices sustainable design, however, some commentators do not associate this project with Megastructuralism especially due to its choice of materials that are nothing but high-tech.

Both trends, the tiny house movement and Megastructuralism intend to form a new relationship with nature. While tiny houses aspire to reduce the carbon footprint and often settle in remote areas outside cities, the Megastructuralist projects, in many cases try not to engage with the ground level, but to form cities on upper levels, trying to interfere with nature as little as possible. In the tiny house movement, nature is something to be associated with global warming, something that that calls for sustainable design and living, but still is framed by tiny house' windows; whereas often in Megastructuralist projects, nature is something to stay away from, as to protect it as it is.<sup>15</sup> These two conceptions of nature reflect in the trends' relationship to ideas around leisure. While in tiny houses the work-leisure separation is partly eliminated (with some wanting to live off the grid and others extending their quality time with less housework), the radical megastructuralist projects treat leisure as particular spaces that are associated with distinct functions. The planning of huge structures in Megastructuralist projects is shaped according to the architects' imagination of leisure and leisurely functions.

16. Anson, April. "'The world is my backyard': Romanticization, thoreauvian rhetoric, and constructive confrontation in the tiny house movement." *In From sustainable to resilient cities: Global concerns and urban efforts*. London: Emerald Group Publishing Limited, 2014, 307. doi.org/10.1108/S1047-004220140000014013.

The antecedents of Megastructuralist projects are structures often related with leisure facilities. The centuries old bridges from Florence, Stuttgart and London which could accommodate commercial facilities along with housing and other functions, as well as seaside architecture, as Banham points out Santa Monica Pier in Los Angeles that dates back to 1922 are examples to these huge structures. On the other hand, according to the mostly referenced academic article on tiny houses, *The World is My Backyard* by April Anson, an antecedent of the tiny house movement is Thoreau's Walden, which is one of many examples of attempts to live with less, either by choice or by present circumstances, radically playing with the idea of leisure with the elimination of a paid job, what is typically associated with work.<sup>16</sup>

17. Heather Shearer and Paul Burton. "Towards a typology of tiny houses."

One of the rare academic studies within the field of architecture and urbanism based on tiny houses is the article by Heather Shearer and Paul Burton titled *Towards a Typology of Tiny Houses*, asks the question whether it is an individualistic or a community movement.<sup>17</sup> With many

examples of the trend being not documented and staying off the grid, this question remains at the heart of this paper. While the idea of leisure has been replaced by words like well-being and happiness within socio-political spheres, the community or societal connotations of the movement remain critical. Megastructuralism on the other hand, tried to come up with every attribute that would make up a complete city, while imagining a radically different design for a different world, which of course, would mean forming of a new leisure-work relationship for all inhabitants. That is to say, imagining a new kind of leisure served as an inspiration for experimenting with design and this experimentation was ideally meant to include everyone.

### Leisure as Experimentation: Two Trends Challenging Architecture's Limits

Leisure can serve as an inspiration for architecture to challenge its limits. In the case of Megastructuralism and the tiny house movement, this inspiration corresponds to ideas around flexibility and mobility in design, as well as changing the present ways of dwelling and living, through finding ways around building codes and regulations.

18. Huizinga takes the idea of play at the center and studies various aspects of culture in relation to this idea. It is known to have influenced many artists and designers blending with advances in technology and consumerism of the pop culture. However, many radical artists and thinkers used the book as a prominent inspiration, Constant Nieuwenhuis being one of them.

19. Jona Friedman's website. Accessed 2021. <http://www.yonafriedman.nl>.

20. Reyner Banham, *Megastructure: urban futures of the recent past*.

21. Rumpfhuber, Andreas. *Architektur immaterieller Arbeit*. Turia und Kant, 2013. Mathews, Stanley.

22. Reyner Banham, *Megastructures of the Recent Past*.

Megastructuralism is an architectural movement that originated from many ideas around leisure. Along with the advances in technology which were meant to designate architecture's future, the everyday would heavily depend on robots and machines which would allow people to have more time for leisure. Early Megastructuralist projects like Jona Friedman's *Urbanisme Spatiale* would take the idea of play and amusement at the center, translating Johan Huizinga's *Homo Luden's*<sup>18</sup> into a project, blending it with ideas such as democratization of the city, in which citizens could choose their habitation through a computer.<sup>19</sup> Thereby, design had to be flexible, mobile and adaptable. Other architects like the Archigram Group advocated similar ideas, yet experimenting with their projects' representation, using collages and adapting a pop culture style as another medium to be introduced to architecture.<sup>20</sup>

The changing work-leisure relationship within the mid-20th century mainly inspired other Megastructuralist projects such as The Fun Palace project designed by Cedric Price and Joan Littlewood (a theater artist). Within the architectural imaginary of the era, Price and Littlewood wanted to come up with a huge structure that would follow and document how people would use a space and thereby change in design on the course of the day. The culture center, the Fun Palace, was an ever-changing complex machine and was meant to be accessible by everyone; in terms of education and culture as well as the interactive relationship that the changing structure offered to people.<sup>21</sup>

Reyner Banham, in his famous book *Megastructures of the Recent Past* dedicates an entire chapter to Megasturctures and leisure. Titled Fun and Flexibility, the chapter discusses how the Megastructuralist approach started to lose its radical stance, aligning with consumer culture, which the movement itself opposed to earlier.<sup>22</sup> Towards the end of the chapter, Banham focuses on the architects' work on singular capsules as projects that could also exist autonomously without the

supporting structure of the megastructures. Were these units proto-tiny houses?

22. Reyner Banham, *Megastructure: urban futures of the recent past*.

23. Vicki Maree Weetman. "Resistance is fertile: exploring tiny house practices in Australia." *Australian Planner* 55, no. 3-4 (2018): 232-240. doi.org/10.1080/07293682.2019.1636837.

24. Heather Shearer and Paul Burton. "Towards a typology of tiny houses."

25. Vicki Maree Weetman. "Resistance is fertile: exploring tiny house practices in Australia."

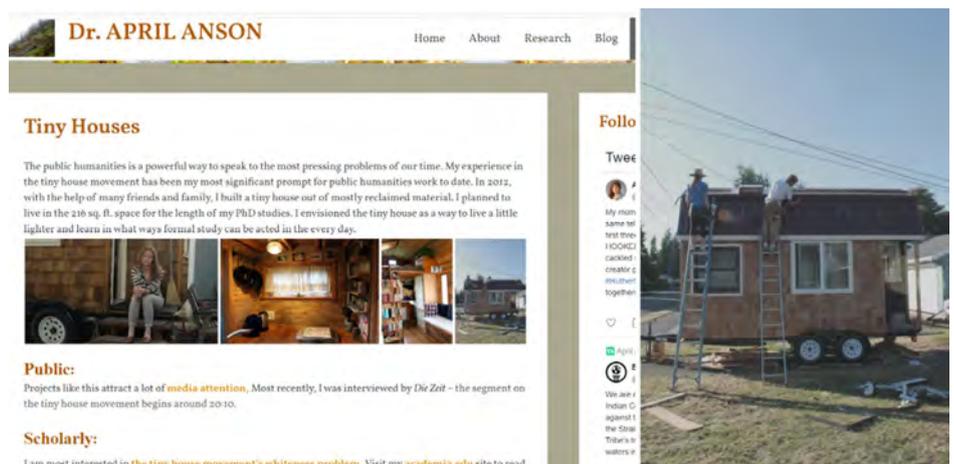
Tiny house movement, as a trend stepping away from dominant modes of architectural production, can be regarded as a much different experimentation than that of the Megatructuralists'. The experimentation occurs in the sphere of ambiguous regulations across the globe. Many tiny house examples try to find property ownership, not conforming to normative housing market.<sup>23</sup> Moreover, in most countries they remain without a legal status.<sup>24</sup> The experimentation within the tiny house experience, thereby, is not about a particular design form, but about escaping regulations and building codes, allowing its habitants living partly off the grid outside the known market relations.<sup>25</sup>

It should be noted that mobility and environmental sustainability is a major focus in tiny house projects. The small size of the houses is another point resembling that of the Megastructuralist projects' dwelling units. Both trends rely on flexibility, mobility and change (or adaptation). The parallel is apparent. The tiny house examples are dominantly autonomous without a preplanned support structure. Within many tiny house projects, the architectural imaginary relies on singular households without much say about common spaces and other facilities that may potentially serve these partly mobile structures in terms of a way to come together and to form a community living.

## Words and Meaning of the Two Trends

26. Thorstein Veblen, *The theory of the leisure class*. Boston: Houghton Mifflin, 1973.

Over a century ago, Thornstein Veblen coined the term *Leisure Class* based on how people's access to leisure depends on social status, deepening existing asymmetries within a society.<sup>26</sup> Even though the tiny house movement appears as a counter-culture against such consumption as mentioned above, its representation of and through leisure, leisurely goods, activities and spaces appear controversial.



Figures 4: On the left, a still image from Anson's blog on the tiny house experience and on the right an image showing the construction process.

The criticism directed at the tiny house movement is mainly about the inconsistency between how this way of life is represented in the media and what happens in reality. April Anson, as a tiny house builder / dweller

27. April Anson, "'The world is my backyard': Romanticization, Thoreauvian rhetoric, and constructive confrontation in the tiny house movement." In *From sustainable to resilient cities: Global concerns and urban efforts*. London: Emerald Group Publishing Limited, 2014, 307. doi.org/10.1108/S1047-004220140000014013.

28. April Anson, "Framing degrowth: The radical potential of tiny house mobility," in *Housing for Degrowth*, edited by Anitra Nelson, and François Schneider, London: Routledge, 2018, 68-79. doi.org/10.1108/S1047-004220140000014013.

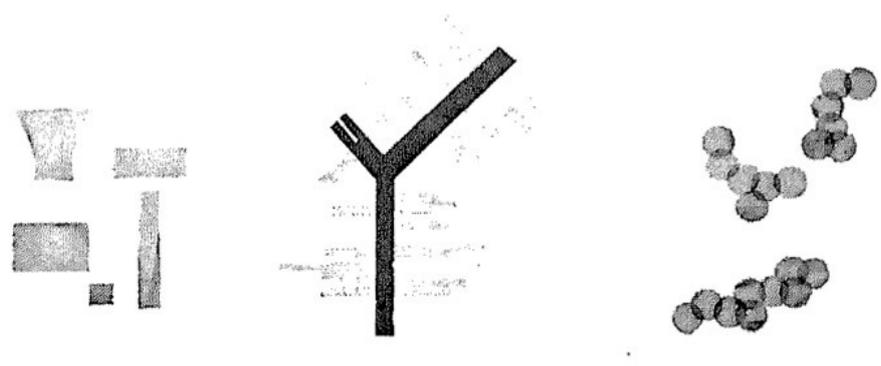
29. Reyner Banham, *Megastructure: urban futures of the recent past*.

30. Alan Colquhoun, "Essays in architectural criticism: modern architecture and historical change," *Journal of Aesthetics and Art Criticism* 41, no. 3 (1983).

31. Kenneth Frampton, *Megaform as urban landscape*. New York and Boston: University of Michigan, A. Alfred Taubman College of Architecture+ Urban Planning, 1999.

herself, asserts that with the dominant market relations, tiny houses are to become just another commodity, and the promise of the movement that includes "to live deliberately" becomes an option for people who can afford such escape, with an impulse to flee to the woods, running away from the troubles of modern life."<sup>27</sup> (Fig. 4) According to Anson, this is a romantic reduction of Thoreau's ideas; a different way of owning such movement could have been about paying attention to histories of living less, and most importantly, considering Thoreau's political critique directed at accumulation practices of his time. Later, in another text, Anson proposes to view the tiny house movement along with a criticism of settler colonial thinking prevalent across the globe and calls for a recognition of transformative social relations with the Degrowth movement that has a very particular political agenda.<sup>28</sup> The criticism of the movement as well as the potential way out of these disparities is about enhancing the social imaginary that both Degrowth and anti-colonial thinking aspire from. But how can architecture respond to this quest of a social imaginary and make it a part of the architectural imaginary?

According to Reyner Banham the Megastructuralist movement was abandoned by the Left as they had realized that the permissive freedoms that these projects intended to deliver were rather illusory, as they were operating within the capitalist relations.<sup>29</sup> Megastructuralism, indeed, was part of an architectural challenge about being able to build in big urban lands all at once, due to capital reserves of the mid-20th century economy. As the architectural theorist / historicist Alan Colquhoun points out, architects had two main strategies to deal with building super-sized structures all at once; (1) to rely on randomness as in Moshe Safdie's *Habitat* project from 1967 or (2) to come up with a design form which would refer to traditional architecture in some way or another.<sup>30</sup> The superblocks, as Colquhoun names them, are mainly housing units, which make up the majority of the built environment in any given settlement, however lacking any representational means and meaning for people of these settlements. Arguably, the architectural imaginary of the Megastructuralist projects not only introduced the idea of randomness, but also of introduction of flexible and spontaneous leisure as a potential within any built environment, thereby enriching spatial (and architectural) qualities of a design project. Kenneth Frampton, on the other hand, takes the life in metropolis as an endless space in which megaforms, different from megastructure, would create urban landscapes via attaching to the existing urban fabric and the existing topography.<sup>31</sup> Frampton suggests that the distinction between architecture as structures, urbanism and landscape design are diminishing in megaform projects. The architectural imaginary extends on to the sphere of landscape, just like it does with the idea of leisure and leisure society in Megastructuralist projects.



**Fig. 1, Approaches to collective form. From left to right, compositional form, megaform, group form.**

Figures 5: Fumihiko Maki's book *Investigations In Collective Form*, three approaches.

32. Fumihiko Maki and Masato Ōtaka, *Collective Form*. Washington: Washington University School of Architecture, 1964.

33. Fumihiko Maki and Masato Ōtaka, *Collective Form*, 5.

Fumihiko Maki's text *Collective Form* investigates a coherent theory in architecture beyond a single building, thereby stepping away from the perception of architecture as individual structures.<sup>32</sup> (Fig. 5) This of course, happens with the quest of a search for meaning within the built environment. According to Maki, settlements around the world "do not lack in rich collections of collective form," and asserts that "most of them however, simply evolved: they have not been designed."<sup>33</sup> While Maki's assertion aligns with Colquhoun's interpretation of challenges within super-block building, it differs as it proposes possibilities that, arguably, the tiny house movement may count on as a strategy. While the details to Maki's suggestions to imagine collective form require a detailed study beyond the scope of this paper, it is important to stress that he was advocating a master program, not a master plan to dictate one particular approach for design. A master program would include the element of time in which things would find their place, thereby allowing any collective form to conform with the flexibility that the modern cities have been lacking.

## Conclusion

This paper has taken two architectural trends, Megastructuralism and the tiny house movement and has discussed them through the lens of the concept leisure. While it has tried to draw parallels, contrasts and deviations between the two, it intends to draw attention to how various quests around leisure – and later well-being – try to respond to the crises of their era, inspiring experimentation in architecture. While the two trends do receive criticism, it is important to display what the newer one, the tiny house movement could look back to borrow from Megastructuralism, which is about remembering the architectural imaginary, a more collective view of the world, to step beyond the limitation of tiny houses as singular entities.

This paper presents an exploration focused on a shift in the architectural imaginary. An outcome of this exploration has been to notice that while literature on Megastructuralism was theorized extensively by scholars within architecture and urbanism, it is remarkable how tiny house literature is quite the opposite. The limited number of texts with a critical perspective are mainly written by people outside spheres of architecture

or urbanism. What does this say about experimentation in architecture? Is it possible to assume that as a practice, architecture is rather aligning with bigger interventions and regards tiny houses as outside of its scope? Or do the architectural imaginary of the architectural spheres require more time to reflect on and theorize the tiny house movement?

The movie *Nomadland*'s closing scene takes back the viewer to the abandoned company town within the Northern American geography, the ghost town with its houses, gardens, streets, cafes and sidewalks. It is an architecture that will no longer serve the changing world. But the scene can serve as a reminder for architects and scholars of the field to dwell on the structures of the past. 20th century company towns will not be accommodating typical worker communities anymore. The work is changing, the leisure is changing. Architecture has to own and theorize the tiny house movement, not as a sole market commodity, not in terms of practical design tips, but in terms of strategies, or even as a potential master program, as Fumihiko Maki had suggested.

# The Sleepout

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## Keywords

Sleepout  
Sleeping porch  
Regional tradition  
Housing shortage

## Abstract

Going to bed each night in a sleepout—a converted verandah, balcony or small free-standing structure was, for most of the 20th century, an everyday Australian experience, since homes across the nation whether urban, suburban, or rural, commonly included a space of this kind.

The sleepout was a liminal space that was rarely a formal part of a home's interior, although it was often used as a semi-permanent sleeping quarter. Initially a response to the discomfort experienced during hot weather in 19th century bedrooms and encouraged by the early 20th century enthusiasm for the perceived benefits of sleeping in fresh air, the sleepout became a convenient cover for the inadequate supply of housing in Australian cities and towns and provided a face-saving measure for struggling rural families. Acceptance of this solution to over-crowding was so deep and so widespread that the Commonwealth Government built freestanding sleepouts in the gardens of suburban homes across Australia during the crisis of World War II to house essential war workers. Rather than disappearing at the war's end, these were sold to homeowners and occupied throughout the acute post-war housing shortage of the 1940s and 1950s, then used into the 1970s as a space for children to play and teenagers to gain some privacy.

This paper explores this common feature of Australian 20th century homes, a regional tradition which has not, until recently, been the subject of academic study. Exploring the attitudes, values and policies that led to the sleepout's introduction, proliferation and disappearance, it explains that despite its ubiquity in the first three-quarters of the 20th century, the sleepout slipped from Australia's national consciousness during a relatively brief period of housing surplus beginning in the 1970s. As the supply of affordable housing has declined in the 21st century, the free-standing sleepout or studio has re-emerged, housing teenagers of low-income families.

## Introduction

1. Les Murray, *Selected Poems* (Melbourne: Black Inc., 2007), 78-9.

The practice of sleeping on the liminal space of a verandah began during Australia's early colonial period, because of a shortage of housing, and continued with the recognition that it frequently offered a more comfortable space than a bedroom to sleep in warmer weather. Poet Les Murray invoked the pleasures, comforts, discomforts, and fears of the experience in "The Sleepout" which begins 'Childhood sleeps in a verandah room, in an iron bed close to the wall, where the winter over the railing swelled the blind on its timber boom'.<sup>1</sup>



Figures 1: McBriar family home with verandah sleepout on left, sectioned off by hessian, nd., collection of the State Library of Victoria.



Figures 2: Detail of Figure 1.

2. Charlie Hailey, "From Sleeping Porch to Sleeping Machine: Inverting Traditions of Fresh Air in North America", *Traditional Dwellings and Settlements Review* 20, 2, (2009): 31.

3. Eve Kahn and Walter Jowers, "Night Moves: The Sleeping Porch from a Health-Conscious Era", *Chicago Tribune* 3 August 1986. Online at <https://www.chicagotribune.com/news/ct-xpm-1986-08-03-8602260419-story.html> (accessed 18 October 2021).

In the United States "sleeping porches", most often second storey verandah-style sleepouts in middle-class homes, had been celebrated by early adopters, notably author Harriet Beecher Stowe in 1869<sup>2</sup>, and commonly used from the late 19th to the mid 20th century. Understood as allowing more comfortable and healthy sleeping conditions and facilitating a closer relationship with nature, the heyday of the US sleeping porch was between 1900 and 1925.<sup>3</sup>

**FIVE ROOMS AND SLEEPING PORCH**





**Honor Price**

*The Sunbeam*  
No. 3194. "Already Cut" and Fitted.  
**\$2,425<sup>00</sup>**

See Description of Floor Building Houses on Page 7.

At the price quoted we will furnish all the material to build this five-room bungalow, consisting of mill work, medicine case, *Banning*, porch ceiling, siding, finishing lumber, screens for sleeping porch, buffet, building paper, eaves trough, down spout, sash weights, hardware, mantel, ironing board, kitchen cabinet, kitchen material, lumber, lath and shingles, and Fire-Chief Roofing for roof over sleeping porch. We guarantee enough material to build this house. Price does not include cement, brick or plaster.

Can be **BUILT COMPLETE** with high grade warm air heating plant, plumbing, electric wiring and lighting fixtures, including **ALL** material and **ALL** labor, for \$5,343.00. See page B in front of book.



FIRST FLOOR PLAN.

**A FIVE-ROOM** modern bungalow with open air sleeping porch.

**First Floor** The large living room has Colonial stairs and mantel, and stairs to basement which can be reached from the kitchen or from the outside. See modern kitchen with handy kitchen cabinet, broom closet providing storage for brooms, mops, pails, scrub brushes, table leaves, etc. Notice the built-in folding ironing board, also space for refrigerator just outside of kitchen door, handy to the iceman and away from the stove. Dining room has buffet facing the cased opening with a window on each side. We furnish two-panel yellow pine doors on the first floor with clear yellow pine trim to match.

**Second Floor** We furnish our Franklin front doors leading to the sleeping porch. Inside doors on second floor are within arm's reach of either bedrooms or bathroom. Each bedroom has door leading to sleeping porch. A linen closet in hall.

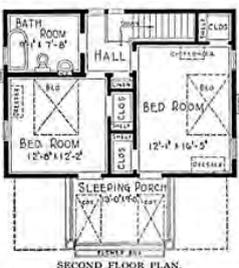
We furnish our best "Quality Guaranteed" mill work, shown on pages 118 and 119, in beautiful grain and color. Windows are made of clear California white pine, with good quality glass set in with best grade of putty.

Paint for three coats outside, your choice of color. Varnish and wood filler for interior finish. Chicago Design hardware, see page 120.

**Flooring** Clear maple for kitchen and bathroom, clear oak for balance of first floor; clear yellow pine for second floor, and clear edge grain fir for porch.

Built on a concrete foundation, excavated basement under entire building. Frame construction and first story sided with clear cypress level siding. Gables sided and main roof covered with best grade thick cedar shingles. All framing lumber is No. 1 yellow pine.

Basement has concrete floor. Basement, 7 feet high from floor to joists. First floor, 9 feet from floor to ceiling. Second floor, 8 feet 2 inches from floor to ceiling.



SECOND FLOOR PLAN.

This house can be built with the rooms reversed. See page 3.

**OPTIONS**

We will furnish Sheet Plaster and Finish instead of lath for \$188.00 extra. See page 114.

Storm Doors and Windows, \$78.00 extra.

Screen Doors and Windows, block wire, \$58.00 extra; galvanized wire, \$61.00 extra.

If Mantel is not wanted, deduct \$65.00.

This house can be built on a lot 36 feet wide.

For prices of Plumbing, Heating, Wiring, Electric Fixtures and Shades see page 115.

**Our Guarantee Protects You—Order Your House From This Book.**

Price Includes Plans and Specifications

Page 72.

SEARS, ROEBUCK AND CO.

Figures 3: House with sleeping porch from the United States company Sears, Roebuck and Co. 1923 catalogue.

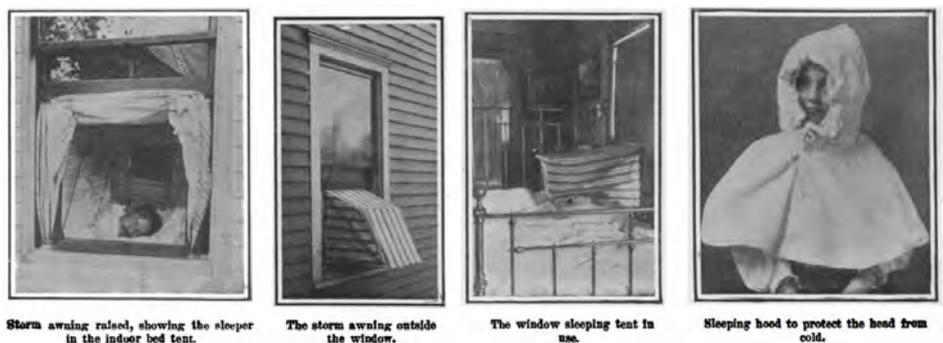


Figures 4: Bedroom interior with attached sleepout space from *Country Life in America* magazine, May 1909.

4. "Sleeping Out Porches, An American Idea", *Herald* (VIC) 21 April 1910, 3.

5. 'Immanuel', "Various Verses", *Evening News* (Sydney, NSW) 14 October 1911, 11 and *Daily Advertiser* (Wagga Wagga, NSW) 25 October 1911, 4.

From 1906 Australian newspapers reported the trend for sleeping porches as health-giving and a home treatment and means of isolating family members suffering from chronic illness, tuberculosis being meant, but rarely mentioned. A 1910 article in the *Melbourne Herald* noted that while this "American habit" had taken root in Australia, it was mostly in the form of sleeping in tents in the garden unlike the more permanent open-air bedrooms found in the United States.<sup>4</sup> Not everyone bought into the sleepout habit—a satirical verse titled "The Fresh-Air Brigade" syndicated in Australian newspapers during 1911 described the members of a family as sleeping in a range of locations including a roof, porch and in a room with a 'window tent', a device for allowing a sleeper to remain indoors while their head was exposed to the outside<sup>5</sup> (Fig. 5).



Storm awning raised, showing the sleeper in the indoor bed tent.

The storm awning outside the window.

The window sleeping tent in use.

Sleeping hood to protect the head from cold.

6. Katherine Louise Smith, "Indoor Bed Tents", *Scientific American*, 4 December 1909, 416-7.

Figures 5: The window tent, a device to facilitate sleeping in the fresh air, from a 1909 issue of *Scientific American*.<sup>6</sup>

## Verandah and Balcony Sleepouts

7. "Out-of-Door Sleeping. For Children", *The Catholic Press* (Sydney, NSW) 2 September 1915, 10.

8. "Sleeping Out", *Sydney Morning Herald* (NSW) 20 January 1915, 5.

9. "The B.S.'s Letter Bag", *Spectator and Methodist Chronicle* (Melbourne, Vic) 13 March 1914, 443.

10. "Trinity Grammar School: Extensive Additions", *Age* (Melbourne), 25 November 1925, 13.

11. Catriona Quinn, e-mail message to author, December 5, 2021.

A converted verandah or balcony was regarded by many Australians as a healthier environment for children during the early twentieth century. This view signified the popular acceptance of modern germ theory and abandonment of the long-held belief that miasma was the cause of most disease. A 1915 article in the *Catholic Press* argued that '[o]ut of door sleeping, particularly during the summer, is advisable for children of any age' with the proviso that 'in cold weather [it] is not best for a child under two and a half to three years old'.<sup>7</sup> It was nevertheless common for city and regional orphanages, hospitals and boarding schools from the early 20th century to accommodate children all year round on the verandahs of the converted Boom period mansions that they often occupied. The perceived value of sleepout accommodation for children is evident in the fact that the Children's Home in Burwood, Sydney in 1915, had balconies 'specially built for the children's beds'.<sup>8</sup> *The Spectator and Methodist Chronicle* of Melbourne noted in 1914 that glass louvres enclosing a verandah in a Methodist orphanage will allow it to be used as a playroom and sleepout for infants.<sup>9</sup> This was not only characteristic of living conditions considered sufficient for wards of the state and children suffering from diseases like tuberculosis, Melbourne's Trinity College housed boarders, the sons of affluent families, in sleepout accommodation from the 1920s.<sup>10</sup> At Riverview School (St Ignatius College) in Lane Cove, New South Wales, verandah sleepout accommodation was popular among boarders until the late 1990s.<sup>11</sup>



Figure 6: Child at Dalwood Children's Home, Seaforth, NSW, 1920s, 11417WJ1. Photographer Sam Hood, State Library of New South Wales. The presence of mosquito netting above the bed suggests the room is a sleepout.



Figure 7. Balcony sleepout, Maffra, NSW, 1966. Photographer John T Collins. Collection of State Library of Victoria.



Figure 8. Photograph (by author) of balcony sleepout in Nicholson Street, Fitzroy, Melbourne, 2021.

12. "Sleeping Out", *Sydney Morning Herald* (NSW) 20 January 1915, 5.

13. "Sleeping Out", 5.

14. "Sleeping Out", 5.

Advice about the benefits for children in sleeping out of doors was contradicted by occasional grisly stories, like a 1915 one about a Perth child occupying a verandah sleepout who had been found with her head 'battered in'.<sup>12</sup> The article warned that '[p]eople who are given to this healthful habit are apt to make a fetish of it and sacrifice several other considerations'.<sup>13</sup> Nevertheless, the author goes on to claim that sympathy for soldiers on active service for sleeping in the trenches is misplaced since 'a generation that sleeps out knows it to be no actual hardship'.<sup>14</sup> This author's assertion conveys not only a startling degree of ignorance about the climate of northern Europe and conditions on the Western Front during World War I, but more importantly, the widely held belief that sleepout accommodation was part of the process of producing tough healthy colonial subjects suited to soldiering, frontier life and other requirements of the nation and the British Empire. The tendencies for rural families to be large, for farm incomes to be unreliable and the costs of home renovation to be expensive, resulted in sleeping out on verandahs being the norm on Australian country properties in the early 20th century, especially for boys and young men. After the practice of sleeping out as a healthy alternative was normalised in cities and towns during the interwar period, it took some of the pressure off state governments in dealing with housing shortages.



Figure 9: View of the back of a farmhouse with sleepout, 1910-18, Albert Jones, photographer, collection of the State Library of Victoria.



Figure 10: Verandah sleepout at the rear of Perth house constructed of timber and flywire, 1925. Collection of State Library of Western Australia, BA1271/251.

15. "Week-enders", *Sydney Morning Herald* (NSW) 26 September 1917, 5.

Verandah and balcony sleepouts were also used in Australia from the early 20th century to provide affordable holiday accommodation on farms, at guesthouses and hotels. Since the tourism industry was in its infancy, small family businesses were relied upon to provide accommodation rather than commercial hotel chains. A 1917 article in the *Sydney Morning Herald* by a young widow with a large country house, offered advice for other women, explaining how she both rented out rooms on weekends and holidays and provided up to ten beds for male boarders on a sleepout verandah.<sup>15</sup>

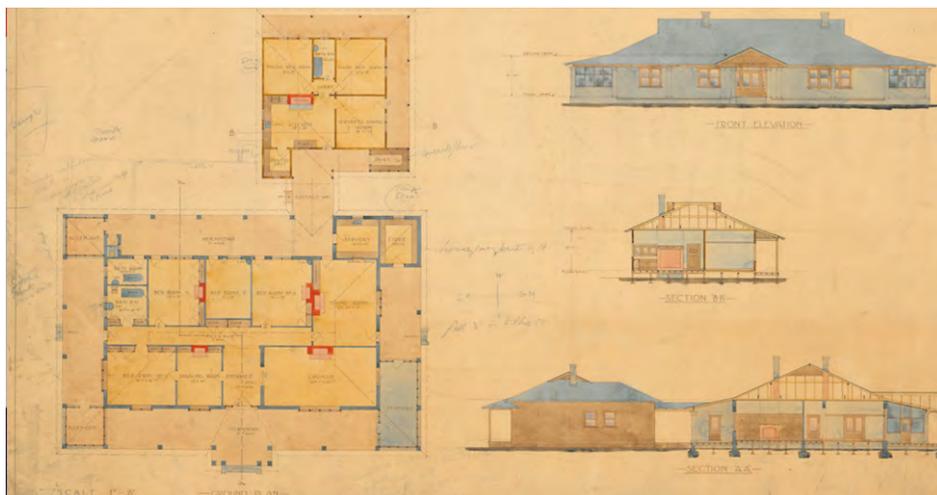


Figure 11: Detail of plan and design of house showing two enclosed verandah sleepouts for use by the affluent Ross family, by architect Albion Henry Walkley, 1924-30, collection of the State Library of Victoria.

Plans for modest middle-class homes in the 1920s often featured a sleepout room as a cost-effective overflow bedroom for an expanding family or as a space for the whole family to sleep on hot nights and a playroom throughout the year. Sitting beneath the home's roof in the manner of the American sleeping porch, they were cheaply enclosed with flywire stretched over timber frames or in other cases, merely marked out with a low perimeter wall of timber or brick to waist height. A 1929 house plan by Stephenson and Meldrum (Fig. 13) shows a sleepout adjoining the second bedroom, its position, access and twin beds suggesting its double use as a playroom and place for two children to sleep in warm weather.



Figure 12: Stephenson and Meldrum design for a "Spanish Type" house with sleepout, *Australian Home Beautiful*, April 1929.

Figure 13. Stephenson and Meldrum plan of "Spanish Type" house with sleepout, *Australian Home Beautiful*, April 1929.

Uncertainty about employment from the mid-1920s into the Depression years of the early 1930s meant that young people often delayed marriage, remaining at home longer or brought their new husband or wife to live in the family home. As a result, young adults and children would find themselves occupying sleepouts to make room for married siblings, members of extended family who needed support, or boarders. Author George Johnston who was born in 1912, describes in his autobiographical novel *My Brother Jack*, how he and his brother were turned out of their room to make space for paying guests; invalids

of World War I who had been discharged from the military hospital in Melbourne where their mother worked as a nurse. For years the brothers slept in

16. George Johnston, *My Brother Jack* (London: Fontana Books, 6th ed., 1967), 11.

a make-shift bed on the floor of a sleepout, which really was only a section of the back verandah partitioned off by flywire screens and a lot of damp ferns. But there must have been a great deal of this sort of thing at that time—being turned out of beds and sleeping in provisional rooms, I mean. Not only in our house or our suburb, but everywhere.<sup>16</sup>

17. David Gruen and Donald Clark, 'What Have We learnt? The Great Depression in Australia from the Perspective of Today', 19th Annual Colin Clark Memorial Lecture, Brisbane, 11 November 2009. Online at: [https://treasury.gov.au/sites/default/files/2019-03/03\\_Colin\\_Clark\\_speech.pdf](https://treasury.gov.au/sites/default/files/2019-03/03_Colin_Clark_speech.pdf) (accessed October 25, 2021).

As unemployment rose during the Depression and the amount spent on housing halved,<sup>17</sup> the number of people occupying all kinds of sleepouts continued to grow. While the 1933 Australian Census did not record the members of households occupying sleepouts, it counted almost 38,000 Australians living in entire dwellings whose walls were made of calico, canvas or hessian, 72,000 with walls of iron or tin and 17,000 of "other materials". These statistics didn't include the housing of Indigenous Australians,<sup>18</sup> who because of gross inequality and resulting low incomes, often improvised shelter from whatever materials were to hand, within and on the fringes of towns and cities. They also made use of verandah sleepouts in rural, regional and urban settings.

18. Australian Government, *Australian Yearbook* 1953, 40, 553.

### Free-Standing Sleepouts

City and townsfolk often commissioned the construction of small free-standing sleepouts in suburban back yards during the 1920s, both for family members and to offer much-needed low-cost rental accommodation like the examples in Figs. 14 and 15. As Australia's economy improved from the mid-1930s the capital cities saw a modest growth in the construction of fashionable apartment buildings, duplexes, and houses for the middle-class, but few homes were built for working-class families. The failure of housing supply to keep up with population growth, especially in Sydney, Adelaide and Melbourne, kept city rents high and discouraged landlords from making improvements. *Australian Home Beautiful* published its first article offering plans and instructions for a free-standing sleepout in 1939 (Fig. 16) suggesting continued acceptance of this solution to the housing shortage.



Figure 14: Freestanding sleepout at a homes in Plenty Road, Heidelberg c. 1925, The Biggest Family Album in Australia collection, Museums Victoria, MM7528.

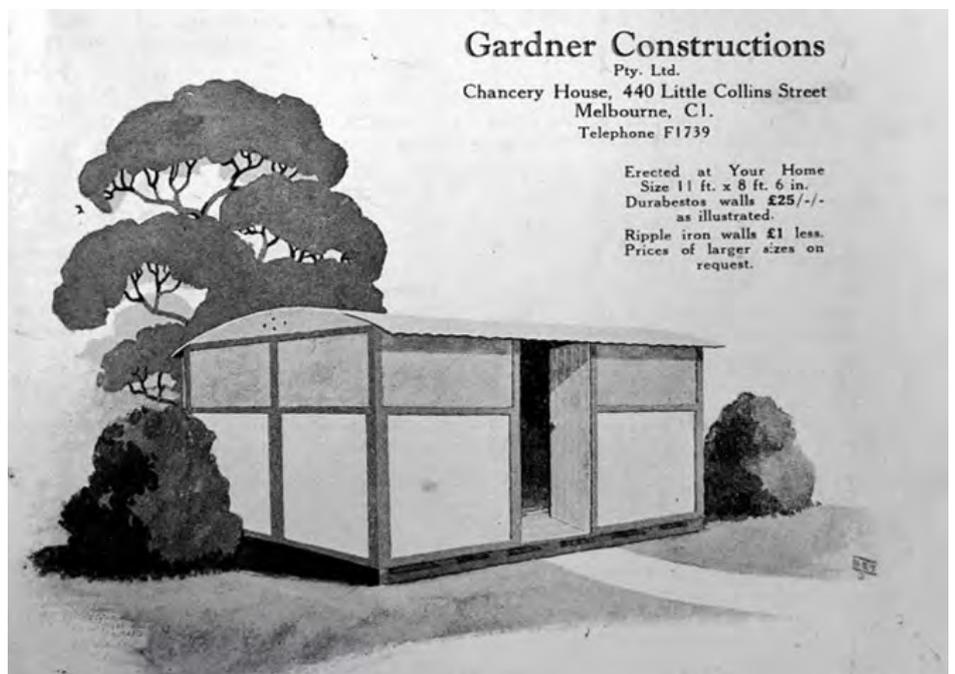


Figure 15: Advertisement from *Australian Home Beautiful*, March 1928.

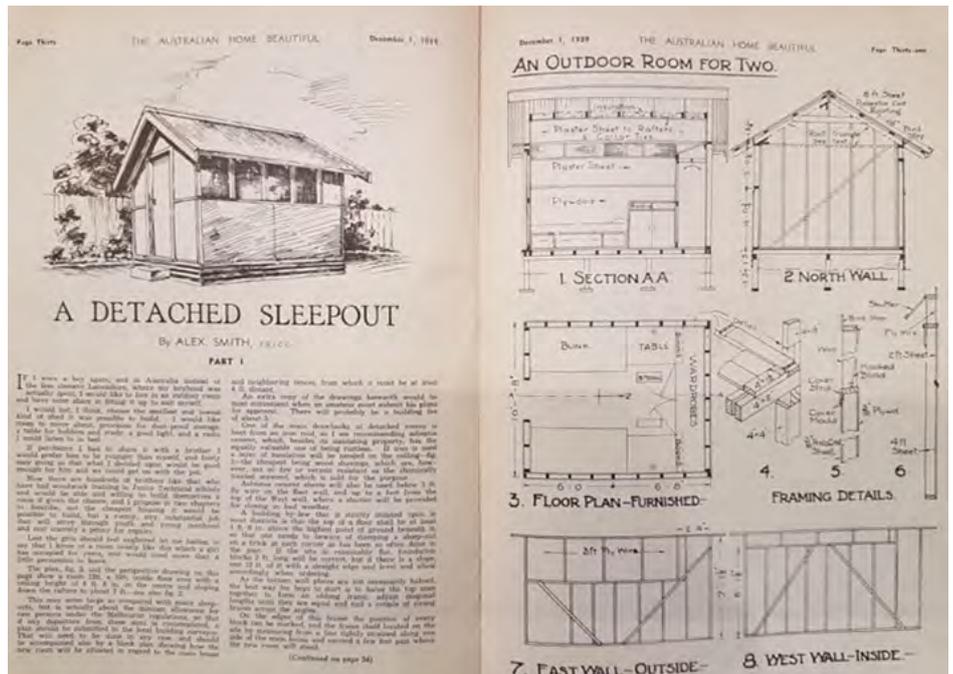


Figure 16: The first of a series of articles on how to build a sleepout in *Australian Home Beautiful*, December 1939.

19. Kate Darian-Smith, *On the Home Front: Melbourne in Wartime: 1939-1945* (Melbourne: Melbourne University Press, 2nd ed., 2009), 50.

The outbreak of World War II in September 1939 exacerbated a housing crisis that would have been inevitable with the end of the Depression. While those who joined the armed forces were provided with accommodation, others who moved to the cities to take up war work found it difficult to find a place to live. The expanding manufacture of weapons, munitions, vehicles and aircraft created a significant growth of employment in state capitals and higher wages were deemed necessary to attract employees. This drew unemployed and underemployed men and women and their families from surrounding regions.<sup>19</sup>

20. "Shortage of Homes: 30,000 Needed in Sydney", *Sydney Morning Herald* (NSW) 7 November 1941, 6.

A 1941 survey showed a shortage of 30,000 homes in Sydney<sup>20</sup> and in Melbourne, where the majority of Australia's munitions would be made, the shortfall was conservatively estimated at 25,000 homes.<sup>21</sup> Adelaide added 14,000 new factory workers to produce arms and other machinery for the war between 1939 and 1941 and after armament production began, added another 26,000 creating a severe housing shortage.<sup>22</sup> Nevertheless, the Commonwealth Government's commitment to the war effort led it to impose a series of restrictions on domestic construction that became absolute from 1941 under the National Security (Building Operations) Regulations. After this time only state governments were allowed build new homes to address crucial needs, mostly for war widows, soldiers and their families classed as totally disabled and the elderly, while the Commonwealth's meagre wartime building program for civilians was devoted to housing war workers, mostly hostels and both permanent and temporary homes for married essential war workers and their families.

21. Darian-Smith, *On the Home Front*, 86.

22. Susan Marsden, "Housing the Workers in South Australia during World War Two", first published as "Housing the Workers", *Journal of the Historical Society of South Australia*, 16, 1988. Online at <http://www.sahistorians.org.au/175/documents/housing-the-workers-in-south-australia-during-worl.shtml> (accessed 29 November 2020).

23. Darian-Smith, *On the Home Front*, 90.

The public was urged by governments to rent their spare rooms to war workers to help with the wartime housing crisis.<sup>23</sup> Speculators leased larger houses then sublet individual rooms. Many landlords kept their costs low by ignoring repair orders that housing authorities were slow to enforce, given the undersupply of building materials. Some

24. Editorial, *Advertiser* (Adelaide, SA), 10 July 1943, 7.

25. "District Housing Denounced", *Newcastle Sun* (NSW), 21 January 1941, 3.

26. "Sleep Outs", *Cairns Post* (Qld), 29 March 1944, 2.

27. "Sleepouts to Let", *Advertiser* (Adelaide, SA), 25 March 1942, 8.

householders converted their verandahs and balconies into sleepouts to rent. The author of a letter seeking advice on building a sleepout in the 'Homemaker Queries' column of the *Adelaide Advertiser* in 1943 was advised that constructions costing over £20 required a permit and that householders should approach timber merchants as soon as an application was lodged, since supplies were limited.<sup>24</sup> Both homeowners and tenants with space in their back yards built free-standing sleepouts, often re-using materials from existing sheds and outdoor structures such as laundries. This may not have produced quality accommodation, but the housing shortage was so critical that families were squatting in railway carriages and shanties made from flattened oil cans in Melbourne's western suburbs and in Newcastle NSW it was reported that people were living in drainpipes, viaducts and tunnels.<sup>25</sup>

By 1942 the Commonwealth Government's War Workers' Housing Trust (WWHT) developed a scheme to supply standardised sleepouts for erection in suburban back yards that could be shared by two war workers. These sleepouts were rented to householders for 15 shillings a month unfurnished, or 18 shillings furnished, with the Trust requiring homeowners to allow tenants access to the family bathroom and kitchen.<sup>26</sup> Constructed with a timber frame, covered with asbestos cement sheets and roofed with corrugated asbestos cement sheets, the walls and ceilings were often lined with Caneite and their floors covered with linoleum. Initially, they came in two sizes, 9 x 9 ft (2.74 m) and 9 x 12 ft (2.74 x 3.65 m), although the smaller size was soon discontinued.<sup>27</sup>



Figure 17: Sleepout of fibrous cement sheet, roofed in corrugated cement sheet and lined with Caneite in Brunswick, Victoria, possibly a WWHT sleepout. Photograph from a private collection.

28. "Sleepouts to Let", 8.

29. Marsden, "Housing the Workers in South Australia during World War Two", unpag.

30. "Control of Sleepouts with Agents", *Courier-Mail* (Brisbane, Qld), 30 September 1943, 4.

Because Australia had not yet developed a modern tourism industry prior to World War II, one of the roles of state tourism organisations was to provide a register of acceptable private accommodation for interstate and country visitors.<sup>28</sup> With less to do during wartime, the South Australian Director of Publicity and Tourism took on the administration of the sleepout scheme<sup>29</sup> while in Queensland it was administered by the Real Estate Institute.<sup>30</sup>

There was spirited opposition to the quality of the WWHT sleepouts

31. "Overcrowding", *Singleton Argus* (NSW), 28 June 1944, 2.

32. "Sleep outs", *Windsor and Richmond Gazette* (NSW), 5 July 1944, 1.

33. "Not Relaxing Home Limit", *Courier-Mail* (Brisbane, Qld), 25 May 1944, 3.

34. "Sleep-Out Scheme", *West Australian* (Perth, WA), 25 October 1943, 2.

and to the scheme in general. New South Wales politician W. Davies scornfully referred to them as 'fowl houses', which in their size and materials they resembled.<sup>31</sup> Local government bodies and councillors criticized them as creating slums and argued that once they were erected, it would be difficult to have them removed.<sup>32</sup> Yet there was no shortage of applications from householders to obtain them. The head of the Accommodation Branch of the War Housing Division of the Labour and National Services Department reported in 1944 that more than 500 sleepout applications had recently been approved in Melbourne and other cities reported hundreds of applications.<sup>33</sup> In order to calm the concerns of local government, the Trust gave assurances that it would retain ownership of the sleepouts until the end of the war and householders would only be allowed to purchase them at that time, if they complied with local building regulations.<sup>34</sup>

### The Sleepout in the Post-war Era

35. Alastair Greig, *The Stuff Dreams Are Made Of: Housing Provision in Australia 1945-1960* (Melbourne: Melbourne University Press, 1995), 1.

36. Greig, *The Stuff Dreams Are Made Of*, 36.

Towards the end of the war, many of the people who had put off marrying and having children delayed no longer. The rapid rate of family formation and the subsequent baby boom put further pressure on housing supply. The Commonwealth Department of Postwar Reconstruction commissioned a report on the nation's housing, delivered in 1943, which estimated a shortage of 300,000 homes at the end of the war.<sup>35</sup> The 1947 Census recorded that over 10 per cent of Australian dwellings were shared by more than one family and 80,000 people were 'sleeping out', meaning that they were homeless.<sup>36</sup>

37. Ruth Cracknell, *Ruth Cracknell: A Biased Memoir* (Ringwood, Victoria: Penguin, 1997), 1-2.

38. Colin Fraser, "Home in Three Squares", *Australian Home Beautiful* 27, July 1948, 24-5, 76.

The post-war housing crisis meant many Australians in capital cities and regional centres continued to use and construct new sleepouts. Actor Ruth Cracknell reported in her memoir that her newly married sister and husband Bill, who had just returned from war service, took the second bedroom of the family home in Chatswood leaving her to sleep in a 'part-enclosed side verandah [which] sat in the treetops.'<sup>37</sup> A 1948 article in *Australian Home Beautiful* described the conversion of an interwar sleepout five years earlier by Bet Olsen in the backyard of her husband's family home in the Melbourne suburb of Heidelberg. The so-called 'Sleepout flat' (Fig. 8), was praised as a 'compact self-contained' home with a 'distinctive atmosphere of friendliness and informality'.<sup>38</sup> That this young middle-class couple were still living in such cramped circumstances three years after the war's end and that the magazine was publishing this story as a useful 'how-to' story indicates the depth of the housing crisis and the continued importance of the sleepout as a means of dealing with it.

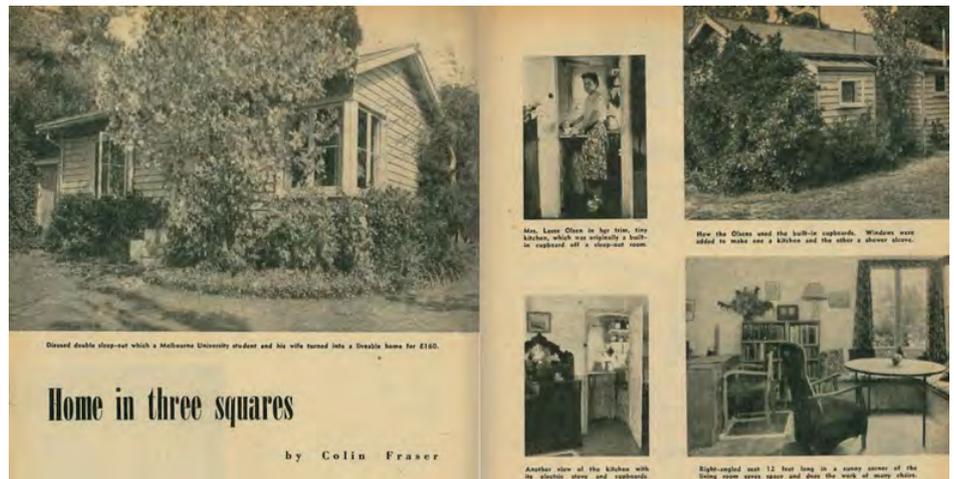


Figure 18: This sleepout converted into a flat in 1943 was still in use in 1948, *Australian Home Beautiful*, July 1948.

39. Graham Holland, Emoh Ruo: *Owner Building in Sydney* (Sydney: Hale & Iremonger, 1988), 230.

40. "Ban Suggested", *Argus* (Melbourne, Vic) 3 August 1950, 5.

Because Australia had not yet developed a modern tourism industry in the early post-war era many Australians who were unable to obtain a builder, even when they had accumulated sufficient wartime savings to pay for one, began building their own homes. An average of thirty per cent of Australian homes in the 1950s were owner-built.<sup>39</sup> Some local councils made life difficult for owner-builders while others were keen to see the transformation of greenfield sites into new suburbs. Melbourne's Box Hill Council, for instance, encouraged owner builders by allowing them, once the house frame was erected, to build a sleepout on the house block to live in while their house was being finished. The council believed its generosity was abused when some owner-builders failed to progress their home-building past the framing stage or once the home was completed, moved in, and then rented the sleepout to another family rather than demolishing it or repurposing it as a shed or garage as was the council's stated plan.<sup>40</sup>



Figure 19: Timber sleepout used by Mrs Eager (pictured) while her sons David and Will slept in the tent on the right as they built a house for David and his fiancée Daphne in Wandin, Victoria 1947-8. Photograph collection of the Eager family.

41. Ian Burnley, *The Impact of Immigration on Australia: A Demographic Approach* (Melbourne: Oxford University Press, 2001) 102 and Greig, *The Stuff Dreams Are Made Of*, 5.

42. "Preying on Migrants Here", *The Evening Advocate* (Innisfail, Qld), 3 January 1950, 3.

43. "Open Your Homes the Governor Said...", *Argus* (Melbourne, Vic) 3 March 1955, 1.

44. Housing Commission Victoria, 1964, *Twenty Sixth Annual Report for the period 1 July 1963, to 30 June 1964*, 9.

The shortage of labour holding back Australia's overall economic development and the supply of housing and commodities, encouraged bi-partisan support for the post-war mass-migration program. While migrant labour helped overcome the worst of the housing crisis by the mid-1950s, in the short term, from the late 1940s and into the 1960s it strongly impacted the lives of those newly arrived.<sup>41</sup> Non-British migrants were discriminated against in both the private rental market and in obtaining public housing and therefore had fewer choices in the kind of space they could rent. Newspapers frequently reported exploitation of recent European migrants by landlords charging them unreasonable rents for sleepout accommodation.<sup>42</sup>

Building approval applications to local governments in the 1950s show that sleepouts continued to be built, both as free-standing structures and partly enclosed sections of verandahs. As they had during the war, many post-war local councils resisted the construction of freestanding sleepouts and sought to remove those already built. In one case, Melbourne's Chelsea Council pursued a landlord who was renting eleven 'sub-standard' sleepouts in the Supreme Court to have them demolished. Despite the demise of their reputation, sleepouts that had become vacant in the early 1950s were used once again in Melbourne, to provide accommodation for visitors to the 1956 Olympic Games.<sup>43</sup>

Verandah sleepouts were such an accepted form of habitation that state governments continued providing them in post-war public housing. Victorian Housing Commission (HCV) concrete homes of the 1950s for example, came in three sizes, two bedrooms, three bedrooms and for larger families, three bedrooms with a back verandah sleepout. Between 1963-4 older HVC homes with sleepouts were updated with solid walls at tenants' requests.<sup>44</sup>



Figure 20: Concrete homes produced by Housing Commission Victoria (HCV), Olympic Village, Heidelberg, Victoria.

Figure 21. Concrete homes produced by HCV came in three sizes, the largest was three bedrooms with a rear sleepout.

When existing sleepouts were not demolished or rented out in the post-war era they were used in the 1960s and 1970s for storage and by children all over the country as a play space. The notion that exposure to fresh air was beneficial to children's health continued to have currency so that sleepouts retained their use for children and adolescents while they became regarded as unsuitable for occupation by most adults. Children were still encouraged to occupy sleepouts in spells of hot weather, their lack of insulation meant they were quick to cool down

on summer evenings and they were commonly used for children's sleepover parties during school holidays.

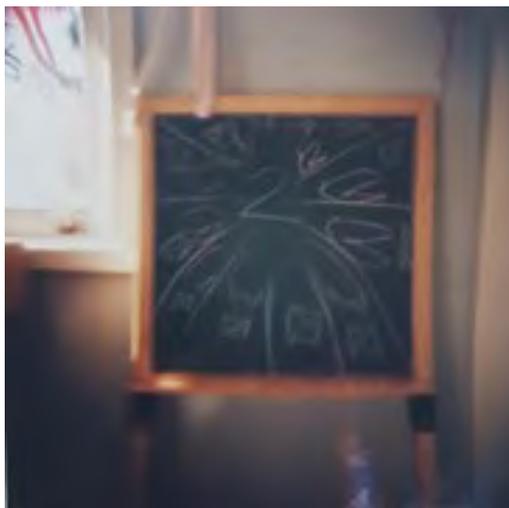


Figure 22: Sleepout lined with Caneite, used as a play space in Brunswick, Victoria, 1993. Photograph from a private collection.

The children of the war generation, the baby boomers, were more well-educated than their parents and had grown up in an increasingly affluent society, catered to by a consumer culture that responded to their desires. The 'generation gap'—the mismatch between the values and assumptions of war generation parents and their children, created tensions that were often alleviated by the space provided by the separate sleepout for sleeping and socialising. They served throughout the 1970s as a kind of safety net for teenagers, keeping them at home while allowing some privacy and independence. Newly built sleepouts were often called 'bungalows' to differentiate them from the utilitarian, supposed eyesores of the interwar and war years.

In Australian working-class suburbs such as Melbourne's Brunswick, sleepouts have remained in continuous use, often occupied by recently arrived migrants, refugees and Australians on low incomes. Interwar sleepouts and post-war bungalows continue to provide accommodation for those unable to afford to rent an apartment, with few social connections, unable to negotiate share house accommodation and without access to social housing.

### **The Revival of the Sleeping Porch and the Re-Emergence of the Sleepout**

45. Maggie Burch "What is a Sleeping Porch?", *Southern Living*, 7 January 2020. Online at <https://www.southernliving.com/home/porch/sleeping-porch> (accessed 20 October 2021), Donna Boyle Schwartz, "Why We Love the Sleeping Porch", Bob Vila. Online at <https://www.bobvila.com/articles/sleeping-porch/> (accessed 27 October 2021), Jennifer Zuri, "Who Doesn't Want a Summer Sleeping Porch?", *Town and Country Living*, 23 June 2021. Online at <https://town-n-country-living.com/summer-sleeping-porch.html> (accessed 28 October 2021).

The post-war availability and increasing affordability of home air conditioning led to the disappearance of US sleeping porches. Walls of flywire were replaced by solid walls and windows, turning them into ordinary rooms. New concerns about the environmental cost of air conditioning, the popular embrace of biophilic principles and interest in the effects of natural light on circadian rhythms has encouraged a recent trend in reviving the use of sleeping porches in older American homes through demolishing walls and reinstating flywire and glass.<sup>45</sup>

46. "What We Do", Kids Under Cover. Online at <https://www.kuc.org.au/what-we-do/> (accessed June 30, 2021).

In Australia and the United Kingdom in recent years the term sleepout has come to mean a kind of event, where children and or adults sleep out of doors or undercover but without the benefit of a bed. These events are held to raise money for charities, often those supporting people experiencing homelessness and to generate awareness about the issue in cities and regional towns. Secondary schools in Australia hold sleepout events to encourage empathy in young adults, to broaden their social experience and to build community.

Kids Under Cover is a contemporary organisation addressing the issue of youth homelessness with an early intervention approach that has benefitted from these sleepout or 'camp out' events. The Melbourne-based charity has extended its reach to the ACT and Queensland, raising funds to build and administer one and two bedroom 'studios' with a bathroom (Fig. 23). It aims to provide a 'stable, secure space for a young person to grow and study while keeping them connected with their family or carer, thus reducing the risk of them being forced to leave home prematurely.'<sup>46</sup> These 21st century sleepouts are fully demountable so they can be re-used for a new family on a new site once they are no longer needed. They are awarded via community service organisations with links to Kids Under Cover, which works in partnership with the local government, a social worker and the family. The term 'studio' is seen as preventing the emphasis on the young person being 'out' of the home, which the organisation emphasizes is the very thing that these structures are intended to prevent.



Figure 23: A studio supplied by charity Kids Under Cover, <https://www.kuc.org.au/library/youth-homelessness-facts-statistics/>.

## Conclusion

The social practice of sleeping on a verandah sleepout has lost its connection to bringing up healthy, toughened colonial subjects. Accommodating either children or adult family members on a veranda or balcony sleepout is more likely to be understood today as evidence of extreme disadvantage than a means of obtaining the perceived health benefits of fresh air. Recent research showing the positive impact of natural light on sleep patterns and the popular application of biophilic principles has facilitated a limited revival of the American sleeping porch and may do the same for the Australian sleepout.

The re-emergence of the free-standing sleepout after a gap of four decades, now renamed a studio, as a way of keeping young people out of harm's way and connected to family while providing them with a degree of autonomy and privacy is a worthy continuation of this form of regional building. Given the continued shortage of affordable housing in 21st century Australian cities and towns, improved prefabricated versions of the regional form of the freestanding sleepout might be offered even more widely than by a single charity, as a solution for people of a range of ages in seeking temporary low-cost housing, including tertiary students providing in-home care and companionship for the elderly.

The sleepout in its verandah, balcony and free-standing forms proved an economical and convenient means of dealing with a succession of housing crises, from the early years of colonial settlement to the mid 1960s. Despite a brief period of housing surplus in the late 20th century, the shortage of affordable housing and the problem of generational conflict exacerbated by household over-crowding continue to increase in most Australian cities and many towns in the 21st century. Updated freestanding sleepouts may offer a partial, temporary solution to these perennial issues as they did throughout the 20th century.

# ULTRA

## **Positions and Polarities Beyond Crisis**

### **SESSION 2: *Construction History***

# WW2 and Its Aftermath: Impact on the Architectural Palette

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## **Keywords**

WW2  
Post-war decade  
Construction materials  
Construction products,  
Innovation  
Materials control

## **Abstract**

How were construction materials and products used in Australia, and especially South Australia, during the Second World War through to around 1965? Broadly, the emphasis was on military applications during the war and on consolidation and normalization, rather than innovation and development, in the post-war decade. The architectural palette was severely constrained, though early Modernist architects rose to the challenge. Materials innovation and development in Australia did not fully restart until after 1955. The evidence for these assertions draws from a consideration of a broad range of materials – renewables, earths, metals and synthetics.

## Introduction

1. F.R.S. Yorke, ed., *Specification* (Cheam: The Architectural Press, 1941), 3.

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3. RAAF Museum, 'A20 CAC Wirraway' (Point Cook: RAAF Museum, Point Cook, 2010), [www.airforce.gov.au/sites/default/files/minisite/static/7522/RAAFmuseum/research/aircraft/series2/A20.htm](http://www.airforce.gov.au/sites/default/files/minisite/static/7522/RAAFmuseum/research/aircraft/series2/A20.htm).

4. Department of Veterans' Affairs, 'Civilian Construction Corps paved the way for the forces', *DVA Anzac Portal* (3 June 2019), <https://anzacportal.dva.gov.au/stories-service/australians-war-stories/civilian-construction-corps-paved-way-forces>.

5. M. Page, *Sculptors in space* (Canberra: RAI, 1986), 215.

6. S. Marsden, *Twentieth century heritage survey: Stage 1: Post Second World War* (1946-1959): Overview history (Adelaide: Department for Environment and Heritage, 2003-4), 9.

7. M. Kelly, 'Housing after the Second World War', *Bristol Ideas* (2019), [www.bristolideas.co.uk/projects/homes-for-heroes-100/housing-after-the-second-world-war/](http://www.bristolideas.co.uk/projects/homes-for-heroes-100/housing-after-the-second-world-war/).

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9. Migration Museum, 'The last great exodus from Britain?', MM (11 January 2016), [www.migrationmuseum.org/the-last-great-exodus-of-british-migrants/](http://www.migrationmuseum.org/the-last-great-exodus-of-british-migrants/).

10. National Museum of Australia, 'Postwar immigration drive'.

11. Unlike after WW1. This idea was advocated in W.D. Forsyth, *The myth of open spaces: Australian, British, and world trends of population and migration* (Melbourne: Melbourne University Press, 1942).

12. K. James, 'Soldiers to citizens', *Australian War Memorial* (30 March 2021), [www.awm.gov.au/wartime/45/article](http://www.awm.gov.au/wartime/45/article).

13. A. O'Neill, 'Total fertility rate of Australia 1800-2020', Statista (2 March 2021), [www.statista.com/statistics/1033428/fertility-rate-australia-1800-2020/](http://www.statista.com/statistics/1033428/fertility-rate-australia-1800-2020/).

14. SA Government, *Building Materials Act*, 1945 (Adelaide: SA Government, 1945).

15. NSW Government, *Building Operations and Building Materials Control Act*, 1945 (Sydney: NSW Government, 1945); Queensland Government, *The Building Operations and Timber and Building Materials Control Act*, 1945 (Brisbane: Queensland Government, 1945) – also 1948 and 1951, ceasing 1952; WA Government, *Building Operations and Building Materials Control Act*, 1945 (Perth: WA Government, 1945).

It is possible that, owing to war restrictions, some of the proprietary materials mentioned in the editorial pages of *Specification* may for a time be unobtainable.<sup>1</sup>

In Australia as elsewhere during the war, production and use of materials was transferred urgently from civil to military purposes. For example, Australia built 212 timber-framed Mosquito fast bombers at Bankstown<sup>2</sup> and made its own aircraft for the first time, such as the Wirraway training aircraft.<sup>3</sup> The Civilian Construction Corps built military facilities around Australia, including the US Air Force base at Mount Louisa, Queensland, primarily to support the war in the Pacific.<sup>4</sup> Converting the construction sector from civil to military purpose was challenging but was done very quickly.

How was the reverse managed after the war? Page wrote that 'The decade of 1945–55 was the seminal period for the great advances in building materials and construction methods which were to revolutionize the industry'.<sup>5</sup> But is this correct? An alternative view is that full recovery from the war took over a decade:

This postwar decade had that precise meaning [that the unresolved business of the war itself – with respect to economic damage, social disruption, political score settling, and so on – was still the dominant feature] also in South Australia.<sup>6</sup>

After the war both Britain and Australia faced housing shortages, and therefore construction materials shortages, as the military was demobilized. For Britain the housing shortages were exacerbated by bomb damage in major cities.<sup>7</sup> Though the British government encouraged citizens to stay and help with the rebuilding,<sup>8</sup> a part of the solution was a reduction in demand through emigration, to Canada, Australia and elsewhere.<sup>9</sup> In Australia the post-war immigration drive was a major cause of materials shortages. From 1947 to 1965, two million immigrants arrived in Australia.<sup>10</sup> The drive was geared to the development of urban industry rather than the rural sector.<sup>11</sup> This policy also affected the return of almost 600,000 demobilized men and women, from 1942 to 1947.<sup>12</sup> A post-War boost in the fertility rate, from 2.54 in 1945 to a peak of 3.4 in 1960, added to demand.<sup>13</sup>

Australia addressed its materials shortages through State-based legislation controlling the use of construction materials, connected to house prices. In South Australia these restrictions ran from the start of 1946 to the end of 1953 and were enacted specifically because 'by reason of conditions brought about by the war in which His Majesty has been engaged, the supply of certain essential building materials is insufficient to meet the demand therefor'.<sup>14</sup> The legislation comprised the Building Materials Act, 1945; the Building Materials Act, 1949; and the Building Operations Act, 1952 (Table 1). The 1945 Act applied to houses with a construction cost of more than £1000, any other building or structure with a construction cost over £150, repairs worth more than £100 to any type of building, and work worth more than £200 involved in splitting houses into multiple occupancies. Similar legislation was enacted in other States.<sup>15</sup>

**Table 1: Summary of SA construction materials restrictions, 1946-53**

| Material/product          | Building Materials Act, 1945   | Building Materials Act, 1949                               | Building Operations Act, 1952  |
|---------------------------|--|--|--|
| Timber                    | Of a kind usually used for the purpose of the construction of or alteration to buildings | -  | -  |
| Flooring boards           | -  | All  | Pinus radiata  |
| Building bricks           | Other than refractory bricks or bricks of cement concrete                                | And bricks or blocks of cement concrete, and breeze blocks | Burnt  |
| Roofing tiles             | All  | -  | -  |
| Cement & cement products  | -  | Certain uses proscribed, e.g., roads, fences               | -  |
| Asbestos cement sheets    | Corrugated   | Corrugated & plain   | -  |
| Black and cast-iron pipes | Water and gas  |  | -  |
| Galvanized pipes          | Water and gas  |  | Manufactured within the Commonwealth, internal diameter between one-half inch and three inches |
| Galvanized iron sheet     | Corrugated and plain   |  | Manufactured within the Commonwealth, No. 24 & No. 26 gauge                                    |
| Steel reinforcing rods    | -  | ½ in. or ¾ in. gauge                                       | -  |

16. Marsden, *Twentieth century heritage survey*, 42.

Controls on non-residential building were lifted in 1953. New houses, though, remained limited in area – 111 m<sup>2</sup> for a timber house and 116 for a brick house – with additions restricted to under £300. This led to the ‘austerity house’ and other innovations such as staged construction, open-plan layouts, lower ceilings (2.745 m) and no verandahs. These restrictions too had gone by the late 1950s.<sup>16</sup>

17. Marsden, *Twentieth century heritage survey*, 39.

To cover the shortfall, many materials were imported rather than locally made, and black markets developed in cement, but mass production facilitated the use of aluminium, asbestos cement, plate glass, plasterboard, strawboard, and hardboard, especially in Modernist architecture.<sup>17</sup>

### Before the War

18. Strawboard is a panel product made using wheat stubble straw. M. Lewis, ‘5.11 Building boards: Solomit’, in *Australian building: A cultural investigation* (2015), [www.mileslewis.net/australian-building/](http://www.mileslewis.net/australian-building/).

Several developments and innovations in construction materials happened just before the outbreak of the war, in Australia and overseas. In South Australia, for example, Solomit built its first strawboard factory at Freeling in 1937, and its second at Murtoa, Victoria in 1938.<sup>18</sup> Some

19. P. Bell, *Early bricks and brickwork in South Australia* (Adelaide: Department of Environment and Natural Resources, 1998), 21.

materials had seen no change. Extruded clay bricks had been made in SA since 1853, but dry pressed bricks dominated from the late 19th century through to at least the 1960s, and Hoffman kilns 'dominated the brickmaking industry in South Australia from the First World War to the 1970s'.<sup>19</sup>

Overseas, many plastics had been invented and developed before the war. Plasticized PVC, PVC-P, was invented in 1926 at BF Goodrich in the USA. The first rigid PVC pipes were produced in Germany in 1935 using techniques devised for celluloid. Polychloroprene, 'Neoprene', was commercialized in 1933 by DuPont in the USA. Styrene-butadiene rubber (SBR) was first produced in quantity by IG Farben in Germany in 1935. Polymethyl methacrylate (PMMA), 'Plexiglas', was invented in Germany by Röhm & Hass in 1932. Polyethylene (PE) was invented in England in 1933. Polytetrafluoroethylene (PTFE), 'Teflon', was accidentally invented at DuPont in 1938. Polyamide (PA), 'Nylon', was released by DuPont for hosiery in 1939.

## WW2 (1939-1945)

20. I. Bevege and G. McKenzie Smith, 'Forestry Units in World War II', *Australian Forest History Society Newsletter* 66 (September 2015), 6-7.

21. Queensland WWII Historic Places, 'Industry: Forestry industries', *Queensland Government* (29 July 2014), [www.ww2places.qld.gov.au/homefront/industry](http://www.ww2places.qld.gov.au/homefront/industry).

23. Australian Academy of Technological Sciences and Engineering, 'Technology in Australia 1788-1988', AATSE (1988), 240, <https://www.austehc.unimelb.edu.au/tia/240.html>.

24. For British examples, see Yorke, *Specification*; 'Air-raid precautions', 549ff. One example was high strength reinforced concrete roof slabs for ARP shelters, by Frazzi (Yorke, *Specification*, 100). See also Historic England, *Military structures: Listing selection guides* (London: Historic England, 2017). Concrete was used in Darwin for the Quarantine anti-aircraft battery, observation posts at Dripstone Cliffs, and for undersea defenses in Darwin Harbour: 'WWII Quarantine anti-aircraft battery site', Northern Territory (undated), <https://northernterritory.com/darwin-and-surrounds/see-and-do/wwii-quarantine-anti-aircraft-battery-site>; P. Forster, 'Fixed Naval defences in Darwin Harbour 1939-1945', Navy (undated), [www.navy.gov.au/history/feature-histories/fixed-naval-defences-darwin-harbour-1939-1945](http://www.navy.gov.au/history/feature-histories/fixed-naval-defences-darwin-harbour-1939-1945).

25. J. Peterson, 'Nazi megaweapons – a concrete tale', *War History Buff* (20 March 2019) <https://warhistorybuff.com/2019/03/20/nazi-megaweapons-a-concrete-tale/>

During the war timber supply was problematic everywhere. British need for local timber led Australia to send two 200-man military Forestry Companies to Britain in 1940, and a 150-man unit in 1941. They returned in 1943.<sup>20</sup> Their absence will have affected timber availability in much of Australia. In Queensland, northern rainforest timbers were used locally for defence works, rather than being shipped to the southern States, with the Cairns sawmills operating fulltime on defence from 1942.<sup>21</sup>

Plywood is one of the materials that befitted technologically from the war. Its use for barracks, boats, gliders and so on, tripled the number of mills in the USA.<sup>22</sup> A urea-formaldehyde adhesive for plywood, Aerolite, had been invented in Britain in 1935. In Australia the war led to better marine plywood (new adhesives), very thin plywood (as thin as 0.32 mm) from NSW coachwood for use on the monocoque Mosquito bomber (freeing up metal workers and aluminium), and the introduction of plywood made from radiata pine in SA. The CSIRO's Division of Forest Products conducted research used in some of these innovations.<sup>23</sup> In 1944 Australia had 25 plywood mills, 11 of them in Queensland (processing kauri logs for military uses) and just two in SA, which peeled mainly radiata pine but also small amounts of Tasmanian mountain ash.

Concrete development and innovation in SA paused during the war, though in Europe bomb-resistant concrete construction was urgently developed.<sup>24</sup> This was used for massive fortification systems such as Germany's Atlantic Wall, which used 36 million tonnes of concrete and comprised 15,000 bunkers traversing 4,800 km.<sup>25</sup>

Metals were prioritized for the war effort, though the industry (here represented by British Aluminium) was ever hopeful:

Whilst aluminium serves first the Empire's first task [i.e. the War], the above-mentioned and other B.A. Co. publications are available freely to architects and designers, in preparation for post-war uses of the metal.<sup>26</sup>

26. Yorke, *Specification*, 334.

Likewise, the Zinc Development Association (UK) suggested a promising post-war future for the material:

27. Yorke, *Specification*, 278.

As an essential war material, zinc is now restricted almost exclusively to Government requirements; but in meeting these urgent needs, zinc is adding to its utility for building purposes in general. The widespread use of zinc is an indication of the important part which the metal will take in the future work of reconstruction.<sup>27</sup>

28. American Chemistry Council, 'Chlorine compound of the month: Polyvinyl chloride (PVC)', ACC (February 2004), <https://chlorine.americanchemistry.com/Science-Center/Chlorine-Compound-of-the-Month-Library/Polyvinyl-Chloride-PVC-Its-Hard-to-Imagine-Life-Without-It/>.

Supplies of natural rubber stopped with the Japanese occupation of Malaya in 1941, so industry looked for alternatives for both civil and military use. To a large extent, plastics were adopted as substitutes. Rubber used for insulating electrical cables was replaced by PVC-P, for cabling on military vessels where its inherent fire-resistance (thanks to the chlorine component) was beneficial.<sup>28</sup> Other rubber substitutes included Neoprene and SBR.

29. K. Shah, 'A brief history of plastic', *History of Yesterday* (19 September 2020), <https://historyofyesterday.com/a-brief-history-of-plastic-2336f7bbdb96>; S. Freinkel, 'A brief history of plastic's conquest of the world', *Scientific American* (29 May 2011), [www.scientificamerican.com/article/a-brief-history-of-plastic-world-conquest/](http://www.scientificamerican.com/article/a-brief-history-of-plastic-world-conquest/).

Other plastics had wartime uses. PMMA was used to replace glass in aircraft windows. PE was used to insulate radar cabling. PTFE was used to contain the volatile gases needed to make the atomic bomb. PA was rationed during the war for parachutes and ropes. During the war plastics production, based on petrol feedstock, nearly quadrupled in the USA.<sup>29</sup>

### Post-war Decade (1945-1955)

30. Marsden, *Twentieth century heritage survey*, 38, 43.

Timber supply took some time to get back to normal after the war. Timber was a controlled material in the SA Acts (Table 1), in Schedule Two of the NSW Act, in the schedule to the WA Act, and in its own section ('Timber control') in the Queensland Act. And so, for example, the South Australian Housing Trust (SAHT) erected more than 1000 imported timber houses at Gilles Plains over 1951-2, and over 3800 imported timber houses at Clearview and elsewhere over 1950-4.<sup>30</sup> The main local innovations were in timber products. Use of hardboard and softboard was not restricted after the war. CSR added a hardboard line to its Sydney softboard plant in 1947 using Swedish technology. The CSR plant and the Masonite Corporation hardboard plant in NSW eventually shifted to using radiata pine as feedstock, rather than eucalyptus and bagasse. A hardboard plant was opened at Burnie in Tasmania in 1952.

31. W.B. McKay, *Building construction volume three* (London: Longmans, 1963), vi (Preface to the first edition).

The use of plywood and similar products was encouraged after the war due to the need to use timber economically. For these products 'the rarer and more valuable timbers especially are made to go as far as possible by conversion into thin veneers.'<sup>31</sup>

32. Lewis, 'Building boards: Solomit'.

In 1946-7 the Modernist architect Robin Boyd used Solomit strawboard panels experimentally to roof his house at Camberwell, Victoria, surfacing it with bituminous felt and gravel – this caught on.<sup>32</sup> Over the 1950s Solomit production grew to thousands of strawboard sheets for acoustic ceilings, insulation, and some houses such as its display house in Brighton, SA in 1952.<sup>33</sup> In 1954 another strawboard product, Stramit, began production at Bendigo.<sup>34</sup>

33. Marsden, *Twentieth century heritage survey*, 39.

34. Stramit had been invented in Sweden in the 1930s. With a water-resistant paper face, it was designed for roofing, covered in asphalt after the joints had been taped and filled: J.J. McKay, *Building construction volume four* (London: Longmans, 1961), 178-9.

35. Bricks were controlled elsewhere, including Northern Ireland: NI Ministry of Commerce, *Bricks (Control) (Northern Ireland) Order, 1943* (Belfast: NI Ministry of Commerce, 1943).

36. Bell, *Early bricks and brickwork*, 22.

37. I. Stuart, 'The history and archaeology of the Hoffman Brick and Tile Company, Melbourne, Australia', *Industrial Archaeology Review* 17/2 (1995), 129-144.

38. Marsden, *Twentieth century heritage survey*, 39.

39. M. Goodchild, 'Plastering over the cracks', *Architecture & Design* (16 October 2008), [www.architectureanddesign.com.au/news/industry-news/plastering-over-the-cracks#](http://www.architectureanddesign.com.au/news/industry-news/plastering-over-the-cracks#).

40. Though in the UK it was being used during WW2 for 'a neat and efficient wall constructed for protection against bomb blast' by Turners Asbestos Cement (Yorke, *Specification*, 212).

41. Australian Asbestos Network, *Asbestos history* (Perth: Murdoch University, 2019).

42. J. Ashby, 'The aluminium legacy: The history of the metal and its role in architecture', *Construction History* 15, (1999), 85. Production ceased in 1949 due to the expense.

43. It took some time for Australia to produce aluminium locally from scratch, despite having the world's second largest bauxite reserves (as of 2020).

Bricks remained in short supply – various kinds were restricted by the SA Acts (Table 1), and in the NSW (in their own Division), Queensland and WA Acts.<sup>35</sup> The last Hoffman kiln in SA was built in 1951, at Glen Osmond.<sup>36</sup> A new type of kiln, the tunnel kiln, was first built in Victoria in the 1950s by Brick Industries, having been advocated by the Building Research Division of the CSIRO in 1950.<sup>37</sup>

The use of concrete in architecture seems to have continued through the war and the post-war decade, but supply was short. It was included in one SA Act and the WA Act, as 'cement and cement products.' After the war a black market in imported cement developed which led the SA government to support the construction of a new kiln at Birkenhead, by the Adelaide Cement Company, in 1953.<sup>38</sup> The SA Portland Cement Company relocated its Marino kiln to Angaston in 1952.

Window glass was controlled in the NSW Act. The 1950s saw some innovation. Rolled pattern glass (such as Kosciusko and Coogee) was produced through the 1950s to the 1970s. In the USA, Libbey-Owens-Ford had developed double-glazing, Thermopane, also used in Australia. Crownlite, a ceramic-coated heat-absorbing annealed plate glass made by Australian Consolidated Industries (ACI), had failed in two curtain wall projects in the mid-1950s: at the GMH Factory, Dandenong, and at a 12-storey office block in Adelaide. These thermal stress fracture failures led to a report recommending the use of toughened glass for spandrels. Plasterboard – set gypsum sandwiched between two layers of heavy paper – replaced wet plaster for flat work and preformed fibrous plaster for plain sheets. After the war fibrous plaster sheets were cast in multiple small-scale backyard factories to meet demand.<sup>39</sup> Industry thought the demand could be better met by dry-wall construction, and so plasterboard was first made in Australia in 1947, by CSR Gyprock at Concord, NSW.

Asbestos cement (aka 'fibro') was a conventional and everyday material.<sup>40</sup> It experienced a post-war boom:

Its greatest use came with the explosion of house construction in the postwar years from 1945 to the close of the 1960s. By the mid-1960s, it featured in almost 20% of all housing stock.<sup>41</sup>

Though the date of 1945 in this quote could be challenged – the material was included in the various control Acts – in NSW alone, 70,000 houses were built using asbestos cement from 1945 to 1954. The bulk of the chrysotile used by James Hardie for its Australian asbestos cement products was imported from Canada.

The UK and USA had substantial aluminium industries that had been set up for aircraft manufacture but, at the end of the war, were 'in search of a market'. There was also a great deal of scrap aluminium from unwanted aircraft that needed a purpose.<sup>42</sup> Neither situation applied in Australia. Aluminium used in Australia was imported to the end of the post-war decade, and so remained expensive.<sup>43</sup> Perhaps because it was simply not being imported, it was not scheduled in the various building materials control Acts. But in the USA the aluminium surplus seeded innovation, most notably the development of the glazed curtain wall. Early examples were the Equitable Savings & Loan Building, Portland in

44. Ashby, 'The aluminium legacy', 86.

1948, by Pietro Belluschi, and the Alcoa Building, Pittsburgh in 1953, by Harrison & Abramovitz.<sup>44</sup>

45. Presumably because zinc for galvanizing was hard to come by at this time.

Unlike aluminium, iron and steel were widely controlled. Various products were scheduled in the SA Acts (Table 1). Structural and reinforcing steel was controlled in the NSW Act along with various items made from iron and steel including wire, nails, water and gas pipes, ferrous castings, bolts and nuts, and sheet steel. The WA Act listed wire and wire products (e.g. nails), water and gas pipes, and ferrous castings. Nevertheless, steel sections were developed for use in housing. A system called Econosteel was developed – uncoated steel sections dipped in bituminous paint.<sup>45</sup> It was used for over 300 houses in the ACT after 1945 but was six times more expensive than timber. The first standard for cold-rolled steel sections was published in 1946 by the American Iron and Steel Institute.<sup>46</sup>

46. D. Allen, 'History of cold formed steel', *Structure* (November 2006), 28-32.

Galvanized iron remained in short supply in the post-war decade. Galvanized iron sheets (corrugated and plain) and pipes were listed in the material control Acts in SA, sheets in NSW, and 'galvanized iron' generally in WA.

47. American Chemical Society, *Discovery of polypropylene and the development of a new high-density polyethylene* (Washington: ACS, 1999).

The wartime increases in plastics production, as for aluminium, led to oversupply, with manufacturers such as DuPont looking for civil uses for these materials. New plastics were also developed, such as polypropylene (PP) and high-density polyethylene (HDPE), developed in the USA by Phillips Petroleum in 1951 and 1954 respectively.<sup>47</sup> In the 1950s rigid PVC (PVC-U) was developed in grades that were readily extruded or molded, thanks to improvements in polymer production and stabilization. The potential uses of PVC in construction expanded accordingly and it is now the most widely used plastic in construction.

48. Chemlink Australasia, 'ICI Australia – Development in Australia', *Chemlink* (1997), [www.chemlink.com.au/orica\\_hist.htm](http://www.chemlink.com.au/orica_hist.htm).

The history of fully Australian-made PVC spans just over 40 years from its post-war start to its finish in 1996. In 1954, the ICI electrolytic mercury cell chloralkali plant at Botany, NSW (built in 1941), had surplus chlorine capacity, which was used to make vinyl chloride monomer (VCM). This was polymerized to create just 5000 tonnes a year of PVC. The process initially used costly acetylene gas, made from Tasmanian calcium carbide. The acetylene was converted to EDC (ethylene dichloride) which was then converted to the VCM.<sup>48</sup> The production of PVC in Australia from Australian feedstocks (salt and calcium carbide) meant that Australia could now make its own PVC pipes and vinyl flooring (invented in Sweden in 1947).<sup>49</sup>

49. British Plastics Federation, 'The story of polyvinyl chloride (PVC)', *BPF* (2014), [www.bpf.co.uk/plastipedia/plastics\\_history/Default.aspx](http://www.bpf.co.uk/plastipedia/plastics_history/Default.aspx).

## 1955 and Beyond

50. AATSE, 'Technology in Australia', 242, <https://www.austehc.unimelb.edu.au/tia/242.html>.

After 1955, development in hardboard and softboard continued with new plants at Ipswich in Queensland in 1958, and Bacchus Marsh, Victoria, in 1961.<sup>50</sup> The first production of particleboard in Australia was in 1957 at Mount Gambier, by Coreboard. A second particleboard plant was built in 1960, at Oberon, NSW.<sup>51</sup> The product is now ubiquitous.

51. AATSE, 'Technology in Australia', 244, <https://www.austehc.unimelb.edu.au/tia/244.html>.

The number of plywood mills increased to 55 by 1970, as the industry benefited from the development of synthetic (formaldehyde) glues

52. B. Toogood, *Sydney Opera House 02 Architectural resource package* (Melbourne: Forest & Wood Products Australia, n.d.).

53. Solomit, 'Acoustic strawboard ceilings', *Solomit* (n.d.), <https://solomit.com.au/acoustic-strawboard-ceilings/>.

54. ArchitectureAU, 'Dickson and Platten, architects: 1950-2000', *ArchitectureAU* (6 October 2017), <https://architectureau.com/calendar/exhibitions/dickson-and-platten-architects-19502000/>.

55. W. Watson Sharp, *Australian methods of building construction* (Sydney: Angus and Robertson, 1969), 41.

56. Marsden, *Twentieth century heritage survey*, 39.

57. Adelaide Brighton Cement, 'About us: Company history' (Adelaide: Adelaide Brighton Cement, 2013).

58. K. O'Sullivan, *Concrete expressions: Brutalism and the Government buildings precinct, Adelaide* (Adelaide: University of South Australia, 2013).

59. G. Marfella, 'From heat absorption to speculation: The troubled evolution of international all-glass architecture in Melbourne (1955-1985)', in *GOLD: the 33rd Annual Conference of the Society of Architectural Historians, Australia and New Zealand*, eds. A-M. Brennan and P. Goad (July 2016), 404-417.

60. D. Barrett, *Australian Window Glass/ Pilkington ACI/Viridian* (archive) (Sydney: Museum of Arts & Sciences, 2009).

61. Watson Sharp, *Building construction*, 377-78.

62. Watson Sharp, *Building construction*, 367. The 1969 revision was clearly not thorough.

63. L. Cheng, 'Australia's first skyscraper turns 60', *ArchitectureAU* (11 December 2018), <https://architectureau.com/articles/australias-first-skyscraper-turns-60/>.

between 1955 and 1966. An important and innovative example of plywood in this period is the use of Australian white birch from Wauchope, NSW, in the Sydney Opera House Concert Hall ceiling and chair shells, built 1967-73, and designed by Jørn Utzon and Peter Hall.<sup>52</sup>

Over the 1960s Solomit production continued to grow.<sup>53</sup> Used as a ceiling panel, it became a well-known part of the palette of Dickson and Platten Architects, in Adelaide.<sup>54</sup>

In the 1960s Hallett Brick Industries built the first (American-designed) tunnel kiln in Adelaide, at Golden Grove. All Hoffman kilns ceased production by the early 1980s. For shaping bricks, in 1969 Watson Sharp called dry pressing 'the most modern method' – as already noted, brickmaking was conservative.<sup>55</sup>

For concrete, innovation happened after the post-war decade. For example, concrete arch frames, new to SA, were used by the SAHT in 1958 for the Pioneers Memorial Hall at Seacombe Gardens.<sup>56</sup> In the 1960s, SA Portland Cement introduced sulfate-resisting cement (SR), masonry cement, and Brightonlite, an off-white cement (HE).<sup>57</sup> Brighton Tan cement was used in several Brutalist buildings in Adelaide built in the 1970s for the State government.<sup>58</sup>

ICI House, Melbourne, built in 1958 and designed by Bates Smart & McCutcheon, was Australia's first skyscraper, at 84 m. Its curtain wall was glazed from the outside using plate glass, with the spandrels made from grey ceramic toughened plate glass. But these spandrels failed – nickel-sulfide intrusions were identified as the cause. All 700 panes of blue Belgian Pan-O-Glass were removed.<sup>59</sup>

Pilkington perfected the float glass process in 1959 and the first production plant was opened in the USA in 1962, by Pittsburgh Plate Glass.<sup>60</sup> Despite local production capabilities, most building glass was imported, from Belgium (Glaverbel), the UK (Pilkington) and the USA (Pittsburgh Plate Glass and Libbey-Owens-Ford). For example, Pittsburgh supplied the glass for the Shell Corner Building by SOM (1960) and BHP House (1969-72), in Melbourne. Watson Sharp made no mention of float glass.<sup>61</sup>

Plasterboard did not become ubiquitous in Australian construction until the 1960s. Again, Watson Sharp did not mention it, saying that fibrous plaster was 'almost universally used in preference to plaster on laths.'<sup>62</sup> In 1962 Gyprock developed vinyl cements for crack-resistant jointing of the sheets (this is American practice – in the UK the entire sheet is skim coated, using square-edged blueboard). Plasterboard cement was introduced in 1964.

The first building in Australia with an aluminium-framed curtain wall was the MLC Building, North Sydney in 1955-7, by Bates Smart & McCutcheon. The sister MLC Building in Adelaide was also built 1955-57. The curtain walls for ICI House, Melbourne (1958), were also framed using extruded aluminium.<sup>63</sup>

On the Gold Coast about 50 steel framed homes were built by an American company in the 1960s, using galvanized cold rolled steel

64. National Association of Steel Framed Housing, *History of steel framing* (Hartwell: NASH, n.d.).

frames finished with stucco. Lysaght supported the construction of a galvanized steel-framed house by the National Capital Development Commission in Belconnen, ACT.<sup>64</sup>

Metals production in Australia saw many developments after the post-war decade. For aluminium, the Bell Bay smelter in Tasmania began production in 1955 at just 1200 tpa, as a joint Australian/Tasmanian government operation, using imported alumina. Planning for this project had begun in 1944. Commercial mining of bauxite – along with the production of alumina – did not begin in Australia until 1961, at Weipa in Queensland.

65. Chemlink, 'ICI Australia'.

66. British Plastics Federation, 'The story of polyvinyl chloride'.

67. Watson Sharp, *Building construction*, 228.

68. M. Scheffler and J. Connolly, 'History of building joint sealants', in *Science and technology of building seals, sealants, glazing, and waterproofing*, Volume 5, ed. M. Lacasse (West Conshohocken PA: ASTM, 1996), 85-94.

For steel in SA, BHP opened a Basic Oxygen System (BOS) furnace, a second blast furnace and a rolling mill at Whyalla, in 1965. For zinc, Lysaght commissioned its first continuous galvanizing line at Port Kembla (NSW) in 1961. Through the 1960s, Lysaght introduced terne (alloy of lead and tin) coated steel (Terne Sheet), vinyl coated steel (Marvplate) and, in 1966, pre-painted steel – better known as Colorbond.

For PVC manufacture in Australia, the acetylene process was replaced at Botany in 1963 by one using the cheaper ethylene. The ethylene was produced by a new (1960) naphtha cracker on site and then converted to EDC. This plant produced around 60 000 tonnes of PVC a year.<sup>65</sup> But PVC was a material still looking for applications, often the case for new plastics. Vinyl wall coverings were only developed in 1966.<sup>66</sup> Watson Sharp (1969) mentioned polyethylene pipes, but not PVC.<sup>67</sup> Overseas saw the development of second-generation pre-war elastomeric sealants in the 1960s, including one-part polysulfide sealants, one-part silicone sealants, and two- and three-part urethane sealants.<sup>68</sup>

## Conclusion

WW2 and its aftermath substantially interfered with the innovation and use of construction materials in South Australia and beyond. Materials innovations during the war included plywood in Australia, and new plastics such as PVC-P, developed overseas. Materials innovations in the post-war decade in Australia included fiberboards, brick firing, glass, plasterboard, and PVC production. But the situation in Australia was marked by widespread legislated materials controls. Overseas saw the development of aluminium curtain walls, rigid PVC, and several new plastics.

After 1955 in Australia the controls had gone. Materials innovation increased and included particleboard, formaldehyde glues for plywood, curved plywood, concrete arch frames, new types of cement, float glass, plasterboard cements, aluminium curtain walls, galvanized cold rolled steel, local production of aluminium, in-line galvanizing and other new steel finishes, and cheaper PVC production.

For the most part, innovations and developments in Australia happened after the post-war decade and controls happened during it. The architectural palette was reduced by the war and its aftermath for 15 years or so. Page's claim of 'great advances' in the post-war decade was overstated.

# Engineering Melbourne's "Great Structural-Functional Idea": Aspects of the Victorian Post-war "Rapprochement" between Architecture and Engineering

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## Abstract

In 1963, Robin Boyd wrote about a post-war "rapprochement" between the disciplines of structural engineering and architecture. Etymologically, the term suggests the movement of two entities that draw closer to each other, either in an unprecedented fashion or resuming a suspended interaction.

World War II and the "anxieties and stimulations" of the post-war period, to use Boyd's expression, accelerated the process of overcoming longstanding educational and professional disciplinary barriers. They were the driving forces behind what he denominated the "great structural-functional idea" of the 1950s. Architecture schools embraced modernist/functionalist ideals, producing graduates with considerable technical knowledge - true "romantic engineers." The global post-war fascination with unconventional structures played its part. Occasionally, Antoine Picon argues, architecture's "symbolic and aesthetic discourses" walk a "strictly technical path." Under the banner of Le Corbusier's *Esthétique de l'Ingénieur*, architecture and engineering converged.

New technologies made collaborations with engineers habitual. According to Andrew Saint, however, partnerships were rarely affairs of equals since "architectural jobs came to architects first." The diversification and growing number of engineers also transformed them into a labour force, Picon suggests, affecting their prestige and, possibly, their historiographical fortune. Scholarship on post-war Melbourne architecture has generally privileged the architect as the protagonist in the creation of innovative structures, only occasionally acknowledging consultants. This does not reflect the concerted nature of design commissions and frequent evanescence of disciplinary boundaries.

This paper aims to highlight the major playing grounds for this alignment within design professions. It also hints at the complex relationship between the contributions of Victorian engineers and their recognition by post-war newspapers and architectural journals, opening the analysis of Melbourne's post-war architecture to the discourse of professional representation and arguing the importance of "unbiased" histories of the built environment.

## Introduction. Melbourne's "Great Structural-Functional Idea"

1. Robin Boyd, "The State of Australian Architecture," *Architecture in Australia* 56, no. 3 (June 1967): 459.

2. *Ibid.*

In "The State of Australian Architecture," Robin Boyd explained how two buildings on opposite sides of the Yarra River, the 1956 Olympic Pool and the Sidney Myer Music Bowl, could be seen as climactic of the architecture of post-war Melbourne, examples of a peculiar design approach. The two structures were characterised by "a great structural-functional idea carried out with an enforced austerity and voluntarily cavalier technique,"<sup>1</sup> and were both products of the collaboration between young Victorian architects and engineer William 'Bill' Irwin (Figure 1). The way Boyd described Irwin suggests that his role within the architectural scene of post-war Melbourne was one of great importance. To use Boyd's words, the engineer had "the courage of his architects' convictions."<sup>2</sup> After all, the great "structural-functional" ideas for both buildings demanded a degree of willingness to work with unconventional construction systems.



Figure 1: Engineer William Lyle Irwin inspects the erection of a steel truss at the Olympic Pool building site, Batman Avenue, Melbourne. The image is part of a series of pictures taken in 1955, possibly between the months of April and October by one of Irwin's collaborators. Source: Image courtesy of engineer Phil Gardiner, WSP Australia.

3. Jeffrey Turnbull, "Enterprise in Structure and Form: The Melbourne School and Cross Section 1952-1961," in *Proceedings of the International Conference of the Society of Architectural Historians, Australia and New Zealand*, (Melbourne: SAHANZ, 1986), 118.

4. Philip Goad, "Optimism and Experiment," *Architecture Australia* 79, no. 5 (June 1990): 40.

Without needing to use Boyd's article as evidence of the existence of a "Melbourne School," one can agree that his words finely capture one of the key underlying themes that defined a memorable episode of Victorian architecture - the relationship between architectural and structural design. The two buildings he cited belong to a long list of cases where architectural form was directly derived from a specific, radical or unorthodox structural concept, an ethos developed by Melbourne architects which Jeffrey Turnbull described as an "unusual emphasis on *firmitas*."<sup>3</sup> This attempt to embrace structural design as the source of architectural expression has been widely documented by historians, to the point that architect Peter McIntyre has been depicted by Philip Goad as a "romantic engineer."<sup>4</sup>

Working with "great structural-functional ideas" required Melbourne

5. As suggested by Roy Grounds' published opinions on the "Art of Space," or by Boyd's discussion of the "generating idea."

post-war architects to possess considerable technical knowledge and to be willing to explore beyond typical structural logic - even if, ultimately, the potential of structural experiment never was a solely functional or economic one.<sup>5</sup> They also needed to work with engineers who could understand those same visions and make them technically achievable. The rare flavour of this episode of productive collaboration was the result of a post-war alignment between the disciplines of structural engineering and architectural design. This paper highlights major fields where this alignment can be identified and studied. Gathering fragments of published literature and structured as a framing exercise, it proposes a possible direction for future research and a methodological approach which might enrich our understanding of this period of Victorian architecture. In particular, it raises considerations of a historiographical nature, opening the analysis of Melbourne's post-war architecture to the discourse of professional representation and arguing the importance of "unbiased" histories of the built environment.

### **Boyd's Post-war "Rapprochement" between Architecture and Engineering**

6. Robin Boyd, "The Engineering of Excitement," *The Architectural Review* 124, no. 742 (November 1958): 294-308. Robin Boyd, "Under Tension," *The Architectural Review* 134, no. 801 (November 1963): 324-334.

7. *Ibid.*, 325.

Boyd himself debated the character of this disciplinary alignment, blended with a variety of other aspects, in his articles of the 1950s and 1960s. The theme was given particular relevance in his well-known *Architectural Review* pieces, namely "The Engineering of Excitement" and "Under Tension" (Figure 2).<sup>6</sup> The latter, comparing important episodes of architectural design from overseas to the experimental Melbourne scene of the 1950s and to Irwin's *oeuvre*, explicitly referred to a post-war conciliation which to many heralded "the end of the art-science split": a "rapprochement" between the two "master designers," the architect and the engineer.<sup>7</sup>

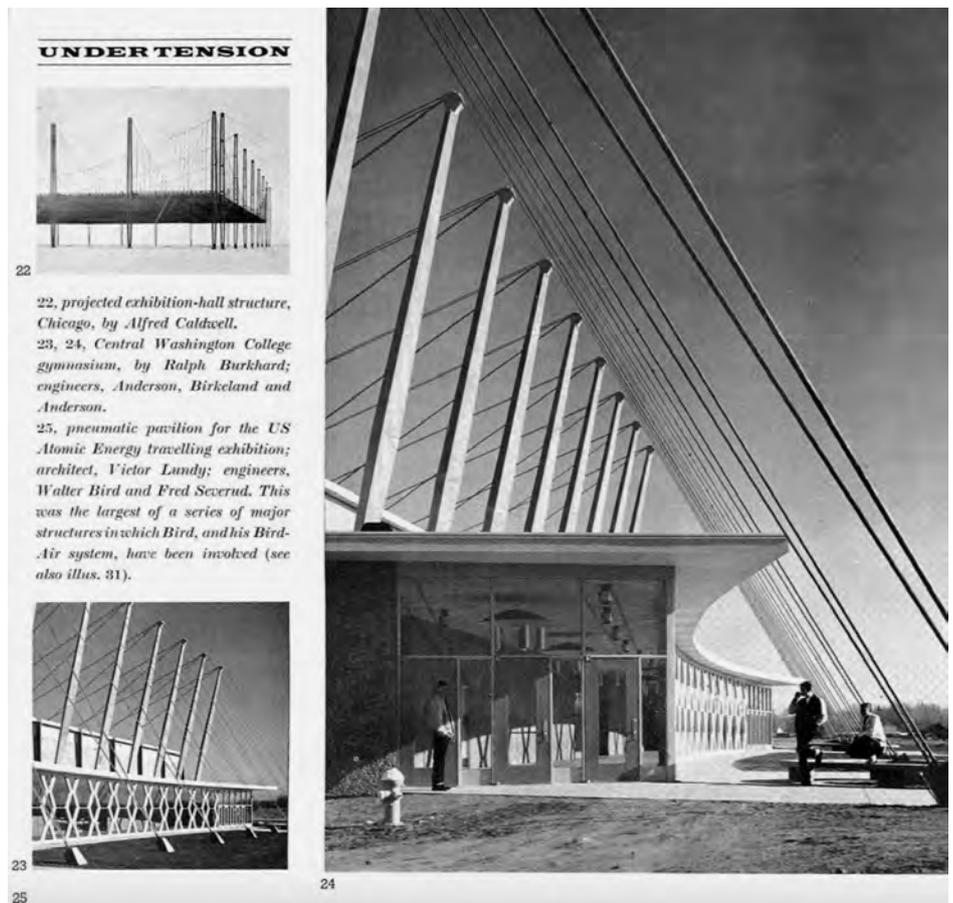


Figure 2: An excerpt from Boyd's AR piece "Under Tension" with an evocative example of the great "rapprochement" between architecture and engineering from the United States. Source: Robin Boyd, "Under Tension," *The Architectural Review* 134, no. 801 (November 1963): 330.

8. Andrew Saint, *Architect and Engineer: A Study in Sibling Rivalry* (London: Yale University Press, 2007), 11-13.

9. Antoine Picon, *L'Invention de l'Ingenieur Moderne: L'Ecole des Ponts et Chaussées 1747-1851* (Paris: Presses de l'Ecole Nationale des Ponts et Chaussées, 1992), 95.

10. *Ibid.*, 11.

Etymologically, the word "rapprochement" suggests the movement of two entities that draw closer to each other, either in an unprecedented fashion or resuming a long interrupted interaction. Andrew Saint has documented how in the Renaissance the words "architect" and "engineer" were adopted to highlight different aspects of the same profession; and how the habit persisted through the seventeenth century when architects and engineers would be distinguished by their tasks rather than by their skills.<sup>8</sup> In many regards, it was after what Antoine Picon has termed the "époque charnière" (France's *Siecle des Lumieres*) that the discipline of engineering progressively developed an awareness that it embodied an autonomous ideal and "reclaimed" a specific knowledge and field of practice.<sup>9</sup> Favored by the advent of mechanisation, a precise definition of responsibilities and duties consolidated in the nineteenth century, emphasising the rupture between the "couples of antagonists" that had appeared earlier: "sensation et calcul, solidité et construction, tradition et innovation."<sup>10</sup> The processes that ultimately led to the overcoming of these theoretical, educational and professional barriers between engineering and architecture saw an acceleration during the Second World War and the global post-war context, eventually resulting in a wide range of interchanges between the two disciplines as well as in the eclipse of the Beaux-Arts-trained architect.

## Material Driving Forces: "Anxieties and Stimulations of the Post-war Period"

11. Boyd, "The State of Australian Architecture," 459.

12. Stuart McIntyre, "The Post War Reconstruction Project," in *The Seven Dwarfs and the Age of the Mandarins: Australian Government Administration in the Post-War Reconstruction Era*, ed. Samuel Furphy (Acton: ANU Press, 2015), 33.

With regard to the material forces driving this conciliation in the State of Victoria, Boyd hinted at the relevance of the historical context.<sup>11</sup> Boyd's "structural-functional idea," a manifestation of the "rapprochement", was at times an answer to the necessities of a nation which had to confront its post-war development vision with significant practical challenges. Victoria's immediate post-war context became a "playing ground" with strict economic and legislative rules. As Stuart McIntyre has noted, Australia's post-war "reconstruction" took the double meaning of "building again" and "building anew" - making an efficient transition to a peacetime economy and using the opportunity to pursue a "new order."<sup>12</sup> "Building anew" also had a literal meaning, as the nation required large volumes of new structures and infrastructure to sustain the economic and demographic growth it envisioned and to solve its existing housing insufficiencies. The professionals tasked with designing Australia's post-war cities had to deal with frequent shortages of construction material and with severe restrictions on its use. The economic climate resulted in an overall rationalisation of architectural design, in an embrace of functionalism, lean structural expression and, in some cases, of innovation and experiment (Figures 3-4). The single house, the factory, the church and other public typologies became the testing ground for an "engineered" approach towards architectural design - encouraging professional interactions and disciplinary hybridisations.

NOVEMBER 28, 1944 5



Henry Maitland Wilson inspecting a detachment of ratings on arrival in Greece. It has been announced that General Wilson has been appointed head of the Staff Mission to Washington, and Mr. Churchill's successor on military matters with President-succecession to the late Sir John Dill.—(British official photograph.)

### MATERIALS SHORT FOR DEHYDRATION HOUSE BUILDING ADVANCES

#### But Manpower is Chief Problem

The rate of progress in Victorian housing schemes is definitely governed by the amount of manpower that is to be made available for the production of the main essentials of construction such as bricks, timber, cement, tiles and plumbers' requisites. Reports and plans there are in plenty, but they are small consolation to the thousands of people who are waiting for houses or better accommodation. There are many problems associated with the shortage, but recent announcements that more manpower will be made available give some hope for relief.

A survey of the manufacturing field shows that stocks were never lower in Victoria than at present. For instance, out of 34 brick kilns in the metropolitan area only five are working, and only 200 men are employed where 1075 were engaged in pre-war days. Brick manufacturers are very much concerned at the low stocks in view of the urgent demand for housing.

A representative of the Victoria Housing Commission pointed out that the housing shortage (which has existed for years) is starting to exhibit. The necessity for grappling with the question is urgent, and it is required now—not by bureaucratic trifling with the subdivision of houses, but rather by amendment of building-control regulations in such a manner as would, during the continuation of the war, prohibit the erection, addition, alteration, or renovation of factories, picture theatres and the like, but permit the erection of dwellings only, at a cost not exceeding...

#### Importance in Front Areas

CANBERRA, Monday.—As a result of the remarkable developments of dehydration it was now possible for an ordinary transport plane to carry sufficient food to feed a battalion in a forward area for a week, said the Minister for Agriculture (Mr. Scully) to-day, when he opened Australia's first vegetable dehydration plant at Batlow, (N.S.W.).

Mr. Scully said Australia was producing about 400,000 lb. of dried vegetables from 1943 tons of fresh vegetables, and production aimed at for 1944 was 12,500,000 lb., all for essential purposes. Mr. Scully said the rate of reduction in the dehydration of vegetables varied between seven-eighths to twenty-three-fourths.

Vegetable processing was now absorbing a significant proportion—about 100,000 tons—of Australia's increased vegetable acreage. Large quantities of vegetables could now be processed as soon as crops matured, providing an important outlet for primary production.

Figure 3: The economic climate of the post-war period to a degree "prolonged" the challenges faced by the building industry during the wartime years, effectively encouraging design rationalisation, structural optimisation and experiment. "Materials Short for House Building," *The Age*, 28 November 1944, 5.

Needing mass production on a great scale to solve her post-war housing problem, Britain's Government has decided that new methods of building are necessary and that—

Experimental building is now attracting a lot of attention in Britain. In the summer of 1944 it was estimated that to make good the nation's housing deficit four million dwellings would have to be erected during the first ten years after World War II—and throughout the winter more houses have been damaged or destroyed daily.

Of the 1,000,000 building operatives on the pre-

## PREFABRICATION IS THE ANSWER

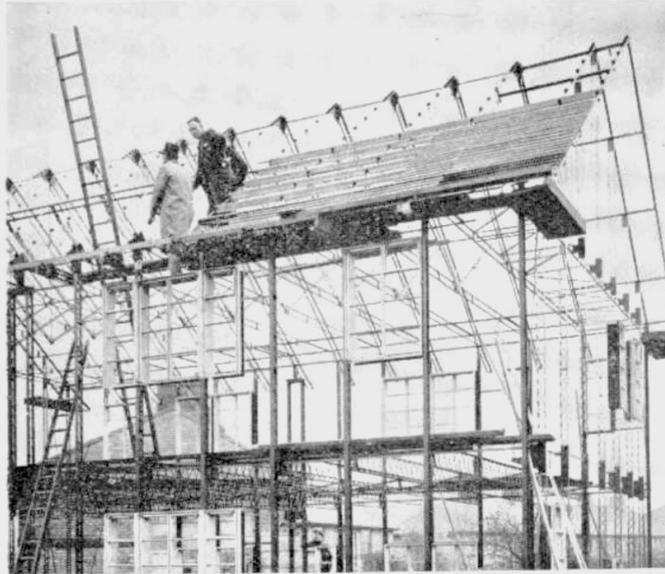
By F. R. S. YORKS, F.R.I.B.A.

Architect for the Braithwaite steel frame house, 1943-45, and Britain's Borough of Surbiton for post-war houses. Author of "The Modern House," "The Modern Flat," "The Modern House in England."

war strength, some 400,000 remain, and of these only some 7,000 are under 41-years-old. With this depleted labour force and a huge reconstruction programme of schools, hospitals and commercial buildings and the vast amount of repair and restoration work that will have to be done to make good the destruction due to bombing and the ravages of six years of neglect, it is obvious that

houses, which are the only type of building that can be mass-produced must be built by new and non-traditional methods. Without any supply problem it took 24 years to produce four million houses between the World Wars.

It was about two years ago, when the magnitude of the problem began to be felt, that industry began to give serious attention to



At left:  
City of Birmingham  
Experimental House  
Hills Steel Frame.  
Below:  
Left. — Braithwaite  
House in construction.  
Right. — Braithwaite House.

Figure 4: Francis R. S. Yorke, "Prefabrication is the Answer," *Building and Engineering* 38, no. 5 (May 1945): 22.

### Assessing The Relevance of War

13. Saint, *Architect and Engineer*, 273.

14. Jean-Louis Cohen, *Architecture in Uniform: Designing and Building for the Second World War* (New Haven: Yale University Press, 2011), 388.

15. Saint, *Architect and Engineer*, 184.

16. Mark Jackson and Stan Fung, "Years of No Significance: Architectural Professionalism in Australia during the two World Wars," in *On What Ground(s)? Proceedings of the Annual Conference of the Society of Architectural Historians, Australia and New Zealand, 1997*, eds. Sean Pickersgill and Peter Scriver (Adelaide: The Society, 1997), 114-115.

The direct involvement of some architects and engineers in wartime activities between 1939 and 1945 may have represented a form of collateral education that prepared them to face the challenges of the post-war period, as well as one that favored the "rapprochement" (Figure 5). During wars, Saint suggests, architects are generally eclipsed and engineers "come to the fore."<sup>13</sup> A technical-practical engineering approach to design proves successful in managing wartime construction tasks – after all, it is in the field of military construction that the first modern engineering schools have their roots. The architectural legacy of war, consequently, is not one that only involves physical structures and innovative wartime designs, but makes itself felt, as Jean-Louis Cohen writes, "in the more immaterial field of skills and experience"<sup>14</sup>. To designers, conflicts can represent great schools to learn "expedients."<sup>15</sup> The adoption of a scientific approach to problem solving (a sort of "managerial expertise" in architecture, to use Stan Fung and Mark Jackson's term<sup>16</sup>) played a particularly crucial role during World War Two and persisted during the post-war years worldwide.



Figure 5: John Lysaght Pty. Ltd. wartime advertisements highlight the conversion of major building industry companies to military construction and munitions industry tasks. Source: *Building and Engineering* 37, no. 7 (July 1944): 43.

17. Philip Goad and Julie Willis, "Invention from War: a Circumstantial Modernism for Australian Architecture," *The Journal of Architecture* 8, no. 1 (Spring 2003): 41.

18. *Ibid.*, 44.

Julie Willis and Philip Goad have demonstrated how these aspects apply to the Australian case as a consequence of the nation's involvement in the building of crucial infrastructure and structures that serviced the battles in the Pacific.<sup>17</sup> The influence of war, they suggest, has been overlooked in terms of the development of a peculiar post-war architecture scene in Melbourne, the city which hosted the headquarters of the Allied supreme military command in the Southwestern Pacific, of the US Army Forces in Australia and, meaningfully, of their Engineers' Section. The interactions between Australian designers and military engineering "fostered innovations, in terms of construction methods, structural experimentation and architectural practice, which had long-term effects on Australian design and its profession."<sup>18</sup> Australian architects were forced into a well documented wide range of different wartime experiences, which exposed them to construction processes and applications of technical *savoir faire*, at times influencing their post-war production.

### The Role of Tertiary Education

19. "Architectural Training: Ex-Servicemen at University," *The Age*, 13 July 1946, 5.

Academic architectural education in Melbourne contributed greatly to the disciplinary alignment. An increasing emphasis on technical subjects characterised architecture curricula at the University of Melbourne and at the Melbourne Technical College (MTC) during the post-war years. The reasons behind this transformation had to do with the academic institutionalisation of architectural modernism as much as they were of political nature. Victorian institutions acknowledged the importance of training technical professionals as an instrument to achieve their ambitious "post-war building programme"<sup>19</sup> and to facilitate the conversion of the wartime workforce back to civilian occupations. Among other things, the establishment of a new architecture professorship at Melbourne University, funded by *The Age* newspaper,

20. "The Age Chair of Architecture," *The Age*, 13 November 1945, 3.

reflected the generally perceived strategic role architecture played in post-war "reconstruction."<sup>20</sup>

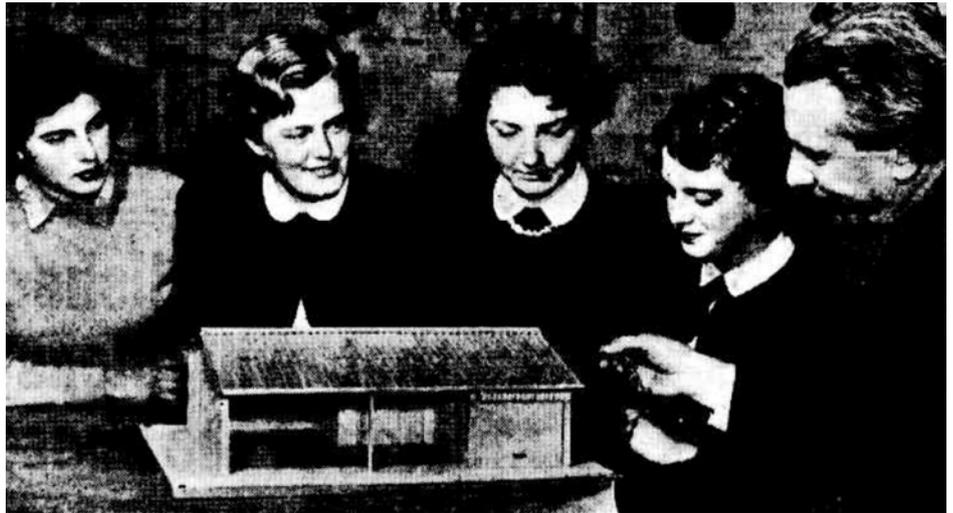


Figure 6: Austrian emigre architect Fritz Janeba, who had worked with modernist "pioneer" Peter Behrens before leaving Europe for Australia, revises design work of students Dorothy Webber, Gwynneth Brown, Nell Cussen and Janice McLean at the University of Melbourne, where he taught from the late 1940s to the early 1960s. Source: "Woman's Parade: a Lady with a Plan's as Good as any Man!," *The Age*, 29 October 1953, 9.

21. Philip Goad, "The Modern House in Melbourne 1945-1975," (PhD thesis, University of Melbourne, 1992), 3/86.

22. The University of Melbourne, *Handbook: Faculty of Architecture 1938* (Melbourne: Melbourne University Press, 1938), 39. The University of Melbourne, *Faculty Handbook, Architecture: Regulations, Details of Subjects and Information for Students 1948* (Melbourne: Melbourne University Press, 1948), 1-3.

23. Melbourne Technical College, *Prospectus 1948* (Melbourne: A. H. Massina & Co. Pty. Ltd., 1948), 78-79.

24. Turnbull, *Enterprise in Structure and Form*, 110.

25. The University of Melbourne, *Faculty Handbook, Architecture: Regulations, Details of Subjects and Information for Students 1949*, (Melbourne: Melbourne University Press, 1949), 24, 27.

Teaching bodies in Melbourne's architecture schools were significantly transformed, now featuring emigre lecturers who had worked with great modernist masters or graduated from leading European technical institutes (Figure 6). Brian Lewis, The Age Chair of Architecture and responsible for Diploma and Bachelor courses at Melbourne University, directly encouraged "the full embrace of a techno-scientific approach."<sup>21</sup> Inspired by the ETH School of Architecture, Lewis aimed to make the integration of design and construction subjects the foundation of his atelier courses; but the new technical "flavour" was not limited to design studios. Melbourne University's handbooks record a profound reorganisation within the Bachelor of Architecture between 1938 and 1948: technical subjects mushroomed and a new curriculum ramification allowed for ulterior incursions in scientific disciplines.<sup>22</sup> Late 1940s Diploma curricula at MTC contained noteworthy numbers of technical subjects as well.<sup>23</sup> These were all precious opportunities for architecture students to get in contact with exciting structural themes, as finely demonstrated by Peter McIntyre's acknowledgment of the influence on his work played by the lectures delivered by young engineer Norman Mussen at Melbourne University.

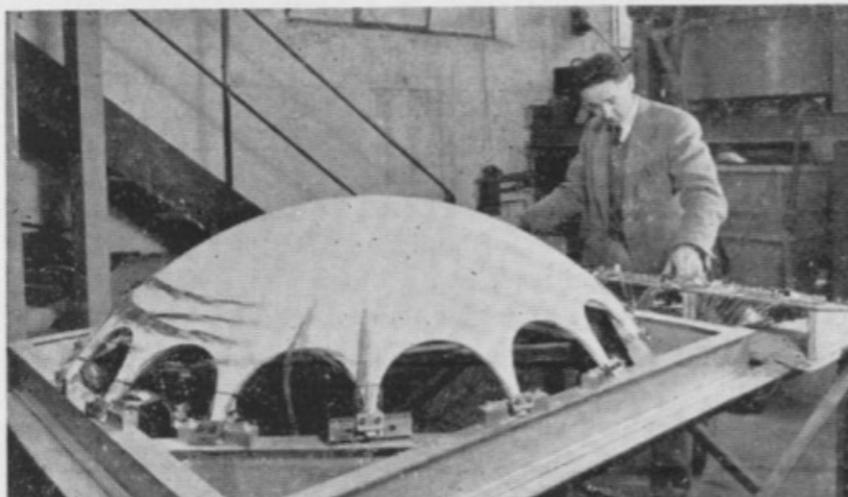
An ulterior confirmation of the relevance of tertiary institutions for the "rapprochement" is the fact that *Cross-Section*, the well-known bulletin which displayed the work of structurally experimental Melbourne architects and expressed "admiration for the structures of engineers," was a product of the Department of Architecture and Building at Melbourne University (Figures 7-8).<sup>24</sup> Hence, it should come as no surprise that around this time the same school also started adopting the written works of great modernist architects and theorists as recommended textbooks, from Giedion's *Space, Time and Architecture* to Le Corbusier's *Vers Une Architecture*.<sup>25</sup> Advocating the adoption of

26. Edouard Jeanneret, *Vers Une Architecture* (Paris: Les Editions G. Cres et C., 1924), VII.

an "Esthétique de l'Ingénieur" in its first page, Jeanneret's seminal text seemed to perfectly capture the world architecture students would be welcomed into at the crowded Nissen huts of the University's Mildura Branch.<sup>26</sup>



Figure 7: A full Cross-Section page dedicated to images of exciting construction sites, including those of the Olympic Pool and of the Hosies' Hotel. *Cross-Section*, no. 3 (January 1955).



This fibre glass model of the dome for the Academy of Sciences Bldg, Canberra (C.S April '57) was made by Melb Univ's engineering school for Prof A J Francis to confirm the theoretical design developed by W L Irwin & Assoc'tes, struct engineers. This is the first time in the world that such a shell dome will be built (a few similar examples have not had the cut outs at the perimeter so this confirmation was considered necessary. The completed design makes the surrounding concrete pool into a restraining ring girder, the ribs rising from it begin as 24" x 18" piers, with ten  $\frac{7}{8}$ " rods, but taper into the 2½-in shell of the domo.

Figure 8: *Cross-Section* recorded the extraordinary process that led to the construction of the Academy of Science dome in Canberra, highlighting the role played by engineers Bill Irwin and Arthur James Francis. *Cross-Section*, no. 59 (September 1957): 1.

### The Ascension of the "Engineer-Consultant"

The conciliation also stemmed from a transformed perception of the role of engineers within design processes. The overcoming of empirical building science and the need to scientifically calculate structures had resulted in the practice of involving structural engineers from the initial stages of the design process ("the earlier the better"<sup>27</sup>) and in the necessity to establish a dialogue with them.<sup>28</sup> This often multiplied the possibilities for structural designers (who gradually abandoned the role of "engineer-contractors" to embrace that of "engineer-consultants") to provide input on projects. Forms of collaboration, ranging from stable partnerships to occasional outside consultancy, became a "fixed pattern" within design processes at the dawn of the twentieth century. However, a true "turning point in the history of construction," with engineering and architecture finding a convergence, took place in the post-war period.<sup>29</sup> At times, Picon writes, architecture's symbolic and aesthetic discourses walk a "technical path" - and one can easily argue that the 1950s and 1960s were such a time.<sup>30</sup> The global post-war attraction to unconventional structures (of which non-linear concrete shapes were but one of the many kinds) meant that collaborations between architects and engineers could produce unprecedented

27. Saint, *Architect and Engineer*, 489-490.

28. *Ibid.*, 229.

29. Marko Pogacnik, "The Esthetics of Impersonal," in *La Concezione Strutturale: Ingegneria e Architettura in Italia negli Anni Cinquanta e Sessanta*, eds. Paolo Desideri et al. (Torino: Umberto Allemandi & C., 2013), 33.

30. Antoine Picon, "Industrialisation of the Building: a Technical and Political Project," in *Understanding and Conserving. Industrialised and Prefabricated Architecture*, eds. Franz Graf and Yvan Delemontey (Lausanne: PPUR, 2012), 26.

31. Philip Goad, "Shells, Spires and a Dome," in *Modern Times: The Untold Story of Modernism in Australia*, eds. Ann Stephen, Philip Goad, and Andrew McNamara (Carlton: Miegunyah Press, 2008), 143.

results. In a meeting point between aesthetics and technology, there was the feeling that the new curves drawn by engineers, scientists and machines could project the world into the Space Age. Australia was not immune to this fascination, and the country's "flirtation with concrete shell structures (...) was a brief and exultant explosion of experiment, as architects and engineers collaborated, as Boyd would have it, in an 'engineering of excitement'" (Figure 9).<sup>31</sup>



Figure 9: The first lines of Boyd's "Engineering of Excitement" hinted at the fundamental role played by the discipline of structural engineering within post-war modern architecture. Source: Robin Boyd, "The Engineering of Excitement," *The Architectural Review* 124, no. 742 (November 1958): 295.

32. Saint, *Architect and Engineer*, 367.

33. "A Three Sided Debate: Are We at the Beginning, Peak or End of an Architectural Era?," *Architecture and Arts*, no. 1 (July 1952): 10.

34. Walter Bunning, "The Future of Architecture: Changes as a Result of War," *Architecture* 29, no. 3 (March 1940): 48.

Engineers could "bring to fruition what the architect conceived"; at the same time, new technologies and radical structural concepts "obliged the architect to consult early on, and to heed the engineer's judgement."<sup>32</sup> A feeling of this type was expressed in 1952 by Melbourne-based architect Ray Berg, who called for the "harnessing" of specialisation to be a "potent force" for architects in an age when buildings had become so complicated that it would be "impossible for any one man to conceive a building in its entirety."<sup>33</sup> Berg's statements echoed earlier reflections by Walter Bunning, who had highlighted how architects had ceased being "the original artistic souls" to become "practical men" in response to the rapid developments of construction practices. Architects, Bunning argued, could not be perfect in every aspect of the profession, so engineers would play a large part in all contemporary building - and it was to "them" that architects owed the greater part of their progress.<sup>34</sup>

History has shown us how leading designers within partnerships can

35. Saint, *Architect and Engineer*, 491.

36. Antoine Picon, "Engineers and Engineering History: Problems and Perspectives," *History and Technology* 20, no. 4 (December 2004): 427.

be either architects or engineers and how, as a substantial result of the "rapprochement," professional boundaries can be evanescent. Nevertheless, on a general level it was not uncommon in the second half of the twentieth century for engineers to "play second fiddle" to architects, at times suggesting the image of the engineer as a professional whose job was to transform an "artist-architect's" visions into reality. Saint has argued that design partnerships seldom have been "affairs of equals" since most architectural jobs "come to architects first," setting the tenor of these collaborations in advance.<sup>35</sup> Picon has suggested that it might have been the twentieth century-professionalisation, diversification and growing numbers of engineers which gradually transformed them "into a massive labour force" and eroded their prestige of "engineer-artists."<sup>36</sup> Arguably, these aspects also affected the historiographical fortune of their profession.

### Media Representation of the "Nexus" between Architecture and Engineering

37. The final chapter of my Master's thesis is structured as a series of individual case studies on the early careers of meaningful Victorian post-war engineers and includes bibliographical references of this type for each of them. See: Francesco Maranelli, "A History of Melbourne Modern 1945-1956: Engineering the Great Post-war "Structural-Functional Idea," (Masters's thesis, Università Luav di Venezia, 2021), 143-234.

One might propound that the "rapprochement" had two principal manifestations: the transformation of the architect, who became a professional with greater technical skills, and the increase in the number of collaborations between architects and engineers. Whenever Melbourne's innovative architectural practices were advised by the best structural consultants of the period, the "emphasis on *firmitas*" was apparent and led to exciting outcomes. Although some significant Victorian engineers were acknowledged as true co-protagonists by the architects they worked with, these collaborations have often faded from memory through how the period has been studied. The recognition of the convergence of the disciplines of architecture and structural design in post-war Victoria has not been paralleled by an extensive study of engineers' careers and contributions. Scholarship has privileged the architect as the primary subject in the creation of the structurally innovative buildings of the 1950s. The engineer is only occasionally acknowledged, and cast in a support role. Such an approach leads to a partial understanding of this professional alignment and constitutes a simplification of the typically concerted nature of design processes. Researching how the "rapprochement" and the contributions made by engineers were portrayed within post-war media represents an interesting direction to facilitate the reconstruction of these important design collaborations. The pages of post-war architectural periodicals contain some of the most interesting evidence of the conciliation. Reviews published within journals such as *Architecture in Australia* or Peter Burns' Melbourne-based *Architecture and Arts* generally recognised consultants and contractors involved in architecture projects. Analysing the issues of these (and other) periodicals, one will notice Bill Irwin's and John Connell's recurring presence as the engineers for Melbourne's structurally innovative large buildings of the late 1950s, Frank Dixon's work as Yuncken Freeman's main engineer for projects where structural expression became a central design theme, and the striking industrial structures designed by the firm Mussen, Mackay & Potter.<sup>37</sup> It is within these journals that one can also find meaningful pieces of writing which directly reflected on "the melding of architecture and engineering." These include, for example, Berg's previously mentioned arguments for the "harnessing of specialisation,"

- 38. "A Three Sided Debate," 9-17. Norman Mussen, "There are Only Numbers," *Architecture and Arts*, no. 1 (July 1952): 23.
- 39. Roy Simpson, as quoted in "Some Recent Buildings of Importance by Yuncken, Freeman Bros., Griffiths and Simpson, Architects, Melbourne," *Architecture and Arts*, no. 30 (February 1956): 22.
- 40. *Cross-Section*, no. 1 (November 1952): 2.
- 41. *Cross-Section*, no. 3 (January 1953): 1.
- 42. *Cross-Section*, no. 176 (June 1967): 3.

Mussen's essays on the "beauty of numbers"<sup>38</sup> and Roy Simpson's call for a "seamless nexus" and "closest sympathy" between architecture and engineering - for the sake of economy, efficiency and good design.<sup>39</sup>

Since its very early days under Boyd's direction, *Cross-Section* highlighted the contributions to architecture made by Melbourne consultants, as well as by engineers in other States (the exciting works of Sydney's great Peter Miller were rarely left unnoticed). The first issue meaningfully adopted the title "architect-engineer" to describe Dixon and presented an anecdote on the structural design of his Balwyn house;<sup>40</sup> the third issue reported how Mussen discussed important themes of design, construction and economy at an architecture congress in January 1953.<sup>41</sup> Mussen's best works were recorded by the bulletin, which eventually paid homage to the engineer in 1967, few months after his passing, describing him as "one of those rare men who was not only capable of awakening an awareness of structure in the students he sometimes taught, but also an inspiring speaker on the whole field of architecture."<sup>42</sup> Many of Melbourne's best buildings, the editors added, were all the better for having Mussen as structural consultant.



Figure 10: Engineer Norman Henry Mussen actively participated in post-war "reconstruction" debates and had his opinions frequently published on Victorian newspapers and journals, suggesting that his contribution to Melbourne architecture transcended his professional profile of "consulting engineer." Source: Norman Mussen, "Why Homes Are Too Costly," *The Herald*, 28 June 1945, 4.

- 43. "House Costs Cut: Assembly Line System in Dandenong Factory," *The Herald*, 31 July 1953, 9.
- 44. "Functional Plan for Coburg Church," *Advocate*, 4 November 1954, 12. "Church for Holidays," *The Herald*, 22 September 1953, 3. *Plywood and Plywood Products* 1, no. 6 (November 1959): 24.
- 45. "Architect and Manager Confer," *Canberra Times*, 6 September 1963, 25.

Victorian newspapers often reveal further details on engineers' involvement in the production of the built environment which enrich our understanding of their role. In their pages we learn of Cyril Hudspeth's participation in a post-war prefabrication scheme which specifically aimed at cutting cost of house production,<sup>43</sup> of Dixon's early work as a consultant for a series of "unconventional" post-war churches in Victoria designed by Alan Robertson and the CONARG collective,<sup>44</sup> and of Mussen's contribution to Robert Warren and bus manufacturers Ansair Pty. Ltd.'s 1963 curious industrialised dwelling project.<sup>45</sup> Mussen's case is of particular interest. The engineer, a skilled communicator himself,

46. Norman Mussen, "Defence Works," *The Argus*, 8 February 1941, 6.
47. "Students' Section," *Journal of the Royal Victorian Institute of Architects* 35, no. 4 (September 1937): 171-172.
48. Including, for example, the spires of St. Patrick's Cathedral, the Century Building, the Russell Street Police Headquarters and the Rivoli Theatre.
49. Norman Mussen, "Height of City Buildings," *The Age*, 20 January 1945, 2. Norman Mussen, "This Much is Free," *The Age*, 1 May 1951, 5. Norman Mussen, "Why Homes Are Too Costly," *The Herald*, 28 June 1945, 4.
50. "Poor Building Regulations Restrict Housing," *The Age*, 2 February 1949, 4.
51. "£50m. Wasted in Building Industry Yearly," *Canberra Times*, 21 January 1954, 2.
52. I have included an extensive collection of newspaper articles on Mussen's youth and early works in my thesis. See: Maranelli, "A History of Melbourne Modern 1945-1956," 226-228.

was widely involved in post-war reconstruction debates. As early as 1940 he wrote an article advocating the use of reinforced concrete for structural frames instead of steel, which was a more expensive solution and should have been reserved for munitions industries.<sup>46</sup> Mussen had already presented the theme in a 1937 lecture delivered at the RVIA's Students' Society,<sup>47</sup> and frequently handled reinforced concrete in his early Melbourne works.<sup>48</sup> After the war, Mussen used newspapers to discuss building issues, such as the importance of lifting building height limits, the correct siting of houses and the challenges of price and quality of construction work – not without enraging more than one contractor (Figure 10).<sup>49</sup> In a *Small Homes Section* piece, "leading Melbourne consulting engineer" Mussen wrote about Australia's subpar building regulations.<sup>50</sup> Even later on, as he moved to Canberra, newspapers kept recording his opinions on the construction industry. In 1954 he suggested that Australia's building industry wasted 20% of its annual expenditure: reducing construction costs was now to be seen as "a moral act of benefit to Australia" for both builders and clients.<sup>51</sup> In Mussen's case, newspaper "representations" are also useful sources of biographical information: his numerous achievements as a tennis and bridge player, his lively social life in Melbourne, his graduation and his love for mathematics were all at some point documented by the local press.<sup>52</sup>

Although these constitute sources of great importance, it must be highlighted that both newspaper and journal pieces reviewing major post-war projects usually gave greater emphasis to the role played by architects; engineers were often depicted as marginal consultants, or their names did not appear – hence possibly feeding simplistic narratives that identify buildings as the products of architects' work only. Even *Cross-Section*, paradoxically, tended to acknowledge builders more consistently than engineers.

THE AGE, TUESDAY, DECEMBER 30, 1952

**TODAY'S SPECIAL PAGE**

**A**

**D**

able at this time... the objective... economic... threat... statement... There... can reduce... other... living... This implies... as an... (with... other... the past few... ent's views... of people... things... seem... will test... the... local... response... Commonwealth... and left... to... were... in... works... bears... in... State... to... do... what... is... It will be the work of... the... young... team... which... won... the... contest... John... and... Phyllis... Murphy... Peter... Mc... One of the assessors of the Olympic Pool Design competition.

**SUCCESS FOR ORIGINALITY**

**OLYMPIC POOLS BEST IN THE WORLD**

MELBOURNE will be proud of its Olympic Pools. The design which won the Australia-wide architectural competition will be discussed all over the world.

It will be a unique and exciting building which will probably arouse more interest here than any building since the Manchester Unity's Gothick tower changed the expression on the city's face.

IT will be one of the largest postwar buildings, costing £350,000 and seating 6000 overlooking the big twin swimming and diving pools. But size will not be the chief interest. This will be a building with enough strength of character to provoke general discussion purely on its architectural quality.

The pools competition is one which really had the desired result. It has uncovered imaginative local talent capable of presenting to the world that Australia is still advancing after all.

In a way this is a personal triumph for Mr. Eric Hughes, president of the

big buildings naturally tend to play safe, which has made progress painfully slow.

Architectural competition, the time honored device for giving young designers a chance to show their ideas, was the role for the buildings last century had but been out of favor lately.

the basic elements self-supporting by taking the spread upper ends of the existing floors and bring them together by means of the roof.

This meant, of course, special design within the beams and roof trusses to withstand the unaccustomed forces that were set up.

**BUT** the most spectacular effect, which

**EXCURSION INTO THE UNUSUAL**

**LETTERS**

**P.M.G. Chief & Telephones**

SIR — THE DIRECTOR-GENERAL of Posts and Telegraphs (Mr. G. T. Chippindall) is reported as saying ("The Age," 20/12) that he found Australian local telephone and phonogram services compare favorably with those in Great Britain.

It is apparent that Mr. Chippindall did not use a public phone box in Britain, or he would have noted that there are slides for change, slippers and pensets, so that payment for other than trunk calls can be made.

In Britain trunk calls and phonograms can be put through from any public call office, at any time. Where in Australia can this service be had? N.R. (Kew).



**CONGRATULATIONS FOR THE WINNERS.—Mr. John Murphy, Mr. Peter McIntyre, Mr. W. Irwin, Mr. Kevin Borland, Mrs. Phyllis Murphy and Mr. A. F. Cole. In the background is the winning design.**

**NEW DISHES REVIVE OLD FAVORITES**

**Successful Industry on Romantic Island**

TRISTAN da Cunha crayfish is making its appearance on the brightly colored menus of the famous Southern

Figure 11: Boyd, as one might imagine, explicitly acknowledged engineer William Lyle Irwin as part of the Olympic Pool competition's winning team even in his newspaper articles. Source: "Olympic Pools Best in the World," *The Age*, 30 December 1952, 2.

53. Peter McIntyre, personal communication with the author, 1 April, 2021.

54. *Cross-Section*, no. 41 (March 1956): 2. *Cross-Section*, no. 13 (November 1953): 3. *Cross-Section*, no. 30 (April 1955): 3.

55. "Olympic Pool, Melbourne," *Architecture and Arts*, no. 6 (June 1956): 25. "Peter and Dione McIntyre's House at Kew, Melbourne," *Architecture and Arts*, no. 6 (June 1956): 27. "Architect's Own House at Kew, Melbourne," *Architecture in Australia* 46, no. 1 (January/March 1957): 34.

To find a clear example of this, one should look no further than to how Irwin's contributions were represented. This is particularly significant since Boyd went as far as to "advertise" Irwin's importance for Melbourne post-war architecture on the *AR* and since Irwin's contribution constitutes a rare case where commentators of this historical episode have unequivocally acknowledged the role played by an engineer. Being able to conceive and handle "unconventional" alternative structural solutions, Irwin was at times the only Victorian engineer who could make what experimental architects formulated technically achievable (Figure 11).<sup>53</sup> A survey of Irwin's drawings and project records highlights the exceptional amount of relevant structures the engineer contributed to after his proverbial participation in the Olympic Pool competition alongside Borland, McIntyre and the Murphys. But his name was not necessarily mentioned every time one of those structures was reviewed by magazines or newspapers. In *Cross-Section*, Irwin's participation in many iconic designs, including the McIntyres' River House or Beulah Hospital, was not acknowledged.<sup>54</sup> A similar lack of recognition can be found in *Architecture and Arts* and *Architecture in Australia* articles on the River House and Olympic Pool projects, with his name being mis-spelled or omitted altogether (Figure 12).<sup>55</sup>



#### OLYMPIC POOL, MELBOURNE

**Architect: Borland, Murphy & McIntyre**

**Engineer: W. L. Erwin**

Fundamentally the structural problem is to support and provide a roof over the sloping seating. The seating is supported by sloping girders at 18 ft. centres. The girder can be supported by a vertical reaction from below in the conventional manner.

The vertical ties are anchored into the columns of the ancillary concrete structures below. The dead load on each anchoring column is considerably greater than the maximum tension in each tie.

The final structure, therefore, consists of two components—the seating and the roof. The resulting form is the minimum volume.

Figure 12: Irwin, shown proudly inspecting the construction of the Olympic Pool in the first illustration of this paper, had his name mis-spelled ("Erwin") in a review of the same project by the Melbourne-based magazine *Architecture and Arts*. Source: "Olympic Pool, Melbourne," *Architecture and Arts*, no. 6 (June 1956): 25.

## Conclusion

Given the general lack of historiographical material on the lives and careers of post-war engineers, newspapers and architecture periodicals might be a valuable option to fill some gaps, but one must be aware of their frequent "imperfection." Thus, locating the current position of post-war engineers' material archives would be a fundamental operation, although this frequently represents a challenge in itself.

As a study methodology, the "reconstruction" of engineers' biographies is not solely aimed at giving historiographical recognition to an often undocumented professional category. An ideal "section" through the career of a structural consultant will reveal an intertwining of secret threads, a sequence of recurring collaborations on projects and a portrait of the architectural circle the engineer worked with. It also contributes to shape richer, non-simplistic histories of the built environment which may better reflect the complexity of the processes that drive the production of architecture and the construction of cities. These operations can be of particular relevance for episodes characterised by an "emphasis on *firmitas*" and a marked professional "rapprochement" - such as the one presented here.

## Author's note

I am to formally thank historian Simon Reeves, architects Peter McIntyre and Anthony Mussen, engineer Phil Gardiner, Professors Philip Goad, Conrad Hamann, Marko Pogacnik, and, in particular, Dr. Paul Hogben for their precious support during the period I have dedicated to the study of Melbourne post-war architecture.

# The Other Architects Who Made London: Building Applications in Richmond 1886-1939

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## Keywords

London  
Housing design  
Victorian  
speculative housing  
Pattern books

## Abstract

Successive house building booms from the late 19th century until the Second World War shaped London's built environment decisively. In terms of the sheer size of area covered, the dispersed, suburban London of terraced, semi- and detached houses that we know today was to a large extent created then, and much of it was built speculatively - by private firms for an assumed demand. Despite this legacy, the questions of who those involved in the design were and how they did it is an under-researched topic surrounded by assumptions that are often difficult to substantiate. Speculative housing of the period has long been regarded as an example of vernacular architecture, made by craftsmen using standard templates, so-called pattern books, without architect's or otherwise professional involvement. The idea - in its extreme, 'ultra' form - is that designers were hardly necessary, as builders could simply copy house designs found in popular books and build from these. This idea of house building without architects or designers is also reflected in some of the literature but has been questioned more recently in academic research.

This paper will discuss the key occupations involved in the design and planning of speculative housing 1880s - 1939 through a survey of Building Applications for Richmond. These can only be understood in the context of its working world where boundaries between building and design roles were often less specialized than today. The evidence suggests that housing design was not as standardised as it appears, by simply reusing templates, but that much of it was in fact designed, usually for a number of dwellings at a time - by builders, architects and also by other professionals. These were the other 'architects' who made the London we know today.

## Introduction

1. Nikolaus Pevsner, *An Outline of European Architecture*, rev. edn (London: Thames & Hudson, 2009).

2. MacCormac Jamieson Pritchard, "Sustainable Suburbia: Work in Progress" (London: MJP, 2005).

3. Will Hurst and Marguerite Lazell, "Government Fails on Pledge for Good Design," *Building Design*, October 3, 2008, 1.

4. Edwardian or inter-war housing was not featured as one of the options in the survey. However, Victorian housing is illustrated by a photo of terraced housing which is probably Edwardian, because it features rectangular window bays. It seems to suggest that in the survey these two periods were perceived as one and the same.

5. Alison Brooks, Matthew Lloyd, and Alex Lifschutz, "Talk: My London Vernacular" (Centre for London's Built Environment, June 26, 2009).

6. Stefan Muthesius, *The English Terraced House* (New Haven: Yale University Press, 1982), 251.

7. This view was also reiterated at the aforementioned talk on the influences of housing history on London. Brooks, Lloyd, and Lifschutz, "Talk: My London Vernacular."

8. Richard Russell Lawrence, *The Book of the Edwardian and Inter-War House* (London: Aurum Press Ltd, 2009), 12.

9. Kitt Wedd, *Victorian Housebuilding* (Shire Publications, 2012), 18.

10. Donald J. Olsen, *The Growth of Victorian London* (London: Batsford, 1976), 158.

11. Process 1866-1914," *Construction History* 1 (1985): 13-24; J.W.R Whitehand, "The Makers of British Towns: Architects, Builders and Property Owners, c.1850-1939," *Journal of Historical Geography* 18, no. 4 (1992): 417-38; Michael Andrew Johnson, "The Sunderland Cottage: The Favourite and Typical Dwelling of the Skilled Mechanic," *Vernacular Architecture* 41, no. 1 (December 1, 2010): 59-74.

Architectural history is still often shaped by Pevsner's binary proposition of architecture versus building, of the cathedral versus the bicycle shed.<sup>1</sup> Under Pevsner's definition, speculative housing of the late 19th and early 20th century in London would be closer to buildings than architecture. Yet, its impact on the city has been significant and there is much to admire about it, both in terms of its urban design or arrangement, as well as its detailing and simple construction. The urban planning of Victorian and Edwardian housing aligns in many ways with ideas of a compact, walkable city.<sup>2</sup> The architectural quality of Victorian housing has also not been without controversy but even critics cannot deny its lasting popular appeal. Among architects today, Victorian housing has often been praised for its robustness, adaptability, and liveliness of design. In a survey among architects in the UK, 'more than half hailed the Victorian era for producing the greatest legacy'.<sup>3</sup> In comparison, only 3.5 % favoured recently built housing.<sup>4</sup> Prominent contemporary housing architects such as Alison Brooks also draw inspiration from 19th- and early 20th-century precedents for their own work.<sup>5</sup>

Despite its legacy, the question of who the designers of speculative housing of the period has still been surrounded by hard-to-substantiate assumptions. Muthesius points to this lack of research on 'the designers' in his book *The English Terraced House*.<sup>6</sup> London's speculative housing of the late 19th and early 20th centuries has long been regarded as an example of vernacular architecture, made by craftsmen using standard templates, so-called pattern books, without architect's or otherwise professional design.<sup>7</sup> Lawrence states, for example, that 'builders did not need architects because they could find designs in pattern-books and publications such as the *Illustrated Carpenter and Builder*'.<sup>8</sup> In *Victorian Housebuilding*, Wedd states that a 'second influence on mass-market house design was the absence of professional architects'.<sup>9</sup> Olsen echoes these views and explains that 'the design of speculative housing lay with the builders, whose views on architecture remained traditional'.<sup>10</sup>

This assumption of house building without architects has been questioned more recently in academic research. In particular Frank Trowell's research on speculative house building in Leeds, J.W.R. Whitehand's and C.M.H. Carr's research on Birmingham and London, M.A. Johnson's study of the 'Sunderland Cottage', and research by the Survey of London have shown that architects were in fact more involved in the design of speculative housing than previously thought.<sup>11</sup> Despite this new evidence, it still seems poorly understood who those responsible for the planning and design were. For one, there is a lack of research addressing this question in relation to London. Furthermore, the research to date does not seem to sufficiently consider the working world in speculative housing at the time. The literature is, for example, often focused on a distinction of architects versus builders, but neglects the involvement of other construction occupations. This perception seems to be based more on relationships in today's construction industry rather than a historical perspective.

This paper investigates the question of who designed speculative housing from 1886 to 1839 through a study of building applications that have recently become available for the London Borough of Richmond. In other words, this paper aims examine who these other, largely unknown 'architects' and designers responsible for a large part of London's residential fabric were. The study also helps to elucidate the working world of speculative housing of the period where boundaries between building and design occupations were often less clear. It shows that housing design was less standardised than often assumed, by simply reusing templates, but that the design drawings appear to have been created by builders, architects and by other professionals, usually for a number of dwellings at a time.

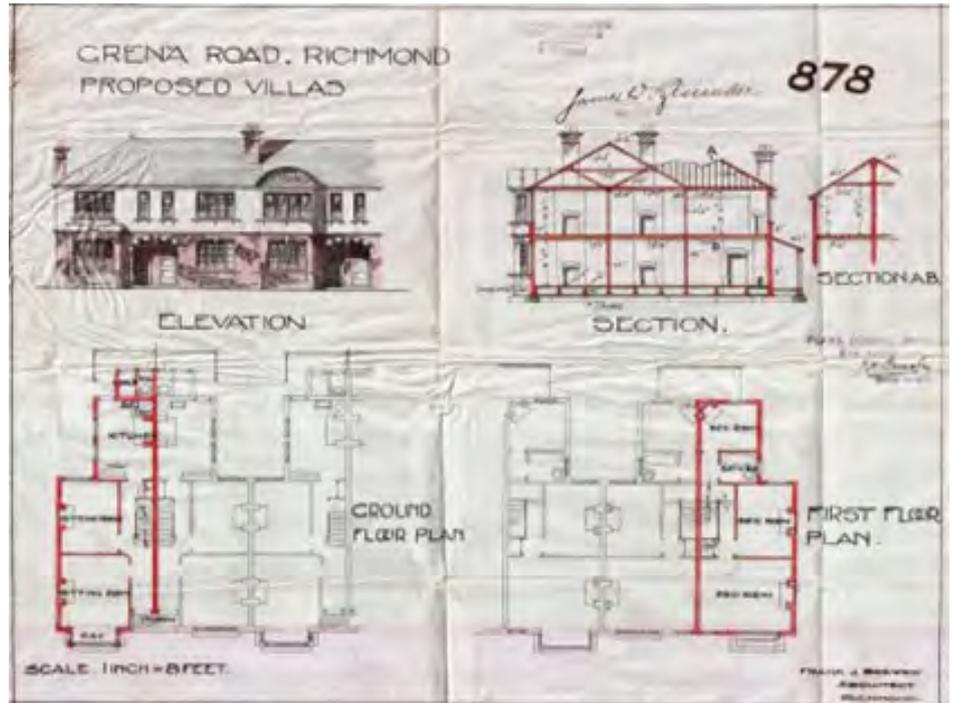


Figure 1: Application drawings for 12 terraced houses in Grena Street, 1901, by architect Frank J. Brewer, also a prolific local architect. In the 1910s, he formed Brewer, Smith and Brewer, who were responsible for around 200 applications in the area (Richmond Local Studies Archive, PLA/03468).

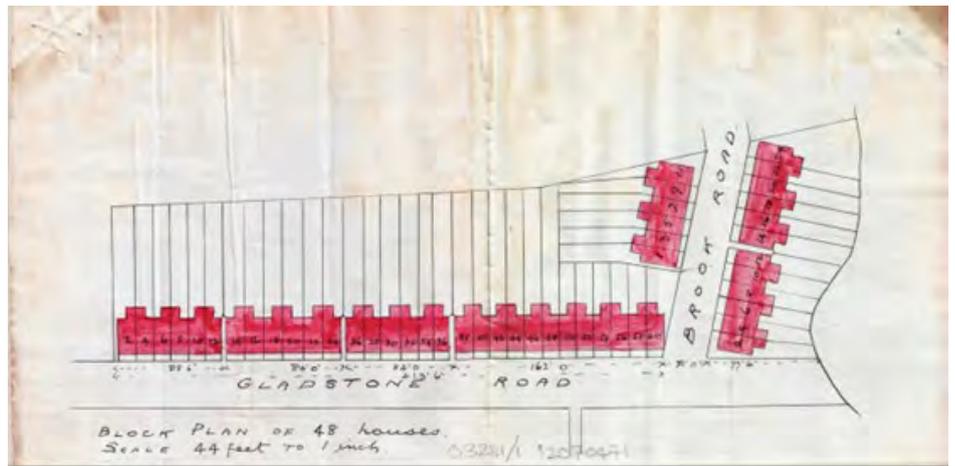


Figure 2: Block plan for a larger application of 48 houses, prepared by local surveyor Ernest Pennington, 1898 (Richmond Local Studies Archive, PLA/03468)

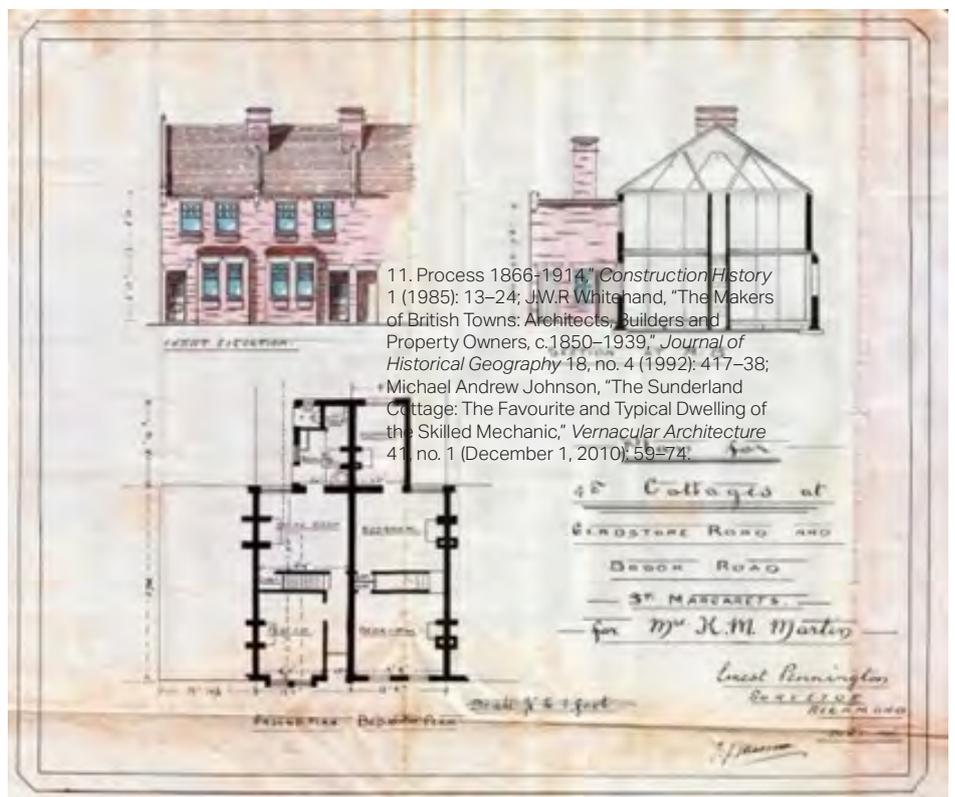


Figure 3: House design for same application by local surveyor Ernest Pennington, 1898 (Richmond Local Studies Archive, PLA/03468)

## Methodology and sources

12. Most of the application contain a completed application form, a block plan and design drawings of the houses at a scale of 1/8" to 1'-0" (close to metric scale 1:100, figure). Richmond Local Studies Archive, "Collection of Building Plans, 1878-1968," Richmond Local Studies Archive, accessed May 28, 2013, <http://www.calmview.eu/Richmond/calmview/>.

13. The boxes of the collection are in alphabetical order of street names. The boxes that were chosen have applications for streets starting with the letters A, D, E, F, K, L, M and S.

This study is based on the evaluation of a sample of building applications from 1886 to 1939, 205 in total, which are held at Richmond Local History Archive. Figures 1 to 3 show examples of drawings for houses that were included with many of the applications.<sup>12</sup> This collection of building applications has only recently been catalogued and was chosen because it is unusually comprehensive among those that survived in Greater London. To be representative, it was important that the sample applications would not all come from the same area.<sup>13</sup> Figure 3 shows the locations of the surveyed building applications, which confirms that the sample is evenly spread throughout what is

today's London Borough of Richmond. While there is scope for further research with a larger sample, this sample provided telling results and is the largest sample studied to date, as far as the author is aware.



Figure 4: Map of today's London Borough of Richmond. The pin markers show the geographical spread of the building application sample, 1886–1939 (www.maps.google.co.uk, Richmond Local Studies Archive).

Richmond cannot be considered typical for the whole of Greater London in every respect during the period, but for the purpose of identifying key occupations, the area covered is still sufficiently indicative for a wealthier growing Greater London suburb of the time. Table 1 shows that there were active speculative housing developments throughout the period, and that most of the surveyed applications in the sample were for terraced, semi-detached and detached houses. The borough is affluent on average, but it also comprises areas as diverse as Barnes, Sheen, Twickenham and Teddington, which each had their own local council then.

Table 1: Breakdown of sample by dwelling types and decades

| Dwelling type        | 1890s              |                 |             | 1900s              |                 |             | 1920s              |                 |             | 1930s              |                 |             |
|----------------------|--------------------|-----------------|-------------|--------------------|-----------------|-------------|--------------------|-----------------|-------------|--------------------|-----------------|-------------|
|                      | No of Applications | No of dwellings | %           | No of Applications | No of dwellings | %           | No of Applications | No of dwellings | %           | No of Applications | No of dwellings | %           |
| Terraced houses      | 13                 | 199             | 81%         | 18                 | 161             | 41%         | 9                  | 54              | 32%         | 5                  | 52              | 14%         |
| Semi-detached houses | 11                 | 42              | 17%         | 31                 | 162             | 42%         | 13                 | 81              | 49%         | 20                 | 161             | 43%         |
| Detached houses      | 5                  | 5               | 2%          | 19                 | 27              | 7%          | 17                 | 24              | 14%         | 12                 | 26              | 7%          |
| Tenements            | 0                  | 0               | 0%          | 3                  | 40              | 10%         | 0                  | 0               | 0%          | 2                  | 60              | 16%         |
| Flats                | 0                  | 0               | 0%          | 0                  | 0               | 0%          | 0                  | 0               | 0%          | 4                  | 73              | 20%         |
| Bungalows            | 0                  | 0               | 0%          | 0                  | 0               | 0%          | 6                  | 8               | 5%          | 0                  | 1               | 0%          |
| <b>Total</b>         | <b>29</b>          | <b>246</b>      | <b>100%</b> | <b>71</b>          | <b>390</b>      | <b>100%</b> | <b>45</b>          | <b>167</b>      | <b>100%</b> | <b>43</b>          | <b>373</b>      | <b>100%</b> |

14. Andrew Saint, "Whatever Happened to Jonathan Carr?," *London Journal* 12, no. 1 (1986).

To begin, it should be acknowledged that the occupations responsible for the design of speculative housing typically differed depending on the stage in the planning and design process. The first stage, the site layout of the housing, was often planned by a surveyor, usually for the purpose of selling the individual building plots at an auction (Figure 4). The next stage, the overall appearance of the houses, was designed by various occupations such as architects, surveyors, architect-surveyors, or builders. The following analysis of building applications focuses on this second stage of the design of the buildings. During construction, it seems to have been rare at the time for architects to be involved in speculative house building - not even in such a pioneering and high-quality speculative development as Bedford Park.<sup>14</sup> The detailed

15. David Kroll, "Speculative House Builders as Designers: The Case of the Reader Brothers 1898-1939 in Greater London," *Construction History*, n.d.

16. These main stages are reflected in literature of the time, and also in every estate development. See for example: Francis Howkins, *An Introduction to the Development of Private Building Estates and Town Planning* (London: Estates Gazette, 1926).

design seems to have been typically managed by speculative builders themselves or so-called builders' managers.<sup>15</sup> Some large house builders, such as Ideal Homestead, were an exception as they began to establish their own architects' department in the inter-war period.<sup>16</sup>

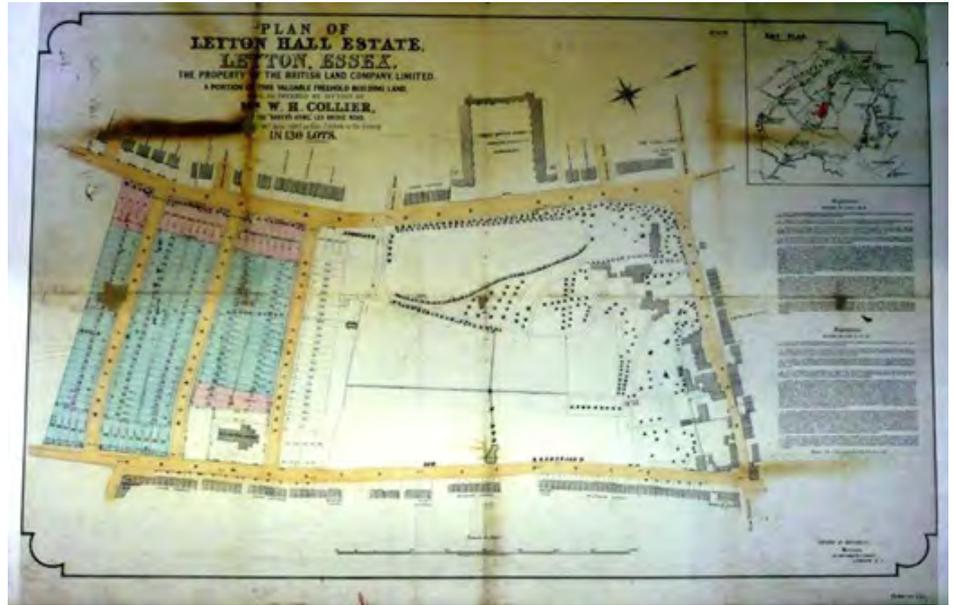


Figure 5: Auction catalogue map from Leyton Hall estate, Leyton, 1883 (Walthamstow Local History Archive, W72.2).

## Key Occupations

The analysis of this application sample shows that a large share of the housing, the largest overall share, 26% in total, was designed by 'architects', in terms of a firm or person that identified their occupation as such on the application and drawings (Table 2). The share of those describing their occupation as 'surveyor' is 4%. However, many of those with a surveying background would have described themselves as architects & surveyors for the purpose of these applications, which at 17% also constitute a significant proportion. Roughly half of the total submitted drawings, 47%, could clearly be identified to have been prepared by architects, surveyors, or architect-surveyors. The proportion of design drawings prepared by builders stands at only 9%. The 'Other' categories mean that it was not possible to clearly identify the occupation of those responsible for the design of the buildings. A proportion of those in the 'Other' category may also have been designed by builders, but it is not clear to what percentage. These results suggest that architects played a key role in the design of speculative housing 1886 – 1939 and at least indicates to what degree. The table, however, also shows that surveyors and in particular architect-surveyors, whose background and training could come from either profession, were equally important.

Table 2: Occupations responsible for the design of housing in Richmond, 1886-1939

| <b>Occupation</b>                      | <b>Application sample</b> | <b>Percentage</b> |
|--|---------------------------|-------------------|
| Architect                              | 54                        | 26%               |
| Architect & Surveyor                   | 34                        | 17%               |
| Surveyor                               | 9                         | 4%                |
| Builder                                | 18                        | 9%                |
| Other (without title) <sup>a</sup>     | 40                        | 20%               |
| Other (drawings unsigned) <sup>b</sup> | 50                        | 24%               |
| <b>Total</b>                           | <b>205</b>                | <b>100%</b>       |

Source: Sample of building applications held in Richmond Local Studies Archive (see list of applications in appendix)

<sup>a</sup>Application drawings are signed, but without occupation title. Most of these were prepared by or for the builder, but authorship is still generally unclear, and they have therefore been listed separately.

<sup>b</sup>Application drawings are unsigned and authorship cannot be established.

17. Mark Crinson and Jules Lubbock, *Architecture: Art or Profession?* (Manchester: Manchester University Press, 1994).

As telling this table is for the whole period, it does not, however, take change over time into account. Table 3 shows that there was significant change over the period and that the share of housing designed by architects and surveyors in the sample gradually increased from a total of 35% in the 1890s, to 39% in the 1900s, to 45% in the 1920s, to 66% in the 1930s. Architect's involvement also increased from 14% in the 1890s, to 20% in the 1900s, to 27% in the 1920s, to 42% in the 1930s. The share of architect-surveyors in the 1890s was as high as that of architects, which reflects that those involved in housing design in the late 19th century would have been prudent to call themselves 'Architect & Surveyor'. It would increase their potential client base, irrespective if their main source of income was surveying or architectural design. The changes apparent in Table 3 reflect a process of professionalization in house building over the period, and they also mirror the rise in professional qualifications and classroom education.<sup>17</sup> The high share of professionally designed housing in the 1930s shows that the division of architectural design as a specialist occupation separate from construction had already been taking place before the legal protection of the title 'architect' in 1938.

Table 3: Breakdown of application sample by occupation and decade

| Occupation                    | 1890s     |             | 1900s     |             | 1920s     |             | 1930s     |             |
|-------------------------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|
|                               | Sample    | %           | Sample    | %           | Sample    | %           | Sample    | %           |
| Architect                     | 4         | 14%         | 14        | 19%         | 12        | 27%         | 19        | 42%         |
| Architect & Surveyor          | 4         | 14%         | 14        | 19%         | 3         | 7%          | 9         | 20%         |
| Surveyor                      | 2         | 7%          | 0         | 0%          | 5         | 11%         | 2         | 4%          |
| Builder                       | 0         | 0%          | 4         | 6%          | 9         | 20%         | 4         | 9%          |
| Other (no title) <sup>a</sup> | 9         | 31%         | 19        | 26%         | 5         | 11%         | 3         | 7%          |
| Other (unsigned) <sup>b</sup> | 10        | 34%         | 21        | 29%         | 10        | 23%         | 8         | 18%         |
| <b>Total</b>                  | <b>29</b> | <b>100%</b> | <b>72</b> | <b>100%</b> | <b>44</b> | <b>100%</b> | <b>45</b> | <b>100%</b> |

Source: Sample of building applications held in Richmond Local Studies Archive (see list of applications in appendix)

Note: For the 1880s and 1910s, the sample is too small to draw meaningful conclusions and has therefore been omitted.

<sup>a</sup>Application drawings are signed, but without occupation title. Most of these were prepared by or for the builder, but authorship is still generally unclear, and they have therefore been listed separately.

<sup>b</sup>Application drawings are unsigned and authorship cannot be established.

18. These were the kind of architect's commissions for affluent owner-occupiers that Creswell describes in *The Honeywood File*. Harry B. Creswell, *The Honeywood File: An Adventure in Building* (London: Faber & Faber, 1929).

19. For more about the role of builders as designers of speculative housing, see also: Kroll, "Speculative House Builders as Designers: The Case of the Reader Brothers 1898-1939 in Greater London."

Relating the application sizes to occupations, further conclusions can be drawn about those responsible for the design of the dwellings (Table 4). The involvement of a professional was more common either for very small building applications for only one house, or for the largest applications. This may be because some of the applications for only 1 house would have been for owner-occupiers (admittedly not actually speculative), who were generally less experienced in house building and more likely to rely on experts to design the house for them.<sup>18</sup> Equally, an individual or firm building at a large scale, for example a whole estate, one or several streets, or a block of flats, would also be more likely to appoint a professional for the design. In fact, a total of 70% of applications for over 10 dwellings can be identified to have been submitted by architects or surveyors. Applications with a few houses, such as 2-5, would have been the typical size of building work undertaken by the small speculative builder; it is no coincidence that the identifiable share of builder-designed dwellings is the highest in this category (13%), with the unknown share in 'Other' likely to increase the real figure even further. These enterprising small speculative house builders were presumably less likely to engage a professional and were more likely to either rely on their own design and drawing skills, or to appoint a draftsman or relative for example.<sup>19</sup>

Table 4: Breakdown of sample by application size and occupation

| Occupation                    | Houses or flats per application |             |           |             |           |             |            |             |
|-------------------------------|---------------------------------|-------------|-----------|-------------|-----------|-------------|------------|-------------|
|                               | 1                               |             | 2 to 5    |             | 6 to 9    |             | 10 or more |             |
|                               | Sample                          | %           | Sample    | %           | Sample    | %           | Sample     | %           |
| Architect                     | 19                              | 32%         | 16        | 19%         | 8         | 33%         | 9          | 26%         |
| Architect & Surveyor          | 8                               | 14%         | 7         | 8%          | 5         | 21%         | 14         | 41%         |
| Surveyor                      | 1                               | 2%          | 6         | 7%          | 1         | 4%          | 1          | 3%          |
| Builder                       | 4                               | 7%          | 11        | 13%         | 2         | 8%          | 1          | 3%          |
| Other (no title) <sup>a</sup> | 6                               | 10%         | 26        | 31%         | 2         | 8%          | 5          | 15%         |
| Other (unsigned) <sup>b</sup> | 21                              | 36%         | 19        | 22%         | 6         | 25%         | 4          | 12%         |
| <b>Total</b>                  | <b>59</b>                       | <b>100%</b> | <b>85</b> | <b>100%</b> | <b>24</b> | <b>100%</b> | <b>34</b>  | <b>100%</b> |

Source: Sample of building applications held in Richmond Local Studies Archive (see list of applications in appendix)

<sup>a</sup>Application drawings are signed, but without occupation title. Most of these were prepared by or for the builder, but authorship is still generally unclear, and they have therefore been listed separately.

<sup>b</sup>Application drawings are unsigned and authorship cannot be established.

The occupations involved in the housing in Richmond were also related to where their business was based (Table 5). Those businesses listed on the application form as 'architects' that were based in central London, 17% of the applications, were almost always architects or surveyors, usually registered with a professional body, rather than builders or amateur architects. However, the majority of those listed as 'architect' on the application form, 49%, were based locally. 12% of the businesses were spread around other areas of today's Greater London with only one outside. The impression that speculative house building of the period was largely a village industry seems to also hold true for the design of the housing.

Table 5: Business locations of those acting as 'architects' on application sample

| Business location           | Number of applications | Architects/Surveyors <sup>a</sup> |
|-----------------------------|------------------------|-----------------------------------|
| Local <sup>b</sup>          | 102                    | 51                                |
| Central London <sup>c</sup> | 34                     | 31                                |
| Other non-local             | 23                     | 14                                |
| Unknown <sup>d</sup>        | 46                     | 0                                 |
| <b>Total</b>                | <b>205</b>             | <b>96</b>                         |

Note: Table shows all those who filled in their name on the application form under the heading 'architect', even if this was not their occupation, or if they would not generally describe their occupation as architects

<sup>a</sup>Column shows only those businesses that clearly identified themselves by title as Architect, Surveyor or Architect & Surveyor on drawings or application

<sup>b</sup>Businesses based in or within 2 km of today's LB Richmond

<sup>c</sup>Businesses based in or within 2 km of the City of London or Westminster

<sup>d</sup>No address available

## Limitations and Complicating Factors

This survey of building applications provides an overview of key occupations involved in housing design at the time. The reality of the working world at the time, however, was more complex than this survey may suggest at first glance. The boundaries between occupations were generally less clearly defined than today. The design stage could not always be clearly separated and attributed to a specialist occupation

and involved reusing, adapting, and collating information into a form comprehensible to local authorities, buyers, and builders.

20. For more about the role of the architect-surveyor, see for example: David Kroll, "Architect-Surveyors as Designers of Speculative Housing: The Case of Norfolk & Prior 1901–1923," *The London Journal*, 2017.

The fluid boundaries between occupations working in housing construction and design are also reflected in the letterheads of correspondence sometimes attached to the building applications. Figure 6 shows an example of a local business, Edwin Evans & Sons, who combined the role of surveyors, auctioneers, estate agents and valuers with providing an architectural service to design the houses. The planning of housing estates and designing houses was part of the traditional role of surveyors as land agents, who were often responsible to design and oversee the construction of farm buildings for example. The letterhead in Figure 7 shows an example of a builder, W. H. Pecover, who also provided drawings and specifications for his own work, essentially acting as his own architect. Figure 8 shows a letterhead from a prolific local architect R.B. Rowell (1875–1966) who was responsible for the design of several hundred houses and entire streets in the area. He often described himself as architect & surveyor, rather than simply as architect, presumably to increase his client base.<sup>20</sup>



Figure 6: Letterhead of Edwin Evans & Sons, an example of a business combining varied services, 1923 (Richmond Local Studies Archive, PLA/05306).



Figure 7: Letterhead from a building application submitted by a builder who also provided architectural services, such as plans and specifications, as indicated on the letterhead (Richmond Local Studies Archive, PLA/05304).

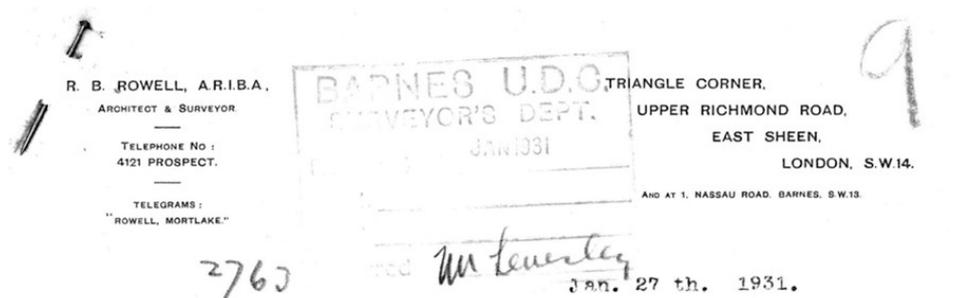


Figure 8. Letterhead by Reginald B. Rowell (1875–1966) who was the most prolific architect in Richmond in the first half of the twentieth century. His work was largely residential, much of it for speculative builders, but he also designed the Chapel for East Sheen Cemetery, 1906, and the Picturedrome cinema in Sheen Lane, 1910.

As evident in these building applications, drawings were widely used for the houses and had become part of statutory requirements, whether they were prepared by the builders themselves, or by a surveyor, architect, or draftsmen (e.g. Figure 9). It is still conceivable that some houses were built with only very basic drawings or sketches, or by copying from published examples, but this is difficult to verify. While drawings were used and often included in the applications, it can also be assumed that design continued during construction and that details were influenced by available building parts and by agreeing details with trades such as plasterers or carpenters.

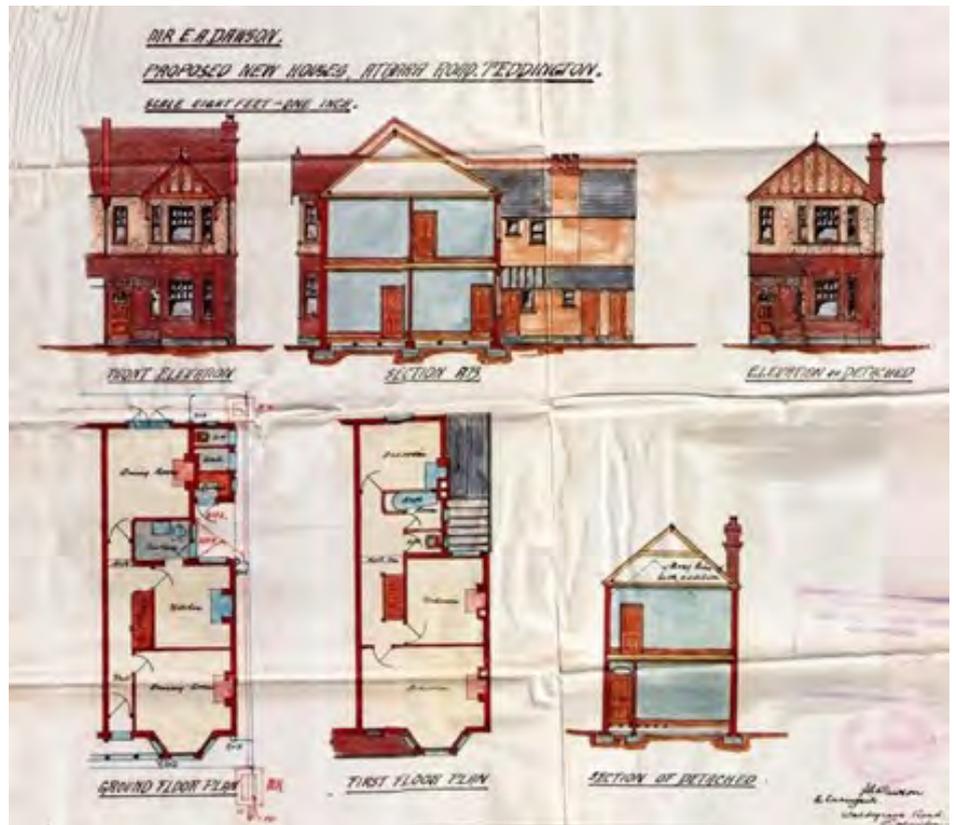


Figure 9: Drawing by builder-architect E.A. Dawson, based in Teddington, for terraced and detached houses in Atbara Road, 1904. (Richmond Local Studies Archive, PLA/00175).

## Conclusion

This survey of a building application sample helps to identify occupations involved in the design of speculative housing at the time. This survey can be seen as part of a larger body of emerging research that suggests housing of the period was based on design drawings rather than simply built from reference books. The sample also confirms that architects contributed to the design of housing during the period. Additionally, the study shows that surveyors played an important role, and even more so the crossover occupation of architect & surveyor. The change over time in the sample aligns with a general process of professionalisation at the time, with the share of architect- or surveyor- designed housing increasing steadily throughout the period. Furthermore, the sample suggests that the scale of house building had an impact on which occupations were involved in its design. Small speculative builders constructing a few houses at a time were more likely to prepare their own drawings. Professions were more involved at a large scale, or at the scale of only one house. It is also interesting to note that the firms were largely based locally. The share of architects and surveyors, however, was the highest for those based in central London.

The reality of typical speculative housing design of the period appears to be somewhere in between popular assumptions and two 'ultras' - somewhere in between the idea of the master builder, at one extreme, who miraculously constructed a house without drawings, only based on his superior expertise or with a pattern book as a guide, and, at the other extreme, an exclusively architect-led design with the builder simply executing instructions from drawings.

There is still much scope for further analysis of building applications, of a larger sample for example. And overall, there is also much scope for case study research of estates and housing developments to better understand the planning and design processes of the time. The case studies that have been undertaken so far show that the planning process was more carefully considered than often suggested in the literature.

# The Advent of Modern Construction Techniques in Iran: Trans-Iranian Railway Stations (1933-1938)

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## Keywords

Trans-iranian Railway  
Modern materials and techniques  
Architecture of Railway Stations  
Western Educated Architects  
Kampsax

## Abstract

It was only in the early 20th century that the concept of 'architect', as defined in Europe, was introduced in Iran. During the nineteenth century, Iranian architects were traditional master builders (*me'mars*) who would learn architecture after years of working with a master. This unique change in the conception of architecture in Iran took place during the interwar period. In 1926, when Reza Shah founded the Pahlavi dynasty, his policies toward rapid modernisation transformed the way architectural design and practice was performed in Iran. Among Reza Shah's earliest programs was the construction of numerous railway stations, extended from north to south, and for that, he invited Western-educated architects and European companies to Iran. The architecture of railway stations became one among the earliest examples of Iranian modern architecture, leading to the introduction of modern materials such as reinforced concrete to Iran. By considering Reza Shah's nationalist policies and progressive agenda, this article investigates the architecture of railway stations, illuminating how their construction paved the way for the arrival of modern architecture and the development of construction technology in 1930s Iran.

## Introduction

1. Bahram Rastin. Tarikh-E Haml\_O Naghl, "History of transportation". *Journal of Economics*. 18 (January/February 1987): 7.

2. Patrick Clawson, "Knitting Iran together: the land transport revolution, 1920-1940", *Iranian studies* 26, no. 3/4 (1993): 235.

3. "Trans Iranian railway, 1927-38". *Journal of the Ministry of Transportation*, (1939): 17-26.

4. Rastin. "History of transportation", 8.

One of the major effects of technological progress was a change in the mechanisms of transportation in Iran<sup>1</sup> When Reza Shah seized power, he realised that the lack of a proper transportation system was a major obstacle to Iran's economic prosperity. Much of the country was sparsely settled; the major cities were hundreds of kilometres apart, with some roads running through inhospitable deserts. The population centres were separated from the oceans by high mountains. There were no rivers suitable for transportation over any distance, and transport was overwhelmingly by land through difficult terrain.<sup>2</sup> Also, all roads connecting major Iranian cities were unpaved, and the main means of transportation was by animals or carriages drawn by animals. Passing along these roads would be impossible during rain with these primitive means of transportation. Starting from the seventeenth century, Iran's geographical and environmental position on the one hand and the long distance between cities and markets on the other, necessitated a shelter for caravans and passengers and a network of caravanserais was constructed. In the Qajar era (1785-1925), traditional means of transportation continued to dominate Iran, and caravanserais were still serving as stations for passengers. In this period, with the expansion of sciences and technology from Europe, a new transportation system was introduced to Iran. Driven by the political ties between England, and Russia, as well as the economic benefits of the railway, Iran served as a bridge connecting the East to the West. The colonial powers began to entertain the idea of railway construction and gaining a concession from the Iranian state. However, in that period, a couple of factors hindered the construction of the railway. First of all, Russia and England were always competing against each other, thwarting any attempt to construct a railway by the other power in Iran. The second major barrier was the natural features of the Iranian landscapes, for no matter where the railway construction was initiated, it would face obstacles such as impenetrable mountains, large rivers, large valleys and deserts. Therefore, advanced technical and industrial expertise and vast financial resources were thus required to overcome those obstacles.<sup>3</sup> It was only through the foundation of the Pahlavi dynasty – simultaneous with the establishment of the postal system and telegraphy – that the establishment of roads and railways of an acceptable quality and roadbed was initiated in Iran.<sup>4</sup>

5. As violet conolly stated, all modern industries in Iran could be traced to the rise of the present Shah in 1926, and the direct outcomes of his initiatives. V. Conolly. "The Industrialization of Persia", *Journal of the Royal Central Asian Society* 23. 3 (1935): 454-463.

6. V. Conolly, "The Industrialization of Persia", 455-456.

Along with the rise of Reza Shah in 1926, there emerged a strong desire to modernise and industrialise the country. Inspired by the reforms of Mustafa Kemal Atatürk in Turkey, Reza Shah declared that modernisation along Western lines was the only strategy to develop the country. To him, the success of Iran was largely dependent on the adoption of modern technologies and the eradication of the prevailing traditional (Islamic) culture.<sup>5</sup> The Shah displayed a propensity for the products of the machine age, such as railway transport, mining equipment, electric lighting and power stations all of which had been inaccessible in Iran prior to his ascent to the throne. He was committed to bringing as many of these modern technologies to his country, and for that purpose, he placed the construction of the Trans-Iranian Railway project among the main programs of reform.<sup>6</sup>

7. M. Reza Ghods, "Government and Society in Iran, 1926--34," *Middle Eastern Studies* 27, no. 2 (April 1991): 219- 230.

8. Amir Bani Mas'ud, *Iran Contemporary Architecture* (Tehran: Honar-e Memari-e Qarn Publications, 2015) 185

9. See Ghods, Government and Society in Iran, and Szczepan Lemańczyk, "The Trans-Iranian Railway – History, Context and Consequences," *Middle Eastern Studies* 49, no. 2 (2013): 237-245.

10. T. Cuyler Young, "The Problem of Westernization in modern Iran", *The Middle East Journal* 2, no.1, (january1948): 53

11. "Trans Iranian railway", 39-41 & 59-65.

One among the chief measures adopted by Reza Shah to modernise Iran and connect its cities was to finalization of the unfinished railway project, known as 'the pet project of the Shah.'<sup>7</sup> For whom it was of great national and political significance. While its existence was a symbol of the new Iran (Iran-e novin), lack of an operating train network was deemed to be an underlying reason for the country's backwardness.<sup>8</sup> In addition, it was of great economic advantage to the person of the Shah. While connecting the eastern and western borders of Iran was of higher economic benefit, Reza Shah decided to locate both termini on Iranian soil, thereby connecting the Caspian Sea to the Persian Gulf by a north-south line. The direction of this line had some personal benefit for the Shah. He could suppress possible revolts by moving his military forces quickly from south to north, but it was also through the railway that Reza Shah could transfer the products of his northern lands to the south for export which made the Shah richer and the villagers poorer.<sup>9</sup>

The construction of the Trans-Iranian railway started in 1927 but intensified in the early 1930s when the state recruited a Danish company in 1933 to complete the construction in around five years. The project was constructed at the cost of \$125,000,000, and was primarily financed domestically through the imposition of high taxes on sugar and tea.<sup>10</sup> The Ministry of Transport proposed several destinations. Eventually, a north-south line connecting Bandar Shah (Bandar Torkman) to Bandar Shahpour (Bandar Emam Khomeyni) was considered the most appropriate – a decision in line with the Shah's objective to reduce foreign interventions within the country (figure 1).<sup>11</sup>

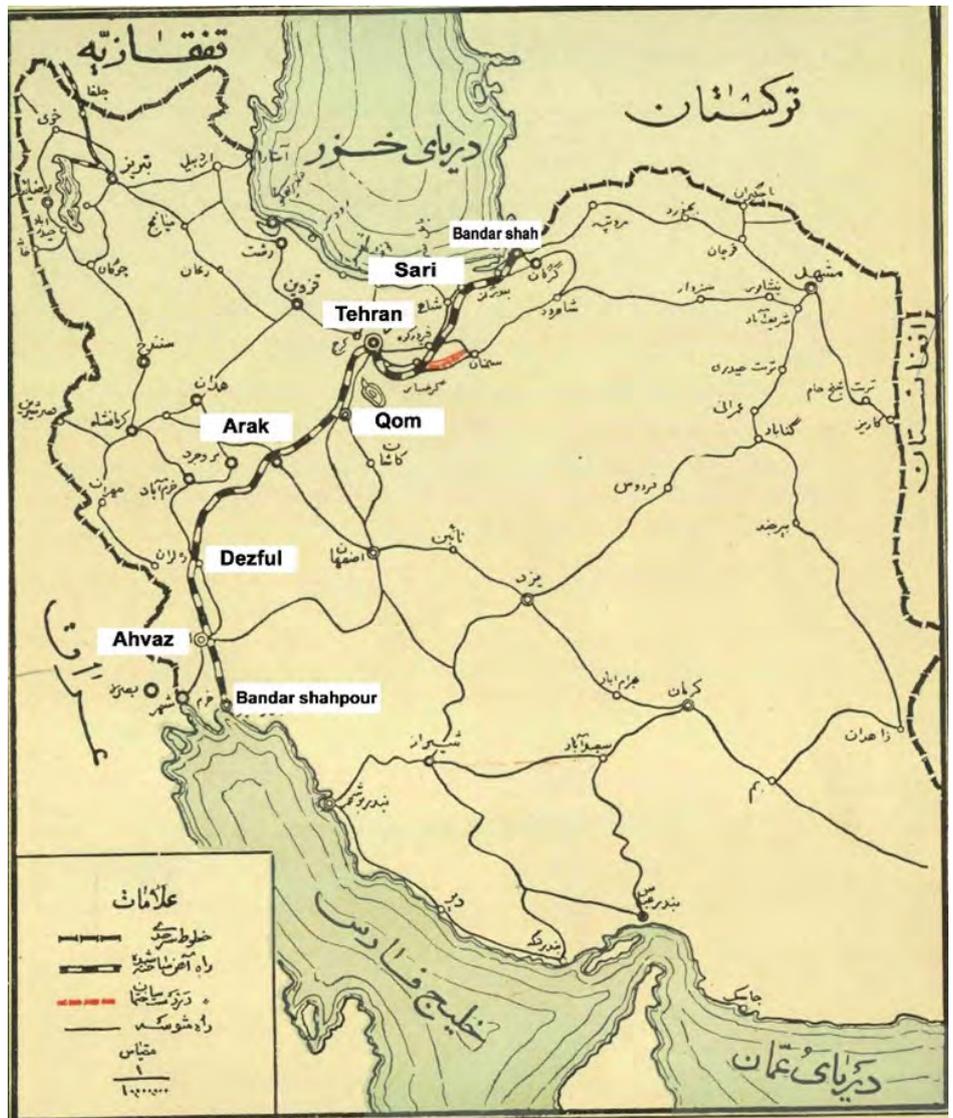


Figure 1: the Trans-Iranian Railway route extending from north to south. Rah ahan sarasari Iran 1306-1317 (Trans-Iranian Railway 1927-38) (Tehran: Ministry of Transportation, 1938), 10. The image was modified by Golshan Moghassemi.

Construction of the Trans-Iranian railway exerted a considerable influence on the country's building industry, introducing the use of modern technology and materials, and in the process, substituting the Iranian vernacular architects (*Memar*) with Western-educated architects. The railway company, moreover, imported Western architectural styles, and contributed to the emergence of modern architecture of an Iranian expression within the country. In the following sections, features of railway station architecture will be explored, and the importance of the Trans-Iranian Railway project in the evolution of architectural design and construction in Iran will be clarified.

### From Iranian Vernacular Architect (*me'mar*) to Western Educated Architect

In the vernacular architecture of Iran, the term "architect" (*me'mar*) referred to whoever learned design and construction under the apprenticeship of an *ostad* (master) without receiving any formal

12. Peyman Akhgar, "The École des Beaux-Arts and the Advent of Modern Architecture in Interwar Iran", *the 35th Annual Conference of the Society of Architectural Historians of Australia and New Zealand*, Victoria University of Wellington 4—7 July 2018: 3.

13. Due to the abundance of construction projects and lack of domestic expertise, a majority of civil projects were outsourced to European engineers especially Russian and a handful of projects were undertaken by Iranian architects, Bani Mas'ud, *Iran Contemporary Architecture*, 185.

14. Trans Iranian Railway, 40- 41.

15. Steen Andersen, "Building for the Shah: Market Entry, Political Reality and Risks on the Iranian Market, 1933–1939", *Enterprise and Society* 9: 4 (Cambridge University Press December 2008): 645, doi:10.1093/es/khn046

16. Andersen, "Building for the Shah", 645.

17. Conolly, "The Industrialization of Persia" 457.

18. Andersen, "Building for the Shah", 645.

19. The manuscript by Jørgen Saxild published in the Kampsax Company's 25 years' jubilee book. Kampsax Archive. Andersen, "Building for the Shah", 645.

education.<sup>12</sup> In the Pahlavi era, however, following the government's modernisation agenda, Iranian students were sent to Europe to study architecture. At the same time, foreign architects and companies began travelling to Iran to assist in constructing its modern appearance.<sup>13</sup> The earliest foreign companies travelling to Iran were the ones involved in the construction of the Trans-Iranian Railway. Among those companies that directed the construction of the Trans-Iranian Railway project was the Danish company of Kampsax. This consortium, which had already successfully established a railway in Turkey, proposed a plan to construct the Trans-Iranian Railway. The proposal was endorsed, and Kampsax established its office in Iran in 1933.<sup>14</sup>

Kampsax supervised the quality of projects based on some guidelines ordained by the Iranian government. The main provision involved the transfer of responsibility by the Iranian government to Kampsax about the complication of all technical and design for the railway workforce. Kampsax also managed the consortium's call for tenders for different parts of the railway construction and the general supervision. Additionally, the company was the advisor of the Iranian government on the purchase and sale of materials required for the railroad – ranging from locomotives to dynamite. Finally, Kampsax undertook to complete the northern and the southern railways in four and six years, respectively.

The Kampsax commenced its projects in the north and south of Iran by employing European engineers (Table 1).<sup>15</sup> Swedish engineers were mostly working in the north, while Americans worked in the south. The engineers in charge of the construction project were chiefly Danes, along with a handful of Swedes and Norwegians.<sup>16</sup> The contractors were mainly Italians (approximately a thousand Italian specialists, masons and workers came to Iran in the 1930s).<sup>17</sup> However, only a handful of Iranian engineers, all recently graduated from abroad, were qualified enough to join the Kampsax organisation, while their responsibilities were mostly limited to the supply of cheap labour. Still, Kampsax executive directors considered themselves as pioneers of technical and educational modernisation in Iran.<sup>18</sup> As Saxsild, a founding partner of Kampsax wrote in an official log of the company:

"Kampsax left its mark on Iran not only directly by completing the Railway but also indirectly. The easier parts of the work on the Railway were carried out by native construction companies that were formed for the occasion and came, bit by bit, to learn the arts of the trade. It was of great importance for the country to establish a native engineering profession that could later take on whatever work might come along. It was no less important that the Iranian construction workers, who did not know the first thing about modern building methods before Kampsax arrived, went through schooling in their trade by the thousands under the supervision of foreign workers, so that Iran now has a qualified construction workforce that is familiar with and trained in modern construction methods. For its part, the government followed the Scandinavian approach very closely and this has left a permanent mark on all sectors of civil administration."<sup>19</sup>

Kampsax's activities eventually led to the foundation of national civil

companies in Iran. During this period, students who had been sent abroad by the government to study engineering came back home and launched their own architectural and construction offices. By drawing on experiences of designing and constructing the Trans-Iranian Railway project, they were able to undertake some massive projects for design of important government buildings in Iran, such as banks, museums and ministries, and significantly contributed to changing the Iranian landscape. Influenced by the modernisation movement in Europe and Reza Shah's nationalist policies of forming a new Iran, by the late 1930s, the bulk of new buildings were constructed in accordance with the prevalent modern language while being considerate of creating a unique national style.<sup>20</sup>

| Names of Contractors for the Northern Railway Line |   |              |   |                |                                    |
|--|---|--------------|---|----------------|------------------------------------|
|  | Construction section<br>From Bandar-e Torkman |              | Contracting<br>company  | Nationality    | Manager(s)                         |
|  | From kilometer                                | To kilometer |   |                |                                    |
| North 6  | 192/500                                       | 202/200      | Angiolini Balocha<br>Company  | Italy          | A. Balocha                         |
| North 7  | 202/200                                       | 212/500      | Angiolini Balocha<br>Company  | Italy          | A. Balocha                         |
| North 8  | 212/500                                       | 220/080      | G. R. Pizzagalli  | Italy          | Pizzagalli                         |
| North 9  | 220/080                                       | 231/300      | Metora sacoprezia<br>Company  | Italy          | Zervaso                            |
| North 10   | 231/300                                       | 237/800      | Metora sacoprezia<br>Company  | Italy          | Zervaso                            |
| North 11   | 237/800                                       | 249/000      | Bruder Rodlich  | Czechoslovakia | Gruiber                            |
| North 12   | 249/000                                       | 266/100      | Neka Company  | Iranian        | Shahab<br>Khosravani and<br>Panahi |
| North 13   | 266/100                                       | 282/000      | Kavosh Railway  | Iranian        | Abbas Aria and<br>Reza Ghaffari    |
| North 14   | 282/000                                       | 298/750      | Beton   | Iranian        | Jafar Jafari and<br>Leon Maleki    |
| North 15   | 298/750                                       | 315/000      | Hedayat Kalantari   | Iranian        | Eng. Hedayat<br>Kalantari          |
| North 16   | 315/000                                       | 332/000      | A. V. D.<br>Georgopoulos<br>Company                                 | Greece         | Emia<br>Georgopoulos               |
| North 17   | 000/332                                       | 000/374      | Chakot company  | Greece         | Nikolai Markof                     |
| North 18   | 374/000                                       | 416/000      | Yanikian and Co.<br>(Road building<br>company)                      | Greece         | A. Yanikian                        |
| North 19   | 416/000                                       | 454/000      | Shaba company   | Greece         | Rahim Arjmand                      |
| Tehran<br>station<br>earthwork                     | From Tehran                                   |              | Gholi Sepahi  | Iranian        | Ghoalmali<br>Maykadeh              |
|  | North 5/500                                   | South 5/000  |   |                |                                    |
| Tehran<br>station<br>buildings                     | -   | -            | Soufikt company   | swiss          | Meyer &<br>kesselheim              |
| North 20   | 5/000   | 51/400       | Schuman<br>contracting<br>company for<br>industrial works<br>abroad | French         | Shabur                             |
| North 21   | 51/400  | 98/500       | Schuman<br>contracting<br>company for<br>industrial works<br>abroad | French         | Shabur                             |
| North 22   | 98/500  | 145/000      | Kojko company   | Iranian        | <i>Tormelon</i>                    |
| North 23   | 145/000                                       | 183/000      | Etka Railway<br>Company   | Iranian        | Eng. Hossein<br>Shaqaqi            |
| Names of Contractors for the Southern Railway Line |   |              |   |                |                                    |

| Southern buildings | From Bandar-e Torkman       |         | Sajsy company                       | Iranian        | Eng. Fazlollah Jila                           |
|--------------------|-----------------------------|---------|-------------------------------------|----------------|---|
|                    | 127                         | 191     |                                     |                |   |
| South 20           | 183/000                     | 219/000 | Iran and Greek Technical company    | Iranian        | George Gopoloss & Nosratian                   |
| South 19           | 219/000                     | 255/000 | Neka company                        | Iranian        | Shahab Khosravani & Panahi                    |
| South 18           | 255/000                     | 297/000 | Contractor company section south 18 | Iranian        | Panahi  |
| South 17           | 297/000                     | 329/000 | Bastan and Beton companies          | Iranian        | Javad Ghaffari & Reza Ghaffari                |
| South 16           | 329/000                     | 364/000 | Beton company                       | Iranian        | Jafar jafari & Asgarzadeh & Bina              |
| South 15           | From Bandar-e Emem Khomeini |         | Rey company                         | Iranian        | Gholamali & meykade                           |
|                    | 538/000                     | 569/000 |                                     |                |   |
| South 14           | 502/700                     | 538/000 | Bastan and Beton companies          | Iranian        | Javad Ghaffari & Reza Ghaffari                |
| South 13           | 461/200                     | 502/700 | Rah and Beton companies             | Iranian        | Afshar & Khameneh, jafari & Asgarzadeh & Bina |
| South 12           | 442/700                     | 461/200 | Saderat Bodaghian company           | Iranian        | Jebrail Bodaghian                             |
| South 11           | 425/600                     | 442/200 | Sookol Company                      | Belgian        | Vander berget & vilar                         |
| South 10           | 409/000                     | 425/600 | Railway & Public Benefit            | Belgian        | Fornosari & diorter                           |
| South 9            | 392/700                     | 409/000 | Hochtif A.G.ESN                     | Belgian German | Bergan  |
| South 8            | 376/500                     | 392/700 | Railway & Public Benefit            | Belgian        | Fornosari & diorter                           |
| South 7            | 362/000                     | 376/500 | Richard kosten (limited)            | English        | Estoward                                      |
| South 6            | 347/180                     | 362/000 | N.M.K Company                       | English        | Westerkard                                    |

|         |         |         |                           |                 |   |
|---------|---------|---------|---------------------------|-----------------|---|
| South 5 | 334/400 | 347/180 | Kasakofski & Roji Company | Iranian& french | koolen                                    |
| South 4 | 323/900 | 334/400 | Etka railway Company      | Iranian         | Hossein Shaqaqi, Ahmad mosadegh & Barbero |
| South 3 | 312/600 | 323/900 | Angiolini Balocha Company | Italian         | A. Balocha                                |
| South 2 | 300/000 | 312/600 | Razan Company             | Iranian         | Yamin Esfandiari& Moghtader Shafia        |

Table 1. The list of Contractors worked on the construction of the Trans-Iranian Railway project in the reign of Reza Shah. Rah ahan sarasari Iran 1306-1317 (Trans-Iranian Railway 1927-38) (Tehran: Ministry of Transportation, 1938), 43-4.

### The Arrival of New Materials and Techniques

21. Conolly, "the industrialization of Persia", 458.

The rapid expansion of new science and technology facilitated through the progressive agenda of change significantly contributed to the emergence of modern construction techniques in Iran, and the project of Trans-Iranian Railway played an essential role in that. A significant contribution of the Railway project to the advancement of modern technology in Iran was indeed the establishment of the first cement factory in the vicinity of Tehran in 1933 to primarily provide the necessary reinforced concrete for the construction of the Trans-Iranian Railway. The cement required for the Railway project was predominantly produced by the new factory, equipped with the most advanced machinery.<sup>21</sup> Due to its speed and solidity, reinforced concrete became very popular at that time, and massive projects such as bridges and tunnels were erected using that material (Figure 2). However, inter-city stations and buildings dedicated to accommodation were still built with traditional and local materials (Figure 3). As noted in the Journal of the Ministry of Roads:

22. Trans Iranian railway,89.

"The buildings made of traditional materials were preferred over other types of buildings because they obviated the need for the utilisation and import of modern materials. Attempts were made to discover stone mines along the route before designing any scheme. Therefore, some samples were sent to a laboratory to be analysed for pressure, frigidty, and permeability. However, the results were often negative and it was inevitable to construct buildings with reinforced concrete instead of stone."<sup>22</sup>

23. Willem Floor, *Industrialization in Iran 1900-1941*, (England:University of Durham, 1984), 18-35.

24. Mina Marefat, *the Protagonists Who Shaped Modern Tehran' in Shahriar Adl, Bernard Orchard (eds.), Tehran the Capital of 200 Years*, (Tehran: Elmi va Farhangi Press, 1996), 103-133.

25. Laurence Lockhart, *Famous cities of Iran* (Brentford: Walter Preece & Co., 1939), 11

The foundation of the cement factory eventually led to the emergence of new building types and materials, such as steel, cement, and glass<sup>23</sup> as alternatives to traditional materials. Thanks to the railway project, by the late 1930s, reinforced concrete was massively produced for state-owned buildings, leaving a significant mark on the appearance and modernisation pace of the country.<sup>24</sup> The level of change was so rapid that Lockhart wrote in 1939, "It may truly be said that anyone returning to Tehran today after an absence of a few years would not recognise it."<sup>25</sup>

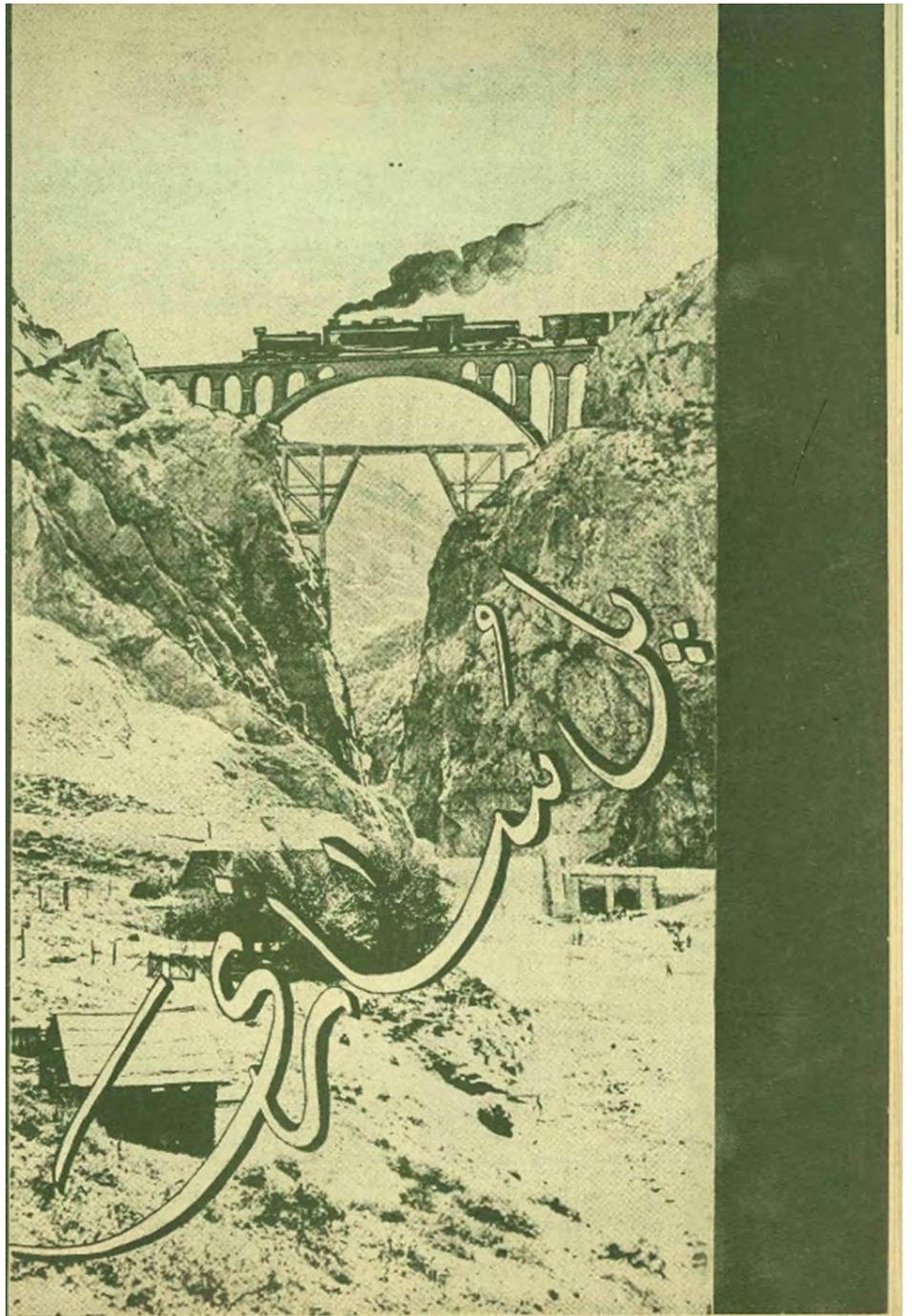


Figure 2: Veresk Bridge, located in the north of Iran constructed with reinforced concrete and stone. *Rah ahan sarasari Iran 1306-1317* (Trans-Iranian Railway 1927-38) (Tehran: Ministry of Transportation, 1938), 41.



Figure 3: Tehran station under construction with reinforced concrete structure in 1935. Courtesy of Philipp Holzmann AG Picture Archive, [holzmann-bildarchiv.de/bauhistorische-forschung/bahnhof-teheran](http://holzmann-bildarchiv.de/bauhistorische-forschung/bahnhof-teheran).

### **The Architecture of Railway Stations**

In the process of Iranian modernity, the key role was played by Iranian intellectual elites, particularly by those who had spent some time abroad, bringing new ideas and distinct awareness of a modern way of life and material culture to Iran. For those educated elite, architecture and built environment became a main tool to express their modern identity. In the design of Trans-Iranian Railway stations, perhaps two distinct approaches are recognisable. These two approaches were reflective of the notion of Iranian nationalism characterised by making returns to the Iranian past and its ancient history, while imitating the West and absorbing its modern civilisation.

26. Trans Iranian Railway, 100.

Stations of the northern line, designed by foreign architects, were built in a simple, modern and so-called "Western" style,<sup>26</sup> characterised by their functionalism and use of concrete. They were usually constructed as two-story buildings with a program divided into two major parts on the ground floor, namely a salon and offices, while the second floor functioned as accommodation for the manager with a separate entrance allocated to it. In the design of these stations, the climate of the region was carefully considered. The buildings were usually of asymmetrical compositions and were covered in plaster. There were, however, no trace of Iranian elements on these buildings as they were exclusively following a functionalist approach in architectural design (figures 4, 5 and 6). These stations were the earliest instances of modern (non-traditional) architecture in Iran – an unprecedented architectural style to be later followed in the design of important government buildings, such as the Ministry of Finance and the University of Tehran, introducing Iran as a progressive country in favour of absorbing the latest technological advancement of the global society.



Figure 4: Bandargaz station, designed following the so-called Western style, 1929-31. Courtesy of Philipp Holzmann AG Picture Archive, [holzmann-bildarchiv.de/bauhistorische-forschung/holzmann-in-nahost](http://holzmann-bildarchiv.de/bauhistorische-forschung/holzmann-in-nahost).

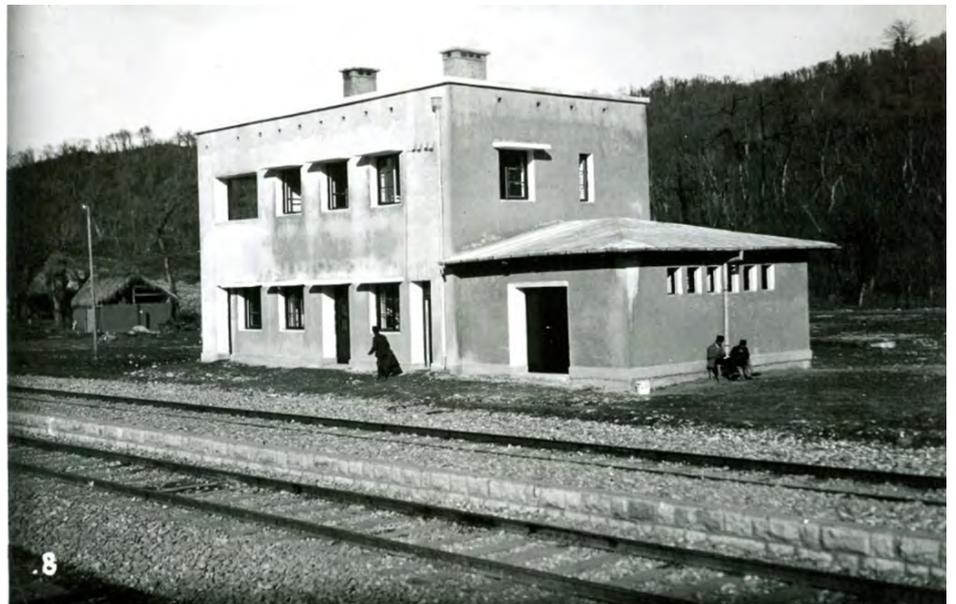


Figure 5: Shirgah station in 1932-33. Denmark, Copenhagen, Courtesy of COWI A/S Archives.



Figure 6: Abbasabad station, constructed with a pitched roof as an adaptation to the climatic condition of the Iranian northern regions, 1932-33. Denmark, Copenhagen, Courtesy of COWI A/S Archives.

27. Trans Iranian Railway, 100-103.

In contrast to the northern stations, most stations on the southern line, following the nationalist views propagated by Reza Shah and the educated elite to venerate the grandeur of the Iranian past, were built in a so-called "Iranian" style. In designing these buildings, Iranian motifs and materials borrowed from Islamic and pre-Islamic eras, such as mud bricks, round and pointed arches, and geometric carving patterns at major stations such as the ones in Ahvaz and Qom, were adopted.<sup>27</sup> However, apart from a few references to the Iranian past, these southern stations were still simple and purified surfaces deprived of any references to Iranian decorative patterns. The styles of these stations significantly influenced the formation of Iranian modern architecture of the time as they turned into the earliest instances of modern buildings which retained Iranian expression, representative of Iran as an emerging country with an old civilisation – a prologue to the design of several government buildings, such as Iranian National Banks and the Post Office building, erected with a similar approach of expressing explicit links to the Iranian past in the 1930s (figure 7, 8 and 9)



Figure 7: Galeh-Cheikh station, built with elements borrowed from Iranian architecture, 1936-37. Denmark, Copenhagen, Courtesy of COWI A/S Archives.



Figure 8: Qom station, designed with the Iranian pointed arches flanked by two symmetrical wings, 1935-36. Denmark, Copenhagen, Courtesy of COWI A/S Archives.



Figure 9: Garm-Amir Station, 1936-37. Denmark, Copenhagen, Courtesy of COWI A/S Archives.

## Conclusion

The materialisation of the Trans-Iranian Railway was among Reza Shah's earliest programs of reform to which he dedicated the greatest budget. It was not only a project of national significance but was a means to connect the country, taking modernisation and its products to every corner of it. For that purpose, in an unprecedented manner, a great number of foreign construction companies were invited to Iran, and a cement factory was founded to facilitate the use of reinforced concrete for the construction of the Railway's massive structures. The construction of the Trans-Iranian Railway significantly changed the appearance of the country, but more importantly, it introduced an approach in architectural design and construction, considerably different from what was practised in Iranian traditional architecture. The availability of reinforced concrete changed the construction pace of the forthcoming buildings and provided a base for Iranian Western-educated architects to practice architecture in a manner similar to the way architectural design and construction were performed in the West.

# ULTRA

## **Positions and Polarities Beyond Crisis**

**SESSION 2: *Design Practice and Local Knowledges***

# Reworlding the Archive: Robin Boyd, Gregory Burgess and Indigenous Knowledge in the Architectural Archive

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## **Keywords**

Architectural Archives  
Tandanya-Adelaide  
Declaration  
Indigenous Knowledge

## **Abstract**

In her book *Decolonising Solidarity: Dilemmas and Directions for Supporters of Indigenous Struggles*, Clare Land suggest how non-Indigenous people might develop new frameworks supporting Indigenous struggles. Land argues research is deeply implicated with processes of colonisation and the appropriation of indigenous knowledge. Given that architectural archives are central to the research of architectural history, how might these archives be decolonised? This paper employs two disparate archives to develop a framework of how architectural archivists might begin to decolonise these archives. Firstly, these archives are the Grounds Romberg and Boyd Archive (GRB) at the State Library of Victoria (SLV). Secondly, the Greg Burgess Archive is now located at Avington, Sidonia in Victoria. The materials from each of these archives will be discussed in relation to two frameworks. These are the Tandanya-Adelaide Declaration endorsed by The Australian Society of Archivists (ASA) and the Indigenous Cultural and Intellectual Property (ICIP) framework developed by Janke (2019). These archival frameworks suggest how interconnected architectural histories and historiographies might be read, reframed and restored. Decolonising architectural archives will require a continuous process of reflection and political engagement with collections and archives. In pursuing these actions, archivists and architectural historians can begin to participate in the indigenous Reworlding of the archive.

## Introduction

Tjamiwa later told us you must listen with *your heart*, 'The knowledge is in the land. You just have to listen. It's always been there and will always be there.'

On May 14 2021, the Australian Society of Archivists (ASA) endorsed the International Council on Archives (ICA) Tandanya-Adelaide Declaration (TAD). This Declaration recognises and values indigenous cultural expressions in both public and private archives. As the ICA declares, First Nations "have sustained their own evolving social, cultural, political and spiritual identities" and these identities exist within dynamic "indigenous knowledge systems and ways of knowing.". As the ICA declaims

1. International Council on Archives, "Tandanya – Adelaide Declaration," October 25, 2019, [https://www.ica.org/sites/default/files/tandanya\\_adelaide\\_declaration\\_eng.pdf](https://www.ica.org/sites/default/files/tandanya_adelaide_declaration_eng.pdf), 1.

2. The Australian Society of Archivists, "ASA endorses the Tandanya Adelaide Declaration" June 8, 2021, <https://www.archivists.org.au/about-us/statements/asa-endorses-the-tandanya-adelaide-declaration> 3-4.

3. For archivists, the TAD declaration, as supported by the ASA, stressed five interlocking themes: Knowledge Authorities, Property and Ownership, Recognition and Identity, Research and Access and Self Determination.

4. Willis, Julie, and Philip Goad. "A bigger picture: Reframing Australian architectural history." *Fabrications* 18, no. 1 (2008), 6-23.

5. Willis and Goad, A Bigger Picture. My intent is to both question and extend this "bigger picture" methodology which shaped Goad, Philip, and Julie Willis, eds. "The Encyclopedia of Australian Architecture" Cambridge University Press, (2012). Andrew Leech in his review of the Encyclopedia outlines its segmented structure noting it documents "how architecture participates in the formation and propagation of a national identity (pursued by Goad and Willis)." Andrew Leach, "The Encyclopedia of Australian Architecture [Book Review]." *Fabrications: The Journal of the Society of Architectural Historians, Australia and New Zealand* 20, no. 2 (2011): 136.

6. This is only the outline of a larger argument. Settler progress and its forward motion can arguably be found in the following: Nichols, David, and Freestone, Robert 2019. 'City & suburb.' In *Australia Modern*, 1 ed., edited by Lewi, Hannah, and Goad, Philip. 72-83. Thames and Hudson. doi:10.1177/1538513212454637 Hannah Lewi & Philip Goad, *Australia Modern : architecture, landscape & design*, (Port Melbourne, Victoria : Thames & Hudson Australia, 2019) O'Neill, Helen. *A Singular Vision: Harry Seidler*. HarperCollins Australia, 2016. Goad, P, and Pert, A 2017. "'Ernest Fooks - The House Talks Back': Between the Savage Mind and the Scientific Mind." 549-559. In *The 34th Annual Conference of the Society of Architectural Historians, Australia and New Zealand Canberra 5-8 July 2017*

"Indigenous peoples – their philosophies and knowledge models – have prevailed despite enveloping colonial programs of assimilation and genocide."<sup>1</sup>

The Declaration thus recognises the trauma to First Nations individuals that is inherent within settler archives.<sup>2</sup> Within Australian archives, trauma may be engendered through narratives related to frontier violence and massacres; the triumph and depiction of colonial power and the psychic violation and reframing of indigenous knowledge. The evidence of genocide and the presence of trauma exists within all archives; pointing to the need for architects, archival institutions and custodians of collections to construct new relationships with First Nations communities.<sup>3</sup>

Architecture is generally associated with histories concerning particular architects and their projects. In Australia, histories of architecture have focused on colonial contexts, the development of cities, international movements and aesthetic stylistics. Willis and Goad, in their 2008 call for a new survey of Australian architecture (2008), note the need for a "bigger picture."<sup>4</sup> That is a "history that seeks to be inclusive of multiple views" and one that must "address, theorise and contextualise the questions raised by indigeneity (in all its complexity)."<sup>5</sup> Despite this call for inclusiveness, there is nonetheless at the heart of many architectural histories, a focus on settler progress, its pulses and momentum. Settler progress is often lurking in the plethora of histories focused on mid-century modernism, suburban housing and emigre architects. Settler progress is often disguised in these histories and encoded through a fascination for European modernism. The recoding of settler history is sometimes achieved through narratives of architects forced into exile, bringing Australia more civilised and civilising ideas of modern architecture. Contestable, as these broad statements might seem, settler progress and its tropes, including its trail of ecological destruction, is rarely questioned in Australian architectural history.<sup>6</sup>

In Australia, the work of architects is found in a range of institutional archives and both public and private collections. Across all of these archives, indigenous knowledge will have a presence. The National Archives of Australia (NAA) and the NSW State Library contain significant collections of architectural material. Universities also contain architectural collections within their walls, such as the University of

7. The Digital Archive of Queensland Architecture <https://qldarch.net/>

South Australia's Architecture Museum, The RMIT Design Archive (RDA) and Melbourne University. At the UQ, The Digital Archive of Queensland Architecture documents architects and their work in 1945-1975.<sup>7</sup> Architectural collections can contain a range of different media; not simply sketches and plans but also a full range of material that might also include: models, consultants drawings, photographs, slides, photocopies, faxes, typed letters, building materials and samples, sample boards and digital files in different storage media. While larger institutional archives will have indigenous protocols in place, few architectural archives and collections will not.

## Background

8. Janke, Terri. "True Tracks: Indigenous cultural and intellectual property principles for putting self-determination into practice." (2019).

An Indigenous Cultural and Intellectual Property (ICIP) framework to enable institutions to develop protocols related to indigenous material has been developed by the Wuthathi Meriam woman Terri Janke (2019)<sup>8</sup> These protocols support First Nations rights to both heritage and culture. Janke (1997) defines indigenous heritage as including

9. Our Future, 1997 Report on Australian Indigenous Cultural and Intellectual Property Rights, (Report commissioned by AITSIS and Michael Frankel and Company, July 1997.)

all aspects of cultural practices, traditional knowledge, and resources and knowledge systems developed by Indigenous people as part of their Indigenous identity (Janke, 1997)<sup>9</sup>

10. Terri Janke, Our Future.

Janke argues that protocols are needed so that "no harm" is done to cultural and intellectual property and rights are given to indigenous communities, protecting them from processes of "bastardisation" and "desecration."<sup>10</sup> The ICIP protocols are designed to ensure "the integrity of cultural practice," ensuring the "connection to the cultural source of creativity" and the collective legitimacy for such IP creation" is not diminished.<sup>11</sup> These measures protect indigenous knowledge; maintain its integrity as a system of knowledge; grant rights to indigenous groups; protect sacred material as well as recognise "collective group attribution" for the use of their ICIP<sup>12</sup>

11. Terri Janke, Our Future, Janke True Tracks, 159.

12. Terri, Janke, "True Tracks: Indigenous Cultural and Intellectual Property Principles for Putting Self-determination into Practice." (2019).

13. Janke, True Tracks, 159.

The ICIP protocols also address the issue of intangible indigenous heritage. UNESCO has adopted a convention for the safeguarding of Intangible Cultural Heritage (ICH). The convention "requires countries to develop inventories of their traditional cultural expressions and traditional knowledge."<sup>13</sup> Central to the convention is the definition of intangible cultural heritage, which Janke defines as

14. Janke, True Tracks, 159.

"(a) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage; (b) music, dance, drama and other performing arts; (c) social practices, rituals and festive events; (d) knowledge and practices concerning nature and the universe; (e) foods and clothing; and (f) traditional craftsmanship."<sup>14</sup>

Australia is not a signatory to the UNESCO convention, which came into force in April 2006.

## Decolonising the Archive

15. Clare Land, *Decolonising Solidarity: Dilemmas and directions for supporters of indigenous struggles*. Zed Books Ltd., 2015.

16. Land, *Decolonising Solidarity*, 26.

In her book, *Decolonising Solidarity: Dilemmas and Directions for Supporters of Indigenous Struggles*, Clare Land suggest that research is a problematic exercise.<sup>15</sup> This is because of the “implication of research in the colonisation of Indigenous peoples and the appropriation of Indigenous knowledges.”<sup>16</sup> Land argues that at the outset of the research, there is a need for self-reflexivity that recognises white privilege and that:

17. Land, *Decolonising Solidarity*, 29.

“To seriously develop non-Indigenous research agendas would require accountability constructs to be established so that non-indigenous researchers were located as challengeable by indigenous researchers.”<sup>17</sup>

Central to the question of decolonisation and white complicity in research is the need for a process that, in Land’s words

18. Land, *Decolonising Solidarity*, 230.

“Springs from the recognition by non-indigenous people that Australia is Aboriginal Land.”<sup>18</sup>

19. Land, *Decolonising Solidarity*, 29.  
Linda Tuhiwai, Smith, 1999. *Decolonizing methodologies: Research and indigenous peoples*. Zed Books Ltd. 142. Only two of Smith’s 25 projects are explored here.

20. Land, *Decolonising Solidarity*, 29.

21. Smith, 1999. *Decolonizing methodologies*, 146-147.

22. Land, *Decolonising Solidarity*, 29.

Hence it must be asked what does the archivist or historian have to gain or lose in engaging with architectural expressions of indigenous cultural knowledge? Who owns the archive? What rights exist within the archive for indigenous people, and how might indigenous authority shape archival research and even the architectural design process itself. Land extends the work of Linda Tuhiwai Smith, identifying that decolonising methodologies have several different modalities: “indigenising, intervening, reading, reframing and restoring.”<sup>19</sup> The first two of these modalities are the focus of here: Indigenising is the project of centring and recentering” of the centring of the landscapes, images, languages, themes, metaphors and stories in the indigenous world and the disconnecting of many of the cultural ties between the settler society and its metropolitan homeland.”<sup>20</sup> The other framework of this paper, aligned with the TDA and the ICIP framework, is the project of intervention. This project is a “proactive” project that is “designed around making structural and cultural changes.”<sup>21</sup> In Land’s words this is a project with “clear structural concerns” and “strategic questions” addressing the question of “what will engage and maintain the contribution to meaningful social change by members of dominating groups.”<sup>22</sup>

23. Reworlding is a concept that has emerged from extinction studies: Chrulew, M. and De Vos, R. 2019. *Extinction: Stories of Unravelling and Reworlding*. *Cultural Studies Review*, 25:1, 23-28.

24. Land, *Decolonising Solidarity*, 29.

25. Smith, 1999. *Decolonizing methodologies*, 143.

From these case studies, the idea of how architectural archives might pursue the projects of structural intervention and centring us pursued through the idea of Reworlding.<sup>23</sup> This concept of Reworlding makes space for indigenous narratives rather than settler and colonial histories. Through the perspective of archival intervention, practical and structural concerns are advanced. Through Reworlding, new modalities of reading, reframing and restoring of indigenous knowledge in the narratives of architectural archives will emerge.<sup>24</sup> This concept also has historiographic or methodological dimension. As Smith states “Within an indigenous framework, methodological debates are ones concerned with the broader politics and strategic goals of indigenous research.”<sup>25</sup>

## The Grounds Romberg and Boyd Archive at the SLV

26. Goad, Philip. "Robin Boyd and the Post-War 'Japanization of Western Ideas'" *Architectural Theory Review* 1, no. 2 (1996): 118

The State Library of Victoria's (SLV) GRB Archive consists of around 158 archive boxes. It has various materials, including sketches and plans, letters, transcripts, photographs, slides, transparencies, graphic materials, and even a few physical objects. Initial consideration of this archival material would suggest that Boyd had very little to do with indigenous people and indigenous knowledge. There is no evidence in the archive that Boyd obtained any commissions related to indigenous language groups. However, Boyd was a collector of a diverse array of Australian anglo-centric and international architectural, cultural and scientific knowledge.<sup>26</sup> Across Boyd's design practices of collecting, filtering and collaging cultural material connections to indigenous knowledge can be discerned. These practices are evident in the two Expo exhibits that he designed.

27. Boyd to John Bray December 19 1966 GRB Archive Box 86 1a.

As the Exhibit's designer for the Australian pavilion at Expo 67 in Montreal, Boyd was asked to include a number of indigenous cultural artifacts in the Exhibit. This included a rock removed from the Northern Territory, watercolours by Namatjira and a series of bark paintings of unknown provenance lent to the Exhibit from the Rudy Komon Gallery in Sydney. These latter items were insured for the sum of 100 pounds. Writing to John Bray of the Australian Exhibit Organisation on December 19 1966, Boyd writes about his visit to Alice Springs with Mr K Edworthy of the Bureau of Mineral resources. The stone was some 25 miles south of Alice springs "near the main road." The stone was described as "one large complex-shaped piece of sandstone estimated to weigh about five tones and to measure about 6' by 8'x8" foot over the extremities."<sup>27</sup>

Boyd wrote on May 23 1967, to Valston Hancock, the head of the Australian Exhibit Organisation, regarding the possibility of including the work of Albert Namatjira in the Exhibit. Boyd noted that there were technical with this work.

"the difficult thing is that his work were always watercolours, which means glass in front of the painting, danger of fading in strong light,"

But there were also aesthetic and visual conflicts.

"Despite vastly different styles, oil painting always have a certain visual relationship whereas a watercolour behind glass looks a different thing altogether, and in fact suffers by comparison, looks so weak."

For Boyd, the solution was

28. Boyd to Valston Hancock, May 23 1967 GRB Archive Box 86 1a.

I really think we should stick to oil paintings at all costs in the pavilion. There would be nothing against a Namatjira in one of the offices or other downstairs rooms."<sup>28</sup>

The bark paintings were obviously delicate as they were warped during transit to Montreal. These indigenous paintings were featured in Exhibit 6 of the exhibition and "fixed onto a revolving stand" of gloss white undulating fibreglass. After they were warped, they were flattened and

then each painting had concealed fixings fixed to plywood cores and then sandwiched between glass.

29. Boyd's letter to Professor Neil Macintosh, June 11 1969, Grounds, Romberg and Boyd Archive, Box 101.

30. 'Expo 70 Osaka: The Australian Pavilion', *Progress Report By Exhibits Architect*, June 12 1968, p 2, Correspondence File 1, Grounds, Romberg and Boyd Archive, Box 103, 1(c), M1778. For a full history of the skull see, J Allen, 'The Curious History of the Talgai Skull,' *Bulletin of the History of Archaeology*, 2010, <http://doi.org/10.5334/bha.20202>.

31. 'Expo 70 Osaka: The Australian Pavilion', *Progress Report By Exhibits Architect*, June 12 1968, Correspondence File 1, Grounds, Romberg and Boyd Archive, Box 103, 1(c), M1778.

32. RDA Design Archive

In the Expo 70 Space Tube at Osaka, there are also connections with indigenous cultural heritage and history. Boyd sought to incorporate within the exhibits an indigenous skull found on Talgai station in Queensland. Boyd sought to include a plastic replica of the 13,000-year-old skull into the Space Tube. Boyd indicated that the skull would help to suggest: 'the age and the emptiness of the Australian continent' and this would 'depict prehistoric man in semi-abstract form.'<sup>29</sup> In his own words, this would describe 'a limitless expanse of outback near-desert in the centre of which hangs mysteriously the Talgai skull.'<sup>30</sup> Boyd saw the visitor moving forward, and "this skull changes to the head of a modern man and is surrounded by a representation and brief description of the neurological.'<sup>31</sup>

While other fragments and examples of Boyd's engagement with indigenous knowledge exists across the GRB archive, Boyd's myopia with indigenous knowledge is perhaps also evident in his earlier design for Tower Hill. The watercolour drawings of the final scheme underscore the fact that the land on which Tower Hill sits was never ceded by its traditional owners. Arguably the representation of this powerful landscape in Boyd's painting is a representation that is disconnected from the indigenous narratives and related cosmology of this place.<sup>32</sup>



Figure 1: Tower Hill Watercolour, Robyn Boyd, RDA Design Archive.

## Between Worlds

The GBA at Avington, Sidonia Victoria, is one of Australia's most significant architectural collections. Burgess won the AIA gold model in 2005. The entire collection contains around 388 models, about 590 combined cylindrical tubes and rolls of drawings. 220 flat boxes of sketches over 64 framed and unframed awards. There 120 archive boxes of office binders and around 450 CD-Roms. In the GBA Archive the Uluru project includes 20 drawing Tubes a final Model 2 and 12 study models. Fifteen tubes (possibly up to 20) containing concept sketches,

hand drawings, architectural documentation (hand drawn), consultants' documentation. There are slides, photographs (from initial meetings to project completion), hand written notes by Greg Burgess, artwork and prints of artwork. Moreover, the slides are compiled in ring binders in at least six archive boxes and hanging file sleeves, in an unknown number of Archive boxes. At least one Archive box includes plastic slide boxes, envelopes, some loose and some elastic bound and an archive box of print photos. There is an A3 Booklet and USB file of the Project Brief and Concept Design for Uluru National Park Cultural Centre. Many of the slides and photos contain images of indigenous people and Uluru itself.

33. Gregory Burgess, "Between Worlds, Before Building: Reflections on living encounters in the sacred Country of Uluru." GBA Archive, 1-8. Provided to authors by Gregory Burgess.

A manuscript obtained from Gregory Burgess entitled *Between worlds, before building: Reflections on living encounters in the sacred Country of Uluru* goes some way to documenting the embedded indigenous knowledge in the Uluru project. The commission began in early 1990 after the *Mutitjulu* community and the National Parks and Wildlife Service, working jointly, advertised for consultants to design and construct a cultural centre at *Uluru* in the Uluru Kata-Tjuta World Heritage National Park. As part of the Uluru process, it was decided that "the design process should allow 'unhurried time' for us to live on-site for a month with *Anangu*, to listen and consult with the Elders on the cultural 'lie of the land', and to establish a shared clarity of purpose and depth of understanding."<sup>33</sup> From the outset, Burgess determined that:

34. Burgess, *Between Worlds, Before Building*.

there were complex issues of establishing an appropriate process of collaboration and understanding: language, land/ Country, culture and functionality.....What was needed here was a resonant belonging, a responsive process and building that wove together living – spiritual and physical – connections with *Uluru*, the sacred Country and its people.<sup>34</sup>

During the time he stayed at the *Mutitjulu* community Gregory Burgess worked closely with "Tony Tjamiwa, an Elder lawman and the local Christian pastor, who became a guiding figure in the collaborative process and the sharing of *Tjukurpa*." As he was to note.

35. Burgess, *Between Worlds, Before Building*.

*Tjukurpa* is the foundation of *Anangu* life and society. It has many complex but complementary meanings and refers to the creation period when ancestral beings created the world as we now know it but also refers to the present and future.<sup>35</sup>

As Burgess consulted with the community, "different aspects of the same stories were told and these began to build up a picture to the point where "the whole perimeter of 'the Rock' was alive with *Tjukurpa* events." Burgess also records how the community had received many returned stones, or sorry stones from tourists over time. Burgess relates how Tjamiwa observed that.

36. Burgess, *Between Worlds, Before Building*.

"That tourist comes here with camera taking pictures all over. What has he got? Another photo – take home, keep part of *Uluru*. He should get another lens – see straight inside. Wouldn't see big rock then. He would see that Kuniya [the sacred carpet snake] living right inside there as from the beginning. He might throw his camera away then."<sup>36</sup>

As a part of the process, Burgess decided to commission a number of paintings from community artists. By listening to *Anangu* and engaging with *Tjukurpa*, Burgess employed these stories to shape, in a direct manner, the evolution of the building concept. Several Anangu people were asked to paint the Tjukurpa of Uluru. Interestingly, Burgess also intuitively employed a dowsing pendulum to position each of the building's spaces. He has written that this process "was a step of trust in my own intuition which also seemed to invite the *Tjukurpa* spirit into the conversation" and that "All these interweaving aspects were synthesised in the design process." Burgess recalled that

37. Burgess, "Between Worlds, Before Building."

"The cycles of ritual that have kept Tjukurpa alive and sustained at Uluru for many thousands of years have changed the land with the directed human consciousness of spirit, creating a sacred realm inhabited by ancestral beings."<sup>37</sup>

As Tjamiwa was to say to Burgess.

38. Burgess, "Between Worlds, Before Building."

"The knowledge is in the land. You just have to listen. It's always been there and will always be there."<sup>38</sup>

Within the archive, there is a laminated A3 format booklet summarising the design process. This annotated booklet contains images of Uluru, landscape sketches of the site, the sand drawings made by community members that became the design concept, and images of the first conceptual model left with the community.



Figure 2: Uluru Study Model, GBA Archive.

### Reworlding the Archive

Where indigenous knowledge has been gazed on sightlessly, relocated, reframed and resituated in archival and exhibit contexts, or embedded in the design process itself, all this does not mean that this knowledge no longer exists. Robin Boyd's watercolour of Tower Hill is a representation where, even if Boyd did not hear it, indigenous knowledge still exists in the surrounding landscape that Boyd depicted. Tower Hill contrasts with the GBA project at Uluru, where the gathering of indigenous knowledge is documented in the architect's narrative and different media, including images of the Anangu people and Uluru. This material,

including photographs and slides, is now present in the GBA archive. An audit of this material in participation with Anangu would determine what can be seen or exhibited. Both the GRB and GBA archives point to the presence of intangible indigenous knowledge in a diverse range of architectural materials and artefacts, including digital information. Boyd's fleeting contact with indigenous artifacts and material is not easily and immediately seen in the GRB archive. Nonetheless, within the GRB archive, essential issues of Australian social history and Boyd's design practices concerning indigenous knowledge are present. In the GBA example, indigenous knowledge is more clearly documented and inscribed through the process and embedded in different media types in the collection.

39. Boyd, Robin. *The great great Australian dream*. [Rushcutters Bay, NSW]: Pergamon Press (Australia), 1972.

In both the GRB and GBA archives, archivists and architectural historians are called to see anew. In both of these archival examples, intangible heritage is embodied in two different processes of architectural expression. In GRB, we can see the tale of the bark paintings, the relocation—and perhaps desecration—of a rock from Country to Montreal, the aesthetic judgements regarding Namatjira, the apparent myopia of the watercolour of the Tower Hill project. Yet, few historians have focused on Boyd's aesthetic judgements and design practice regarding indigeneity and Country. This is despite depicting a massacre in the last pages of his book *The Great Great Australian Dream*; any indigenous presence within the SLV GRB archive has to date been seen to be invisible.<sup>39</sup> Of course, we can excuse Boyd's sightlessness—which might also be called racism—as a result of the mid-century “times” which shaped Boyd's life. Still, we might also reflect that sightlessness perpetuates a continuing Australian settler zeitgeist in our architectural histories.

40. Janke, *True Tracks* 159.

In contrast, the GBA example of the Uluru project indicates how the non-physical characteristics, practices and expressions of indigenous knowledge and skills are all contained within the architectural project. This architectural design embodies non-physical and spatial representations, oral traditions, and linguistic structures and language. As the participatory design of the Uluru project indicates, architectural spaces can also be shaped by both music and the performing arts. social practices, rituals and festive events; foods and clothing; and traditional craftsmanship.<sup>40</sup> In the GBA archive, knowledge and practices concerning indigenous cosmology are embodied in the project. This embodiment points to how ecology, the human and non-human and a living indigenous mythology can exist in a project within architectural archives.

The Uluru project points to the need to Reworld archival practice. Reworlding can be defined as gathering into, recognising, listening and hearing indigenous Country in architectural archives. Reworlding locates and repositions the archive into a new yet ancient, realm; a realm where eurocentric concepts of space and time have collapsed. Through Reworlding, the settler Anthropocene is reconquered by indigenous knowledge. Through Reworlding, the frontier is reclaimed so that past and present human and non-human exist within a united cosmology. But Reworlding the archive is not simply saying that the non-human must be recognised as equal agents to humans within a dynamic ecological network. As suggested at Uluru, Reworlding is a concept that places the

ancient living beings of Tjukurpa as equal agents within its realm. For the Anangu at Uluru this cosmology is *Tjupurka*.

41. Jones, Philip. "Naming the Dead Heart: Hillier's Map and Reuther's Gazetteer of 2468 placenames in Northeastern South Australia." *The Land is a Map: Placenames of Indigenous Origin in Australia* (2002): 187-200.

In Architectural archives, spatiality is commonly represented and present, even if the archival material, such as plans, images or file documents, are themselves two dimensional. Country is also connected to this spatial dimension, and it is through this spatial dimension, further dimensions and layers of Country are made evident. These other dimensions of Country might include oral histories and language, cultural expressions such as ceremonies, songs and paintings. As Philip Jones documents in his work on the Hillier map, the land is a map; everything has a name.<sup>41</sup> A particular project, its landscape and ecological systems will also be part of this dimension, as is the case at Tower Hill. A landscape of Country will also include seemingly inanimate objects such as rocks. Thus, through the knowledge of Country, its full dimensionality and cosmologies that architectural archives can be Reworlded.

42. Murcutt's project of "environmental design" which elides Country is evident in Cynthia Davidson, "Raised to Observe: Glenn Murcutt" *Log No. 8, Toward a critique of sustainable architecture and landscape* (Summer 2006), pp. 31-39.

Through Reworlding, indigenous trauma can be read by architectural historians and archivists. In recognising indigenous trauma, we can begin to pursue Clare Land's other methodologies of decolonisation reading, reframing and restoring. Settler progress and iconography are entrenched and widely distributed in Australian architectural history; of course, space here does not allow a full explication of this claim. However, the work of Glenn Murcutt, Australia's only Pritzker prize winner, points to how the tropes of the settler shed are melded deep into Australian architectural history.<sup>42</sup> As the indigenous poet Evelyn Araluen writes in her poem *The Trope Speaks*: 'The trope sleeps in a homestead built over bones.'<sup>43</sup>

43. Evelyn Araluen, "The Trope Speaks," *Dropbear University of Queensland Press* 2020, 32.

Araluen's trope is a reminder of Walter Benjamin's Angelus Novus looking back at the wreckage of modernity. In the hands of a single auteur like Murcutt, design knowledge is formed in a way that anticipates the future progression of time. This forward-looking chronology gives life to tropes of functional use, construction innovations, and symbolic capital in preparation for recognition within the architectural canon. These forward-looking tropes are then rewritten and rewritten through a process of mimesis in historical practices. In contrast, Greg Burgess's description of design participation at Uluru indicates a process that has abandoned a forward-looking project of modernity.

44. Willis and Goad, "A Bigger Picture."

45. Research based on this premise is beginning to emerge in the work of Peter Hogg. See for Example, Peter Hogg, *Traces of Incipient Aboriginal Urbanism in South-Eastern Australia, In Edge Conditions: Invented Peripheries, Hidden Centres*. In 15th Australasian Urban History Planning History Conference, Launceston, 5-7 February and Peter Hogg, (22 June 2020), *Cones, Beehives, and Domes: Traditional Aboriginal Dwellings in Victoria* PhD Confirmation Report, School of Architecture and Built Environment Deakin University,

Reworlding points to the need for both architects, archivists and historians to consider abandoning forward propelling sequences and chronologies. But we, as white historians, must also abandon methodologies that separate the indigenous from the colonial past and the segmented accounts of Australian Architectural History. Indigenous knowledge is not an exotic and complex history to be dealt with separately from "landscape and urbanisation, colonialism and internationalism, and past historiographical tendencies."<sup>44</sup> Indigenous concepts of settlement did not abruptly finish with the onset of colonisation.<sup>45</sup> Indigenous knowledge cannot be compartmentalised or interwoven—dare we say assimilated—with other themes in order to "provide refrains at a national level that echo through different eras while recognising that each era can be understood to have its own defining characteristics."<sup>46</sup> Reworlding calls for archival and historiographic

46. Willis and Goad, "A Bigger Picture."

44. For an example of such a shift see, Thun, Theara. "The epistemological shift from palace chronicles to scholarly Khmer historiography under French colonial rule." *Journal of Southeast Asian Studies* 51, no. 1-2 (2020): 132-153.

45. Steele, Wendy. *Planning Wild Cities: Human-Nature Relationships in the Urban Age*. Routledge, 2020. p.90 DBR Reports From a Wild Country.

46. Braun, R. (1994). "The Holocaust and problems of historical representation". *History and Theory*, Vol.33, No2 (1994); 172-197. p.195.

47. Lorna Munro p.6 *Guwayu, for all times A Collection of First Nations Poems Dripping With Decadence (big House, White Lies)* Magabala Books 2020

practices that abandon settler chronologies and eras. What is needed is a shift from settler-modernist chronicles; but also a shift to an approach that recognises indigenous historiography.<sup>44</sup> Through Reworlding, a history of Australian Architecture "at a national level" would be organised by language groups and the landscapes of Country.

Our prevailing, seemingly inclusive methodologies advance an architectural history that creates an ever-increasing distance to the trauma of the frontier. This timing leads to another historiographic issue. Given the genocide of indigenous Australians, how might archival practices, and even architectural history itself, enable architectural historians to abandon settler notions of history? How might we develop new historiographic and theoretical approaches when it comes to "reading, reframing and restoring" the counters of both genocide and ecocide in architectural history.

As white architectural historians, we have all been complicit in not seeing the knowledge and spirit of Country in our writing and rewriting of settler history. As Wendy Steele has noted in her reading of Deborah Bird Rose's work, "We glamorise the frontier of civilisation, fetishise the violence of colonisation", and we are "blind to the ongoing livingness of Country."<sup>45</sup> "If there is any parallel, we might turn to the extensive literature on the Holocaust and the various debates issues of how it is represented in archives, literature and the visual arts."<sup>46</sup> Settler occupation and violence is deeply embedded in all Australian architectural history as the Wiradjuri and Gamilaroi poet Lorna Munro was to write in her poem *Dripping With Decadence (big House, White Lies)*: 'Architects of this great nation, nothing but glorified thieves.'<sup>47</sup>

Reworlding as a concept points to a range of potential research. Audits of existing architectural archives and collections would develop new historical narratives that account for previously invisible indigenous connections to Country and histories. Such studies would encompass a broad range and be used to develop new socio-ecological conceptions of architectural sustainability. Reworlding research where the indigenous connection has been shaped or reshaped by architects may also give rise to new ways of seeing? How have the tropes of settler colonialism changed in the work of Australian architects? Reception studies might ascertain how indigenous knowledge has been received and written into existing architectural histories and surveys.

## Conclusion

For architectural archives in Australia, no framework of practice for encouraging solidarity or decolonising exists currently. The first step in decolonising and Reworlding Australian Architectural archives is to reconfigure archival practices with reference to the Tandanya-Adelaide principles and ICIP guidelines. For existing architectural archives, this might include an audit of existing indigenous knowledge within the archive; archival databases should also register initial information regarding relationships to Country. Within architectural archives, respectful co-governance, amongst other things, between institutional authorities and indigenous knowledge authorities should increasingly become the norm. White historians, this author included, must be

careful that a “bigger picture” historiography does not omit the voices of Country.

In any Australian architectural archive or collection, indigenous connections and knowledge will be present. Each architectural design project, built and unbuilt, is on indigenous Country. *Tjukurpa*, in its different incarnations, will make its presence known to those who can see. As Burgess was to note in relation to the design process at Uluru.

48. Burgess, “Between Worlds, Before Building.”

“The non-visible too was becoming palpably present when listening into the silence. Everything seemed to be connected to everything else and we were participants. This experience was changing our lives.<sup>48</sup>

Reworlding the architectural archive recognises indigenous knowledge is inescapable. This knowledge is ever-present, and it will always leach into our white present. It will always be seen, for those who wish to see, in the architectural archive and in the smoke of the histories emanating from that archive.

# On a Field: Undoing Polarities between Indigenous and Non-indigenous Design Knowledges

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## Keywords

Indigenous Knowledge,  
Colonialism  
Climate crisis  
Socio-political  
Dja Dja Wurrung  
Architecture Design Studio

## Abstract

This paper discusses how architectural practices can engage with and be inspired by a culture that is more than 60.000 years old. How can architects learn from situated and embodied Indigenous knowledge systems in the Australian context? How can an ethical engagement with indigenous histories and practices inspire the development of future architectural practices? This paper proposes that a better understanding of indigenous relationships to land and our environment can inspire us as a society and as architects to imagine new ways of thinking and practising. Considering our numerous contemporary crises, such as climate change, species extinction, food insecurity, we might need to begin to challenge and question western European norms and frameworks. The persistence of colonial thinking, operating within a capitalist system, has been the root cause of most of our contemporary crises. To attempt to undo the polarities that persist between indigenous and non-indigenous knowledge and thinking, we might learn new ways of storytelling as a means of envisioning an alternative future.

This paper understands the theme of the 'ultra' as that position that keeps us apart and stops us from sharing stories that might lead to alternative ways of speculating on shared spatial futures. To situate this discussion, we present a collaborative and pedagogical design experiment undertaken on the lands of the Dja Dja Wurrung. On this Country, tentative attempts to learn with the environment and its associated stories were ventured on a small field and storytelling was used to shift our understanding of country and architecture.

## Introduction

1. Li, T. M. "What is land? Assembling a resource for global investment." *Transactions of the Institute of British Geographers*, 39(4), (2014) pp 589-602.

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6. Will Steffenan, et al. Trajectories of the Earth System in the Anthropocene, *PNAS* 115, No.33 (August 2018): 8252–8259,

7. "Local Particulate Air Pollution (PM2.5): Manhattan, New York, United States", *Berkeley Earth*, accessed July 2021, [http://berkeleyearth.org/air-quality/local/United\\_States/New\\_York/Manhattan/](http://berkeleyearth.org/air-quality/local/United_States/New_York/Manhattan/).

8. Christiane Heil, "Notstand im Westen", *Frankfurter Allgemeine Zeitung*, accessed July 2021, <https://www.faz.net/aktuell/gesellschaft/ungluecke/waldbraende-in-kanada-und-usa-notstand-im-westen-17449156>.

9. Paul Voosen, "Why does the weather stall? New theories explain enigmatic 'blocks' in the jet stream", *Science*, Published March 2020, <https://www.sciencemag.org/news/2020/03/why-does-weather-stall-new-theories-explain-enigmatic-blocks-jet-stream>

10. Mitchell D. Harley, et al., "Extreme coastal erosion enhanced by anomalous extratropical storm wave direction", *Nature.com.au Scientific Reports* 7: 6033, (July 20, 2017), DOI:10.1038/s41598-017-05792.

In Australia, Western thinking, processes, and frameworks generally drive architectural practice. This thinking is expressed as wealth and power accumulation, emphasising ownership of property and housing. Rather than homes, property is increasingly assumed in the first instance to operate as a real estate investment, while commodities and objects are assessed by potential growth and increasing yields.<sup>1</sup> 'Location' is a real estate slogan, and a consideration of the best neighbourhood returns both the greatest yield and prestige on investment. This worldview locates the individual at the centre, and the selfish pursuit of one's own gain is expressed through the ownership of a plot of land. Fulfilling the Australian dream comes via the creation of the homeowner's own universe of value on their plot. Backyards are populated with swimming pools and patches of buffalo grass—driven by luxurious, human-centred lifestyle choices. Spatial relationships to one's neighbours are defined according to oversight rules and fences that demarcate property boundaries and block the view into any surrounding landscape. This fixation on regulating against oversight of one property into the next is an issue of great fascination, where even the gaze comes to be regulated. Prevailing attitudes to land, ownership, and relationships with one's neighbours are just some of the challenges should a shift of attitude to environmental relations be sought in the Australian context of settler-colonial traditions.

As has been remarked with more and more frequency since the early 2000s, we live in a new geological era, the Anthropocene; under the dim light of a climate emergency, amid the planet's sixth mass extinction event,<sup>2</sup> and surrounded by unimaginable environmental catastrophes. Climate change is not something in the future, it is happening to us now globally.<sup>3</sup> Hence one could argue that we should be responding to an existential climate crisis. A crisis in which we experience severe droughts and bushfires, during which we start wearing masks and are asked to stay inside because of smoke travelling across continents.<sup>4</sup> A crisis in which mega-storms cause loss of life in ever greater numbers and with more frequency.<sup>5</sup> Moreover, a crisis where safe habitation of the earth is threatened for a large portion of organisms, including humans.<sup>6</sup>

In July 2021 fires in Canada and the West of the USA caused the air quality in Manhattan, approximately 5000 km east, to surpass the maximum value considered safe for human life. Manhattan's air quality index (AQI) value reached 157;<sup>7</sup> any index above 100 is considered unhealthy for the elderly and people with existing conditions, and any value above 150 is considered unhealthy to anyone. Meteorologists in the US have issued health warnings stemming from the fires for more than 40 million Americans.<sup>8</sup> In June and July the West of Germany, Belgium and the Netherlands, was hit with deadly flash flooding, possibly caused by a climate change-induced weather stall event. These events split jet streams, causing atmospheric blockages that trap static air and cause extreme rain and heat events, sometimes simultaneously in entirely different parts of the planet.<sup>9</sup> In Australia, heavy storms and associated wave activity caused by a changing climate have led to the erosion of coastlines<sup>10</sup> in Sydney, with many houses evacuated. These are but a few examples of the climate crisis presenting itself. These phenomena are now being witnessed constantly and becoming part of

11. Colonel Max Brosig, et al., "Implications of Climate Change for the U.S. Army", *United States Army War College* (2019) [https://climateandsecurity.files.wordpress.com/2019/07/implications-of-climate-change-for-us-army\\_army-war-college\\_2019.pdf](https://climateandsecurity.files.wordpress.com/2019/07/implications-of-climate-change-for-us-army_army-war-college_2019.pdf).

12. Towards a zero-emission, efficient, and resilient buildings and construction sector, UN Environment and International Energy Agency, *Global Status Report* (2017): p 14.

13. *Ibid* p 17.

14. "Nationwide House Energy Rating Scheme (NatHERS)", accessed July 2021, [Nathers.gov.au](http://Nathers.gov.au)

daily life. Research by the Pentagon warned in 2019 that climate change will become a threat to national security: increasing terrorism, global poverty, and food shortage, as well as increasing infectious diseases spread by warm climate insects.<sup>11</sup>

In this context, one needs to reflect upon how an architectural practice and how we as architects contribute to these conditions. While we have figures from the building and construction industry showing that the '... building industry and construction account for more than 35% of global final energy use and nearly 40% of energy-related CO2 emissions...'<sup>12</sup>, Australia is one of the least efficient users of energy, producing 540gram of CO2 per kWh. To stay below a 2°C temperature rise as per the Paris agreement would require a maximum of 72 gram of CO2 per kWh, 13% or less of Australia's current energy efficiency and pollution levels.<sup>13</sup> We can argue that there is not much we can do as a single practice or architect, and that it is difficult to change a large system. It is also challenging to rethink current practices deeply embedded within the resource-hungry system.

However, solutions are offered. In many discussions around climate change, technology and development are posited as our hope, like shifting from fossil fuels to solar and making buildings more energy-efficient and sustainable over their lifetime. Real estate agencies advertise new developments with keywords like 'Fossil Fuel Free' because gas appliances won't be installed, or 'Solar Powered' because the communal areas will be lit by power achieved with a few solar panels. We need to be honest and admit that the discussions cannot just focus on the sustainability of operating buildings but also on the sustainability of the construction processes and the materials used. While it is an achievement to discuss NatHERS Star Ratings, the Nationwide House Energy Rating Scheme, developed to 'make Australian homes more comfortable for their inhabitants and also help residents to save on energy bills through smarter design choices' and<sup>14</sup> give developments 6 or 7.5 star energy ratings, this rating system is embedded with its own assumptions. It has ownership and cost concerns at the centre of its equation and looks very much like greenwashing as the constructions themselves remain unsustainable, using concrete and steel as the primary construction material.

Will any of these meagre changes be enough to address climate change? Especially where habits of consumption and assumptions about one's right to own property are maintained. Aren't we still thinking in terms of benefits for some, referring to costs and returns, relying on constant growth, with a human-centric perspective, and the hope that further growth is possible by just applying or inventing the right technological solutions? Can architects and clients work together to find the best means of caring for environments, constructed and natural? Is architecture capable of finding new ways of multiplying its effects as an art of living amidst planetary damage?

In this context, what is there left for architects to do? Should we start asking whether we can reduce the number of new buildings and the dimension of built envelopes, avoiding more consumption of farmland and natural ecologies? Could we rethink the size, ownership, investment return and status of our dwellings? Furthermore, could

regulatory change encourage recycling and repair? Maybe even making it mandatory, rather than encouraging a process where the complete demolition of existing buildings and starting anew is more 'efficient'. Rather than sending building materials to landfills, can we learn to deconstruct and carefully reconstruct buildings with the least use of material resources possible? In this context, one would expect, or at least hope, that architects and designers could lead the profession out of wasteful and unsustainable practices. As a design system, architecture has the tools to move the building industry in a radically different direction—rethinking old habits of extraction and production, right down to the detail of the material choices we make.

### **Where Can We Turn for Alternatives?**

Architects and designers cannot continue with business as usual; they must change their attitude and get involved by rejecting the traditional frameworks in the profession and on the building site. They, we, can't hope for excuses to be accepted any longer. Everyone needs to develop, offer, ask for, advocate for, and apply alternatives. The profession needs to mobilise socially and politically to imagine a new and better world. We must question our whole world thinking and accept that the core problem lies in the Western paradigm of a frontier mentality that focuses on individual benefit. However, if we question our capitalist thinking and framework, where is there left to turn? Maybe we need to imagine a world where ask not how much, but how little we can build. A world where architecture and design do whatever they can to contribute to change but do not assume that a new building or a new design object is the best answer to any design problem. Reflecting on what role architecture and design could play today, while working within a capitalist system that seems not to allow for operating outside of the flows of goods and finance, can we find value and solutions in turning to Indigenous thinking?

15. Tyson Yunkaporta, *Sand Talk: How Indigenous Thinking Can Save The World*, (Melbourne: The Text Publishing Company, 2019), p 167.

This paper argues that architects in Australia and our societal stakeholders could learn alternative approaches from the wealth of knowledge held within the more than 60,000-year-old Indigenous culture. We have applied a Western perspective of continuous growth for too long—treating land as a commodity, an ongoing expression of a colonial attitude towards our environment. As we experience the impact of climate change on a larger scale, there needs to be a different philosophy and relationship to Country and non-human species. To start learning, we need to start listening and understanding. Tyson Yunkaporta writes in his book 'Sand Talk', that 'the only sustainable way to store data long term is within relationships—deep connections between generations of people in custodial relation to a sentient landscape, all grounded in a vibrant oral tradition'.<sup>15</sup> Architects and designers must listen to and learn from both Indigenous knowledge and Country, and in doing so, form meaningful relationships with both. We must learn to think about and see the world from an Indigenous perspective.

We must clarify that this paper and the discussion on how we could undo polarities between Western and Indigenous knowledge systems is from our perspective, starting to engage with Indigenous Aboriginal Corporations in the context of a Master design studio. Since then, we

have been eager to expand our understanding of how architecture and architects can learn and engage with the longest living culture in the world. We are not scholars with knowledge of anthropology or social science or even expert environmentalists. However, we hope that by integrating this learning within a design studio, raising these questions will encourage students, our future architects, to start asking questions of the current professional paradigm. Furthermore, we hope it begins a lifetime of listening, learning and relating to Indigenous knowledge, Culture and Country.

16. Tyson Yunkaporta, *Sand Talk: How Indigenous Thinking Can Save The World*, (Melbourne: The Text Publishing Company, 2019), p 172.

17. *Ibid*, p45.

As architects, we understand that places and buildings are complex systems, informed and influenced by politics and histories, heritage and stories, shifting programs, and use and meaning. For Indigenous First Nations' people, this understanding extends to any site or locale. As Yunkaporta writes, 'oral cultures are known as high-context or field-dependent reasoning cultures. They have no isolated variables: all thinking is dependent on the field or context'.<sup>16</sup> This field of context extends across all space and time in a non-linear way—from cities and towns to fields and forests. A Western eye perceives a duality between untouched nature and designed environments. We construct boundaries through time and space, particularly regarding historical periodisation, which could be considered an us-and-them approach. This approach contrasts the a-temporal nature of indigenous Australian concepts of place and story; the colonial and capitalist concept of 'land' and its reduction to a transactionally derived thing called 'property'. Indigenous thinking sees no boundary. The western historiographical approach allocates indigenous culture as a time period and polarises it in contrast to the western worldview. However, both cultures are now co-evolving and co-existing. Yunkaporta writes about Creation Time 'Nothing is created or destroyed; it just moves and changes, and this is the First Law. Creation is in a constant state of motion'.<sup>17</sup> The colonial heritage that decimated First Nations people and Country now forms an ongoing part of Country. This co-existence raises the question of how historians can recognise different cultural systems without applying their own assessment and referential system to another cultural framework; such an act is colonial in its own right.

18. Paul Memmott, 'Aboriginal Signs and Architectural Meanings Part 2', *ATR (Architectural Theory Review)*, 1997, p38-64.

19. Bill Gammage, *The Biggest Estate on Earth: How Aborigines made Australia*, (Crows Nest: Allen & Unwin, 2011).

20. Paul Memmott, 'Aboriginal Signs and Architectural Meanings Part 1', *ATR (Architectural Theory Review)*, 1996, p79-100.

21. H  l  ne Frichot and Rochus Hinkel, *Voices of Country*, (Ars Electronica, 2020), [https://ars.electronica.art/keplersgardens/files/2020/08/Utopia-Voices\\_of\\_Country-Essay.pdf](https://ars.electronica.art/keplersgardens/files/2020/08/Utopia-Voices_of_Country-Essay.pdf) (accessed 7th June 2021).

22. "Giyakiki: Our story", Djaara Balaki Wuka, accessed July 2020, <https://djadjaurrung.com.au/giyakiki-our-story/>.

From the Indigenous viewpoint, what a Western eye sees as untouched nature may be a carefully managed, cultivated and abundant commons with complex relationships to past, present and future living patterns of all organisms. Remnant areas of indigenous land management tell of this more respectful mode of occupation in need of no signed agreement, nor acts of oppression and denigration.<sup>18, 19</sup> In settler-colonial Australian history, the Western logic of property rights determines that a deed or title can secure land and its resources. As a result of colonisation, Indigenous land was cleared, walls raised, and fences constructed:<sup>20</sup> 'A fence defines a land claim, saying "...mine and not yours."<sup>21</sup>

We need to learn a more holistic and respectful understanding, reading, and engagement with the built and natural environment based on respect and caretaking. Moreover, this holistic understanding may even break down the dualistic barrier between the built environment and 'nature'. This holistic and respectful understanding is needed if we hope to protect and preserve Country and its natural-cultural conditions, respecting its histories and stories, for future generations.<sup>22</sup>

23. Anthony Preus, *Historical Dictionary Of Ancient Greek Philosophy* (Lanham, Md.: Rowman et Littlefield, 2015). P 348.

We began to explore these questions in a Master Design Studio, Studio 40, at the graduate school in the Melbourne School of Design (MSD), University of Melbourne. We attempted to develop creative and utopian proposals that address the numerous environmental challenges we face. We explored different ways of thinking, working and relating to the world by expanding our perspective beyond the built towards the living and the lived. Throughout the semester, we learnt by reading authors such as Paul Memmott and Bruce Pascoe. Moreover, we orally engaged with Indigenous knowledge by listening to Rodney Carter, the CEO of the Dja Dja Wurrung Clans Aboriginal Corporation. We acknowledged that looking at former farmland in regional Victoria as our investigation site removed us from the more challenging questions related to the colonisation of Country through architecture and city-building. As much as architecture is a manifestation of civilisation, it is at the same time the construction of a colonial system. Even with the greek polis, anyone outside was deemed a barbarian.<sup>23</sup> The larger question, which would need to be addressed in another paper, would be how urban agglomerations are becoming part of an Indigenous understanding of Country—they are not other to Country. Something that has been explored through the ARC grant 'Re-Making Indigenous Place in Melbourne' at the Melbourne School of Design before.

One of the challenges we faced was our doubt about whether we were competent enough to engage with questions of Country. Would our expressed interest be seen as yet another attempt of colonisation? We discussed our concerns with our colleague Jefa Greenaway, who has developed a training module for staff at the Melbourne School of Design on Indigenous cultural competencies. Greenaway reassured us that the attempt to start listening and learning is worthwhile; we should feel uncomfortable, but by remaining respectful and learning from mistakes, we could take positive steps forward. While it's only possible to learn a little within the duration of a single design studio, it at least begins a conversation with students and colleagues that will, at least for some, remain ongoing. The studio allowed students and teachers alike to question our Western bias, seeking to acknowledge other points of view instead.

24. Architectureau, 'SuperStudio 2013: winners announced', Architectureau, Published August 2013, <https://architectureau.com/articles/superstudio-2013/>.

25. Nicole Henderson, Emily Palmer & Jordan Simcock, 'Confronting Boundaries', Confronting Boundaries Blog, September 2013, <https://confrontingboundaries.wordpress.com/>.

26. Studio Bower, "About Bower", Bower Studio, Accessed 08 November 2021, <https://bowerstudio.msdl.unimelb.edu.au/about/about-bower>.

27. Rochus Hinkel & Dr Peter Raisbeck, 'Politics and Utopia in Architecture: Indigenous Knowledge Systems', MSD at HOME, 29 March 2021, <https://www.youtube.com/watch?v=1TuhMCdH59g&t=11s>.

The studio was another step forwards in the short history of pedagogical engagement with Indigenous Knowledge. Earlier engagement includes 'SuperStudio', a twenty-four-hour design competition run by SONA. Devised by four Indigenous architects and artists in 2013, the brief, 'Refuge of Discomfort', challenged students to consider a 'design solution that provides comfort and refuge while acknowledging a history of tension and injustice towards Aboriginal and Torres Strait Islander peoples'.<sup>24,25</sup> At the Melbourne School of Design, The University of Melbourne Bower Studio is a series of 'consult, design and build' projects that 'involve students working alongside indigenous groups in remote locations in Australia, Thailand and Papua New Guinea to improve their built environments'<sup>26</sup>. In 2021 one of the authors co-hosted with Peter Raisbeck a panel discussion on Indigenous knowledge systems during the Melbourne Design Week, as part of a series of conversations under the framing title: Politics and Utopia in Architecture.<sup>27</sup> The panel included Leonard Clarke (Uncle Lenny), a Kirrae Whurrong Elder from the Western District of Victoria, and Dr Christine Phillips, who collaborated in a design studio at RMIT

28. Robertson, Hannah, Debbie Ross-Symonds, & Pippa Connolly, 'Designing the Olkola Cultural Knowledge Centre: A Traditional Owner-Led Integrated Research and Education Process', *Proceedings of the 54th International Conference of the Architectural Science Association (ANZAScA) 2020* (November 2020), The Architectural Science Association, pp.375-384.

University. Dr Hannah Robertson from the Melbourne School of Design also participated. Robertson has worked on building and design projects in collaboration with Indigenous communities in Cape York and Arnhem Land.<sup>28</sup> Professor Barbara Glowczewski also participated, a researcher at the National Scientific Research Center (CNRS) and member of the Laboratory of Social Anthropology (CNRS/EHESS/Collège de France). Glowczewski is an anthropologist specialising in Australian Indigenous issues, recognition strategies, Indigenous networks, and alternative collectives for social and environmental justice against ecocide. These are but a few examples of attempts to include Indigenous knowledge into pedagogy.

In Studio 40 our discussion led to questioning architectural expression, composition, aesthetics, and even technology. Instead, an appreciation of the impact of reducing the footprint of buildings was considered when we asked each other: how much do we really need to build? We shifted our focus away from constructions that last to materials and constructions that could be built by laypersons—structures that might primarily offer shelter and become signifiers of places and spaces for cultural production, exchange and food production. The projects in Studio 40 ranged from fire towers (figure 1) that celebrate and observe controlled burnings to aviaries (figure 2) that focus on endangered species, thereby displacing the exceptionalism of humans.



Figure 1 : Firetower, Maria Bulmaga, Studio 40, 2020.



Figure 2: Aviary, Dylan Newell, Studio 40, 2020.

In Studio 40 we learned about the representation and communication of architecture itself, whilst aiming to understand buildings, not as objects, but as part of a larger spatial system: a living system that changes over time. We explored how we could learn from storytelling and tell new stories ourselves. Moreover, we tried to eliminate unnecessary architectural gestures, focusing on working with existing stories of Country rather than reinventing the story from a western viewpoint. We aimed to build as little as possible and consider human needs alongside non-human needs. These discussions alone challenged our relationship to architecture and how we discussed its aims and roles—and we weren't always successful; our cultural habits can run deep, but we began a learning process.

We held several open discussions with guests too. We talked with Michael Fragstein, Digital Story Telling, from Buro Achter April, in Germany about the potential of using immersive digital technologies for storytelling. We listened to Brett Leavy talk about his project of reconstructing the landscapes of major settlements in Australia prior to the arrival of Western settlers. Brett's Aboriginal owned and operated digital studio, Virtual Songlines, uses gaming engines to create interactive pre-colonial landscapes one can wander through with an avatar, observing and participating in traditional cultural tasks such as gathering and hunting for food, ceremonies and fire-making. We invited H el ene Frichot, Professor of Architecture and Philosophy, MSD, to discuss feminist thinking, creative ecologies, and alternative concepts aimed at shifting orthodox perspectives. We learned from Professor Alex Felson, an ecologist and the Elisabeth Murdoch Chair of Landscape Architecture at MSD about integrated landscape systems with dispersed patch ecologies and why connectivity and smaller, nested systems play vital roles in larger systems. Moreover, we explored the history of the landscape. In this regard, students and tutors had to take a critical view of an ordinarily celebrated history, given that our site is a post gold rush volcanic landscape stripped of topsoil. The profit of the gold rush created regional cities that we celebrate for their architectural heritage, while the scars left on Country by the gold diggers have become less visible. In this context it is essential to recognise that architecture is often a manifestation of colonialism.

Students developed a 'program' or 'function' for the site, which often led to discussions about alternative socio-political systems and frameworks. Some proposals established a co-ownership site similar to the counterculture approach of the 1970s. Alternative models for society, construction and maintenance, and care for the site and its program often relied on volunteers by establishing a system outside of the economic logics of payment and salaries. Some designs focused on providing temporary accommodation for people in need, while others centered around facilities for food production, harvesting, and processing, or even included research laboratories for indigenous plants and seed production. Architecture was imagined as changing over time and developing slowly based on local material availability and production, holding onto a concern for environmental impact.

This approach faced us with the challenge of representing minor interventions; small architectural gestures that might have been read more as part of the landscape rather than as a mark of human

occupation on Country. Proposals were heavily influenced by our understanding of Indigenous relationships to Country—the impression this care and management leaves on Western eyes is often that of minimal intervention. In fact, the intervention might not be that minimal, but it comes with a greater respect to what exists already in the place. Within a pedagogical system that regularly rewards overt gestures, learning to make and represent subtle acts can be difficult—students and teachers alike can fall into the trap of equating more with better, when in reality, doing less requires as much, if not more creative thought.

29. Carly Grace, et al., "*Yingabeal: The Wurundjeri scarred tree at Heide Museum of Modern Art*", (Melbourne, Australia: Heide Museum of Modern Art, 2016), <https://vimeo.com/174616022>.

This is seen in scar trees, such as Yingabeal at Heide (figure 3). The minor act of removing a portion of bark from a tree recognises natural patterns (figure 4) and works within this context. It is an act of harvesting that interfaces with a living system while maintaining balance. It is an act of reciprocity that recognises how much can be used, turning the tree into a 'marker tree'<sup>29</sup> while also creating opportunities for other organisms, such as insects and fungi, without killing the tree. It is no accident that western eyes don't often notice these subtle scars—we are attuned to more prominent semiotic acts of destruction and domination. We, as architects, can learn to develop similar approaches for the building and construction industry.



Figure 3: Yingabeal, the scar tree located at Heide Museum of Modern Art, Photo: Dylan Newell.



Figure 4: A naturally scarred tree in Royal Park, Melbourne, Photo: Dylan Newell.

As a response to these challenges of representing minor interventions or design acts we explored the use of storytelling in architectural discussions and as a mode of representation and communication, asking students to represent their proposals to reflect changes, adjustments of use and shifts of expression and experience over time. This representation would sometimes include visualising a proposal by considering the shift of daylight or changing seasons and weather. Moreover, representing change helped shift students' perception from a focus on architecture as an object and formal expression to a reading of space and time. It enabled students to relate better to place over time, acknowledging changing conditions and shifting uses.

The biggest challenge was and is how, as teachers and students, we can build relationships and establish a foundation of trust with the local First Nations people. How much are we superimposing our own views and research interests, for instance, the concept of the Anthropocene, onto our indigenous contacts? The struggle we face is making sure such pedagogical projects and their relation to ongoing research are relevant to and driven by Aborigines and not only by our own perceptions and ideas. While the studio is an opportunity and entry point to rethink pre-existing design knowledge paradigms, we need to acknowledge that we are also on a learning journey. Admitting one's own limitations is a primary step. There will be ongoing learning and failures, admiration paired with frustration and worries that one might fall into the same trap as early colonial settlers—underestimating Indigenous competencies only to push one's own agenda.

# A Story of Two Titles: The Torrens System and Parcel 702, Adelaide

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## Abstract

Although the catchment - the topographically defined edge where "all rainfall... drains naturally ... or is directed to by human intervention towards ... the catchment outlet [which may be immediately a creek, but ultimately is the ocean] " - is the most significant boundary for ecological function of landscapes, Raxworthy has argued that property boundaries and land tenure make it such that "landscape pattern is as much an emergent quality of capitalism as it is propensity[y] of [the landscape]." Despite its role in establishing the pattern of the landscape, landscape architects tend to treat property boundary as a given that is almost invisible when every act they do reacts to it in some way, necessitating, Raxworthy continues, a theorising of land tenure in landscape architecture. I hope to continue Raxworthy's project in this paper by examining the celebrated model of contemporary land titling - the Torrens System - in its place of origination - Adelaide - and explore the relationship between landscape, people and land titling.

Two of the things Adelaide is most famous for might seem complimentary but are actually contradictory: the Torrens System of title (which Atkinson, quoting Greg Taylor, calls ""South Australia's most successful intellectual export."" ) and the first successful determination Native Title in a capital city of Australia. Developed by Robert Richard Torrens, the "Real Property Act (1858)" (which subsequently became known as Torrens Title, or the Torrens System) and "simplify[ied] the Laws relating to the transfer and encumbrance of freehold and other interests in land," by creating a centralised registration system of actual land ownership, rather than simply deeds, removing potentials for contestation. In the developing world the Torrens System has been a very important tool in helping secure land title in post-colonial countries "[becoming] the norm in both Anglophone and Francophone colonial Africa," yet, as Leonie Kelleher has argued, the Torrens System effectively eclipsed the previous sovereignty of Aboriginal people in the very place of its creation.

## Introduction

1. Julian Raxworthy, "Land AS: Conflicting Definitions of Land – and Disciplinary Relations to It – in Landscape Architecture," *Urban Transcripts* 3, no. 5 (2020), <http://journal.urbantranscripts.org/article/land-as-conflicting-definitions-of-land-and-disciplinary-relations-to-it-in-landscape-architecture-julian-raxworthy/>.

2. Michael Atkinson, "Changing the Lie of the Land. The Torrens Title: 150 Years Old," *Bulletin (Law Society of South Australia)* 30, no. 7 (2008): 27.

3. House of Assembly, South Australia, "Real Property or 'Torrens Title' Act 1858" (1858), 143, <https://www.foundingdocs.gov.au/item-sdid-43.html>.

4. Carol Wilson Dickerman and Grenville Barnes, *Security of Tenure and Land Registration in Africa: Literature Review and Synthesis* (Land Tenure Center, University of Wisconsin-Madison, 1989), viii.

5. Leonie Kelleher, "The Story of Robert Torrens," *Kellehers Australia Barristers & Solicitors* (blog), 2015, <https://kellehers.com.au/news-flash/the-story-of-robert-torrens/>.

6. J Mortimer, *Agius v State of South Australia* (No 6) [2018] FCA 358, No. SAD 6001 of 2000 (Federal Court of Australia March 21, 2018).

I have argued that property boundaries and land tenure make it such that "landscape pattern is as much an emergent quality of capitalism [as it is a] propensity of [the] landscape."<sup>1</sup> Despite its role in establishing the pattern of the landscape, landscape architects tend to treat property boundaries as an 'invisible given' necessitating a theorising of land tenure in landscape architecture to which I hope to contribute. In this paper I examine the internationally celebrated model of contemporary land titling – the Torrens System – by exploring the relationship between landscape, people and land titling in its place of origination – Adelaide – in relation to two of the things Adelaide is most famous for which might seem complimentary but are actually contradictory: the Torrens System of title (which Atkinson, quoting Greg Taylor, calls "South Australia's most successful intellectual export."<sup>2</sup>) and the first successful determination of Native Title in a capital city of Australia.

Developed by Robert Richard Torrens, the "Real Property Act (1858)" (which subsequently became known as Torrens Title, or the Torrens System) "simplify[ed] the Laws relating to the transfer and encumbrance of freehold and other interests in land,"<sup>3</sup> by creating a centralised registration system of land ownership, rather than simply deeds, removing potentials for contestation. In the developing world the Torrens System has been a very important tool in helping secure land title in post-colonial countries "[becoming] the norm in both Anglophone and Francophone colonial Africa,"<sup>4</sup> yet, as Leonie Kelleher has argued, the Torrens System effectively eclipsed the previous sovereignty of Aboriginal people in the very place of its creation.<sup>5</sup>

One hundred and sixty years later – in what is known as the Kurna Peoples Native Title Claim – on 21st March 2018 the Federal Court of Australia a positive Native Title Determination in the case *Agius v State of South Australia* was made which restored some of that sovereignty, Justice Mortimer noting "this will be the first time that there has been a positive determination of native title over any area within the area of an Australian capital city," another significant first for Adelaide.<sup>6</sup> One of the specific sites closest to the city of Adelaide that the Kurna gained native title to is Parcel 702 in Belair, a small parcel of 1700 m<sup>2</sup> where title was not seen to have been extinguished. Parcel 702 is approximately 2km from Robert Richard Torrens own property Torrens Park Estate, now the site of Adelaide's Scotch College.

The landscape is a corporeal entity shaped by complex and dynamic geographical and cultural forces, with each place having highly specific qualities. Despite this, land ownership tends to be highly transactional and abstract and often bears little relationship to lands corporeality, often divided according to tropes of surveying or financial yield. If landscape is marked physically by traces of processes, so too is land title, which is shaped by iterative transactions to produce odd parcel shapes often with little – or negative – relation(s) to land. After introducing Torrens Title, in this paper I will cast a lens on the titling process of these two nearby places and moments in their titling processes, placed in relation to their physical landscapes. I will show that the acquisition of Torrens Park almost 200 years ago began as a totally abstract series of placeless transactions by Torrens father that then

focussed on highly valued land from the Kurna, while the contemporary Kurna were only able to acquire a parcel in their successful Native Title Claim that was an 'artifact' of previous land titling operations, a remnant from prior to Torrens Title found through hurried GIS mapping.

## The Torrens System

7. It was Torrens-senior after whom Adelaide's River Torrens was named.

Arriving in South Australia in 1840, six years after South Australia was established as a British Province in an act by the British Parliament, Sir Robert Richard Torrens was quickly involved in colonial government as a collector of customs, possibly due to his fathers involvement in the establishment of South Australia. Torrens' father, economist and Royal Marine officer Robert Torrens [who I shall refer to as "Torrens-senior" throughout], was chairman of the South Australian Colonization Commission – and one of 13 colonial commissioners located in London – from its establishment in 1835 until it was replaced under the South Australia Act 1842.<sup>7</sup> Torrens-senior is relevant to this discussion because of property transactions he conducted remotely – never travelling to South Australia – that secured the land that would become his sons at Torrens Park, its nature not yet known by Torrens-senior since it had only had its boundaries abstractly located at that stage.

8. Douglas J. Whalan, "Torrens, Sir Robert Richard (1814–1884)," in *Australian Dictionary of Biography* (Canberra: Australian National University Press, 1976), <http://adb.anu.edu.au/biography/torrens-sir-robert-richard-4739>.

Despite a reputation for being difficult, Torrens later became treasurer & registrar general for the colony and was nominated as a member of the Legislative Council, becoming a member of the Executive Council in 1855 and "the next year [1856] he joined in the land title registration crusade".<sup>8</sup> The final, resultant piece of legislation assented to by the House of Assembly, South Australia on 27th January 1858 was entitled the "Real Property Act", and its purpose was to "simplify the Laws relating to the transfer and encumbrance of freehold and other interests in land,"<sup>9</sup> since deed processes meant that legal fees could be greater than the cost of the land itself at the time.

9. House of Assembly, South Australia, Real Property or "Torrens Title" Act 1858, 143.

10. Whalan, "Torrens, Sir Robert Richard (1814–1884)."

Whalan describes the principles that comprise the Torrens System, "an important legal reform that is indigenous to Australia", as follows: "1. Land titles no longer passed by the execution of deeds but by the registration of dealings on a public register; 2. Once registered the title of a purchaser became indefeasible unless he was guilty of fraud; 3. and innocent dealers with interests in registered land were guaranteed either their interest in the land or monetary compensation therefor."<sup>10</sup> Writing on the Torrens System on its 150 year birthday in 2008, then South Australian Attorney-General Michael Atkinson noted it is difficult for land owners now to "appreciate what a revolution was sparked by this new way of thinking about land title" because they were blessed "with never knowing how fraught the system used to be."<sup>11</sup> By 1905, American James Edward Hogg was referring to the system created by the Real Property Act using Robert Torrens' name in the title of his book "The Australian Torrens System",<sup>12</sup> and indeed it is now universally known as "The Torrens System (which is what I refer to it as in this paper) or "Torrens Title". However, Murray Raff argues, like others, for "the influence [of] German jurisprudence... on the development of the Torrens system and on land registration systems internationally,"<sup>13</sup> a desire to include a "'Teutonic influence' [underpinning] the importance of gaining the assistance of Dr juris Ulrich Hübbe [1805-1892] for the Torrens reform group."

11. Atkinson, "Changing the Lie of the Land. The Torrens Title: 150 Years Old," 26.

12. James Edward Hogg, *The Australian Torrens System: Being a Treatise on the System of Land Transfer and Registration of Title Now in Operation in the Six States of the Commonwealth of Australia, the Colony of New Zealand, and Fiji and British New Guinea. Including the Text of the Torrens Statutes and Ordinances in the Nine Territories, and References to Other Statutes Relating to Land, and an Historical Account of the Growth of the System* (W. Clowes, 1905), <https://books.google.com.au/books?id=rXktAQAAAJ>.

13. Murray Raff, "Torrens, Hubbe, Stewardship and the Globalisation of Property Law Systems," *Adelaide Law Review* 30, no. 2 (2010): 245.

14. Ken Preiss and Pamela Oborn, *The Torrens Park Estate: A Social and Architectural History* (Underdale, South Australia: Ken Preiss & Pamela Oborn, 1991). As an aside, my original intention for this paper had been to do exactly what Preiss and Oborn had done 30 years earlier.

15. South Australia. Town Planning Committee, *Report on the Metropolitan Area of Adelaide 1962 / Prepared by the Town Planning Committee*, Accessed from <https://nla.gov.au/nla.cat-vn2237013> ([Adelaide]: Government of South Australia, 1962).

16. Christine Bender and Susan Pidcock, "Quarries and Quarrymen of the Foothills," in *Valleys of Stone: The Archaeology and History of Adelaide's Hills Face*, ed. Pam Smith, F.Donald Pate, and Robert Martin (Belair, South Australia: Kōpi Books, 2006), x.

17. Pam Smith and F.Donald Pate, "The Adelaide Hills Face Zone, 1836-1936: A Significant Cultural Landscape," in *Valleys of Stone: The Archaeology and History of Adelaide's Hills Face*, ed. Pam Smith, F.Donald Pate, and Robert Martin (Belair, South Australia: Kōpi Books, 2006), 1.

18. Preiss and Oborn, *The Torrens Park Estate: A Social and Architectural History*, 5.

19. Preiss and Oborn, 6.

20. Jacob Kochergen, "Sleeps Hill Quarry Reserve Maintenance Plan" (City of Mitcham, 2005), 4.

21. Mitcham Local History Service and Heritage Research Centre, "Hills Face Across Mitcham" (City of Mitcham, 2004), [https://www.mitchamcouncil.sa.gov.au/\\_\\_data/assets/pdf\\_file/0041/89888/hills\\_face\\_zone\\_mitcham.pdf](https://www.mitchamcouncil.sa.gov.au/__data/assets/pdf_file/0041/89888/hills_face_zone_mitcham.pdf).

To demonstrate the difference between the previous title system and the Torrens System, authors Ken Preiss and Pamela Oborn – in their book about Torrens Park Estate – show the different scale of documentation of the Old System compared to the Torrens System using themselves as models with the actual title documents for Torrens Park. Dwarfed by maps and pages surrounding him, Preiss is surrounded by the numerous deeds required to confirm ownership due to the Old System, while Oborn simply presents a single large ledger open in front of her when the same ownership was confirmed under the Torrens System.<sup>14</sup>

## Two Landscapes

Both Torrens Park and Parcel 702 are part of the Local Government Area (LGA) of the City of Mitcham, and are included in "The Hills Face Zone" which was proposed in the *Report on the Metropolitan Area of Adelaide: 1962*<sup>15</sup> and formally protected in 1967. The Hills Face Zone is "defined by the western face of the Mount Lofty Ranges and extends for approximately 90 kilometres from Sellicks Hill south of Adelaide to Gawler, north of Adelaide,"<sup>16</sup> and was protected in recognition of their important and ongoing role in the Adelaide landscape, "those enchanted hills", as Colonel Light referred to them in 1836,<sup>17</sup> forming the backdrop to the city. The Hills Face Zone runs north-east/south-west, with Torrens Park located on the rolling foothills of Brownhill Creek, north of Parcel 702, which is located on the rocky slopes of Sleeps Hill.

## Torrens Park

Describing the landscape that would later become Torrens Park, Preiss & Oborn quote Pastor William Finlayson, who arrived in 1837, initially helping with grazing South Australian Company sheep on the site. Finlayson referred to the landscape as "park lands", describing "land... thickly, I might say densely, timbered with peppermint [*Eucalyptus odorata*] or boxwood [*Eucalyptus macrocarpa*]."<sup>18</sup> Both Finlayson and Allen referred to the difficulty of cutting down the thick woodlands on the site. River Redgum (*Eucalyptus camaldulensis*) were also present on Brownhill Creek, of which a remnant tree, the "Monarch of the Glen", remains. Finlayson notes that Kurna people had a settlement along Brownhill Creek, which was described by another settler, James Allen, as a "little brook, which runs between [Brown Hill] and Flagstaff Hill".<sup>19</sup>

## Parcel 702

In contrast, Parcel 702 is part of a steep, rocky landscape in the same range to the south, the site comprising sandstones and quartzites, covered in coppiced regrowth of Grey box (*Eucalyptus microcarpa*), together with Drooping Sheoak (*Allocasurina verticillata*) woodland with Golden Wattle (*Acacia pycnantha*). Its geological properties made it suitable for extraction, and nearby are quarries that opened in 1916, where quarrying of rock for aggregate and for sand continued until the 1950's.<sup>20</sup> The area around Parcel 702 is the Sleeps Hill Quarries Reserve which was declared in 1970 by the City of Mitcham.<sup>21</sup> Despite proposals

in the 1990's to fill and then revegetate the quarries community appreciation of their heritage values lead to their preservation and inclusion into the State Heritage Authority Register.

The differences between the two landscapes – Torrens Park and Parcel 702 – are stark, the former gently undulating woodland by water and the latter dry rocky hills with a scrubby character. However, while these landscapes are different and the contrast in value between them great, both are part of the same landscape morphology and both were – and still are – Kurna lands, even if Native Title has been extinguished at Torrens Park. Establishing the landscape as a material, territorial (and presumably spiritual, for the Kurna) entity in the first instance is an assertion of the specific corporeality of the place. In the following I shall contrast this with the entirely legal and transactional operations that have governed this landscape's ownership and geometries of title, intersecting but abstract of this corporeality.

## Two Titles

Referred to earlier, when Preiss & Oborn demonstrate the difference of title evidence before and after the Torrens System, what they demonstrate is the nature and of title documentation. This reveals that title is largely an administrative affair abstract of place, or landscape corporeality as I have been calling it. If this were not an abstract enough conception of land, then the mechanisms by which the shape of the land of both Torrens Park Estate & also Parcel 702 were arrived at is revealed as particularly abstract, the former starting as a purchase of rights to land not yet specified, and the latter as a left over of successive subdivision processes.

## Torrens Park Estate

22. Michael Llewellyn-Smith, *Behind the Scenes* (University of Adelaide Press, 2012), 31, <http://www.jstor.org/stable/10.20851/j.ctt1sq5wvd>.

23. John Arrowsmith, *The District of Adelaide, South Australia [Cartographic Material] : As Divided into Country Sections / from the Trigonometrical Surveys of Colonel Light, Late Survr. Genl.*, Cadastral Map (London: John Arrowsmith, 1839), [https://www.flickr.com/photos/state\\_library\\_south\\_australia/8399506431](https://www.flickr.com/photos/state_library_south_australia/8399506431).

24. Preiss and Oborn, *The Torrens Park Estate: A Social and Architectural History*, 4.

Originally owned by Torrens-senior, Torrens owned a property called Torrens Park Estate, located in the foothills of the Mount Lofty Ranges, adjacent to the town of Mitcham, which predated it. The Colonial story of Torrens Park Estate commences abstractly in 1835, before Colonel Light had surveyed the 515 "Country Sections" of 134 acres each [54.42 hectares] outside Adelaide that were orientated on a north-south and east-west grid.<sup>22</sup> In a reproduction of Colonel Light's survey from 1839,<sup>23</sup> what later became Torrens Park is located alongside a waterway called "Brown Hill Rivulet" – called Wirraparinga by the indigenous owners, the Kurna and subsequently Brownhill Creek – in Sections 245, 246, 247, 248, and un-surveyed parts of adjacent Brown Hill. Section 246, the main site of Torrens Park is identified on this map as owned by George Barnes, who was the Treasurer to the Board of Commissioners, while those around it were shown as still owned by "S.A.Co", presumably by the South Australian Colonization Commission. In 1835 George Barnes purchased "six preliminary land orders" on behalf of Torrens-senior, which were not redeemed and specifically allocated until "7 March 1839 [when] George Barnes' used Preliminary Land Order No.22 to acquire Sections 246". Preiss & suggest that these lots were being held by Barnes and the Commission in the interim until Torrens-senior was able to organise payment for them.<sup>24</sup> It was not until 1846 that "a statutory

25. Preiss and Oborn, 18.

indenture of release" allowed them to become property of Torrens-senior,<sup>25</sup> however in the same year he sold Section 246 and his son Torrens bought it back in 1852, for double the price his father sold it for. It is interesting (and weird) to place this timeline of ownership of Section 246 in relation to Torrens' biography, it indicates that Torrens' senior had the land – which he had never seen – the year before his son arrived, but did not transfer it to his son. One might wonder about the role of this circuitous title process around Section 246 in Torrens' development of the Real Estate Act in 1856, 4 years after he bought it.

## Parcel 702

26. Mortimer, *Agius v State of South Australia* (No 6) [2018] FCA 358.

27. Mortimer.

In what is known as the Kurna Peoples Native Title Claim, on 21st March 2018 – almost twenty years after their initial application – in the Federal Court of Australia, Justice Mortimer made a Native Title Determination in the case *Agius v State of South Australia* based on a settlement between the Kurna Peoples Native Title Claim Group and the State of South Australia. Mortimer noted "it is not in dispute that at sovereignty, Aboriginal people lived in the claim area... from the time of white settlement," adding that "the original Aboriginal custodians of the land were affected in a unique way by the province of South Australia including the City of Adelaide and its surrounds and that the Applicant represents a group that has contemporary recognition by the state as representing those original inhabitants".<sup>26</sup> The Kurna peoples successful native title claim covered 7000 square kilometres South Australia and covered the city of Adelaide. However, paradoxically, even as Mortimer supported the Kurna claim in her Determination, she also noted that "it has always been clear to all parties that the intensive settlement of the Adelaide plains and its surrounds resulted in the early extinguishment of the vast majority of native title in the region"<sup>27</sup> This sobering assessment meant that even at the moment Native Title was established, it was also recognised to be gone in almost the entirety of that area apart from certain parcels where "...intense and targeted work has been performed to locate parcels within the determination area that have not been subject to extinguishing acts which wholly extinguish native title rights and interests". Parcel 702 is one of the parcels where title has not been extinguished.

28. Frazer S Crawford, *Township of Warnertown: Hundred of Napperby* (Adelaide: Surveyor Generals Office, 1873), <https://www.catalog.slsa.sa.gov.au/record=b2842305~S1>. Note that the Hundred of Adelaide is included in the Warnertown set.

29. Kochergen, "Sleeps Hill Quarry Reserve Maintenance Plan," 3.

Apart from its boundary shown on cadastral plans, no physical features reveal Parcel 702's existence, and it blends into bushland. This area exists south-west of Torrens' sections, in areas that were unsurveyed in the original Light survey but appear in a map of Adelaide's Hundreds from 1873. It shows the possible provenance of this site, located to the west of Sleepshill, an un-labelled triangle nestled between lots 261, 1147 and 1073.<sup>28</sup> In 2005 a Maintenance Plan for the Sleeps Hill Quarry Reserve described "a native title claim on Parcel 702 (CR5764/6990 which is approximately 1,700m<sup>2</sup> in area and situated on the reserve's eastern boundary... [whose] title... [appears to] overlap a portion of Quarry J."<sup>29</sup> Despite being included in "Schedule 3 – Land and waters where native title exists (Native Land Title)" and listed as a "Portion of Sleeps Hill Quarry Site" in the Determination appendices, the overall Native Title Determination of the Adelaide area and its ILUA are shown only as a broad zone on the state government Location SA Map Viewer, which does not designate this specific parcel using either the Native

Title Register or Native Title Schedule legend, with only “Other interests (Council with care, control and management)” listed for the parcel, that include “Public Bike Trail, Waterworks easement over southern portion. (City of Mitcham).” In the same mapping portal however, the reason why this parcel may have been chosen – amongst much surrounding municipal reserve land that might have still been included is – is indicated in the “Date From” field for Parcel 702 which is listed as 29/10/1846, while all the adjacent parcels around it date from the period 1994-1995. Thinking back to Judge Mortimer’s description of “intense and targeted work... performed to locate parcels”, one can imagine a GIS mapping process that used “Date From” as a criteria, which found the parcel by looking for Crown land with the oldest un-transferred title dating back to Colonial times, within 10 years of the adoption of the Torrens System.

## Conclusion

30. Eric Willmot, *Pemulwuy, the Rainbow Warrior* / by Eric Willmot, Accessed from <https://nla.gov.au/nla.cat-vn1485300> (McMahons Point, N.S.W: Weldons, 1987).

Reflecting on Torrens Park Estate and Parcel 702, a key conclusion that I have argued throughout is that there is a great disconnect between land as a something with specific qualities, histories and values, and the administrative processes of ownership. For First Nations people, the fact that they must focus on the latter when the nature of their unique connection to land is primarily based on the former renders the establishment of ownership of Parcel 702 as an important but nonetheless Pyrrhic victory. Although directly unrelated, Eric Willmot’s imagining of a similar recognition by the indigenous warrior Pemulwuy in his fictionalised account seems pertinent: looking at a landscape edged in by fences, Pemulwuy reflects that his fighting about territory that is finite and demarcated like it is by colonists is already an abdication of his cultures totally different way of understanding land.<sup>30</sup>

31. Tyson Yunkaporta, *Sand Talk: How Indigenous Thinking Can Save The World* (Melbourne: Text Publishing, 2019), 13.

Tyson Yunkaporta has noted that the “the recently imposed ‘authenticity’ requirement of declaring an uninterrupted cultural tradition back to the dawn of time is a difficult concession for most of us to make, when the reality is that we are affiliated with multiple groups and also have disrupted affiliations.”<sup>31</sup> Considering that the aim of the Torrens System was to bring to a close a previous tenure system that required copious proof and the collection of previous deeds to demonstrate continuity of ownership, the requirements that indigenous people must use to prove authenticity – as Yunkaporta tells us – resemble closely the pre-Torrens system.

32. Raff, “Torrens, Hubbe, Stewardship and the Globalisation of Property Law Systems,” 246.

For Murray Raff, understanding the relationship between the Hanseatic German system and the Torrens System (which drew on it) allows for an “evolution of principles of equity... in law reform methodologies... especially with respect to environmental responsibilities.”<sup>32</sup> Here “environment” might be a proxy for place, for specificity, something which is absent from the Torrens System which is transactional and premised on ownership for the sake of capital and potential of sale. In reflecting on the Kurna claim and their unextinguished title of Parcel 702, what they were forced to prove was actually a continuity of occupation prior to the existence of titles, a linkage to landscape, to place. Perhaps this is a requirement that needs to be applied to all owners of land, where land is not just a transaction but something with a body, something to which we are responsible.

# ULTRA

## **Positions and Polarities Beyond Crisis**

### **SESSION 3: *Housing and Context***

# Beyond the 1968 Battle between Housing Commission, Victoria, and the Residential Associations: Uncovering the Ultra Positions of Melbourne Social Housing

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## Keywords

Housing Commission  
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Melbourne  
Fitzroy  
Carlton  
Housing

## Abstract

In 1968, the Housing Commission, Victoria, built a series of high-rise towers in response to an identified metropolitan planning issue: urban sprawl and the outward growth of metropolitan Melbourne. This "solution" precipitated a crisis in urban identity. The construction of the first of a series of these modern high-rise towers at Debney Park Estate, Carlton and Park Towers, South Melbourne displaced significant immigrant communities. This became the impetus for the formation of Residential Associations who perceived this project a major threat to existing cultural values pertaining to social and built heritage.

This paper examines the extremely polarising events and the positions of both the Housing Commission and the Residential Associations over the course of fifteen years from 1968. The research is grounded in an historical review of government papers and statements surrounding the social housing towers, as well as scholarly articles, including information gathered by Renate Howe and the Urban Activists Project (UAP, 2003-2004). The historical review contextualises the dramatically vocal and well-publicised positions of the Residential Associations and the Housing Commission by reference to the wider social circumstances and the views of displaced community groups. Looking beyond the drama of the heated debate sparked by this crisis, the paper exposes nuances within the positions, investigates the specifics of the lesser known opinions of displaced residents and seeks to re-evaluate the influence of the towers on the establishment of an inner urban community identity.

## Introduction

1. Alan Weedon, "Melbourne's public housing coronavirus lockdown tells a story of two cities", *ABC*, July 9, 2020, <https://www.abc.net.au/news/2020-07-09/flemington-north-melbourne-public-housing-lockdown-two-cities/12431898>.

2. Renate Howe, *New Houses for Old; Fifty year of public housing in Victoria 1938-1988*, (Melbourne: Ministry of Housing and Construction, 1988), 21.

3. Howe, *New Houses for Old*, 21.

In response to the Covid-19 outbreak in July 2020, the low socio-economic migrant communities of nine public housing towers in Melbourne's inner-city were forced into hard lockdown, the residents confined within these high-rise, high-density tower blocks.<sup>1</sup> More than ever, attention has turned to these 20-30 storey housing towers built in the 1970s, with dated and inadequate ventilation systems, poorly ventilated communal spaces (corridors, staircases, laundries, elevators), and highly vulnerable residents. Reflecting on the origins of the towers has highlighted the disparity between the original idealised governmental intentions embedded in the towers and the architectural outcome that alienated residents, then and now. In 1968, when the Housing Commission, Victoria, (HCV) built the first of the forty-seven high rise towers in Melbourne's inner city suburbs they were representative of an exciting new building typology that would help cement "Modern" Melbourne on the world stage. They were part of a solution to a growing housing crisis in the city of Melbourne. The Housing Commission had been working toward solving this problem since the publication of the 1930s Housing Investigation and Slum Abolition Board Report, which resulted in the formation of the Housing Commission in 1937.<sup>2</sup> Spurred on by the "Modern" decisions and proposed actions of the HCV, Residential Associations organised protests and formed a movement to voice concerns over the demolition of the perceived slums, claiming that the proposed developments of the high rise towers did not respect the lives of the people, mainly migrants, who lived in these areas.<sup>3</sup> The rise of the associations and the HCV actions that followed created a marked rift between the opposing sides and caused the inner-city suburbs of Melbourne to question, develop and articulate their ideals about community identity.

4. These interviews have been conducted as part of a social history project, that presents the "life and times" of Fitzroy from the 1950s onwards. As such, there is an even mix of migrant residents and "WASPs" who have been interviewed. It can be observed in the interviews, however that the "WASPs" have strong political memories of Fitzroy and the HCV, whereas the migrants recount the action of the HCV as simply something that happened, focusing instead on the meaning and value of their own homes, jobs, and social circles rather than the politics of the housing issues.

This paper re-examines the events and positions of the HCV and the Residential Associations, comparing their influences and intentions to determine the fundamental drive behind the call to action that both groups engendered. The historical review contextualises the vocal and well published positions of the Residential Associations and the HCV with reference to wider social circumstances. Specifically, it elaborates on the positions of each group. First, the paper investigates the perceptions of the HCV through a historical review of government papers and statements surrounding the social housing towers. Second, drawing on the existing work of historian Renate Howe and the work of the Fitzroy Historical Society's *Oral History Project*, it highlights the voices of displaced residents.<sup>4</sup> The paper brings forward nuances within the positions, and re-evaluates the impact of the towers on Melbourne's inner urban fabric and the articulation of community identity.

### "Marvellous Melbourne": Setting the Scene

5. David Islip, '1956 Olympic Decorations: The Final Fling', *Fabrications*, 11 no. 1, (2000): 29.

With the excitement of the impending 1956 Olympic Games, Melbourne began reimagining itself. The city became self-conscious and wondered what the world would think of a place that had been described as being "bland and British".<sup>5</sup> Historian David Islip explains that in particular the American press saw Melbourne as a polite, boring city that, with the influence of post war immigration and the enthusiasm for the coming

6. Islip, '1956 Olympic Decorations', 29.

7. John Hughson, 'An Invitation to 'Modern' Melbourne: The Historical Significance of Richard Beck's Olympic Poster Design', *Journal of Design History*, 25 no. 3, (2012): 278

8. Hughson, 'An Invitation to 'Modern' Melbourne, 278.

9. J.P Gaskin and R. Burkitt, *Report on Some Aspects of Housing Overseas*, (Melbourne: Housing Commission Victoria, 1958), ii.

10. Gaskin and Burkitt, *Report on Some Aspects of Housing Overseas*, ii.

11. Gaskin and Burkitt, *Report on Some Aspects of Housing Overseas*, ii.

12. Gaskin and Burkitt, *Report on Some Aspects of Housing Overseas*, 164.

13. Gaskin and Burkitt, *Report on Some Aspects of Housing Overseas*, 164.

14. Gaskin and Burkitt, *Report on Some Aspects of Housing Overseas*, 191.

15. Gaskin and Burkitt, *Report on Some Aspects of Housing Overseas*, 37.

16. Hugh Stretton, *Ideas for Australian Cities*, (Adelaide: The Griffin Press, 1970), 220

17. Philip Goad, 'Encyclopaedia of Australian Architecture' (Port Melbourne, Cambridge University Press, 2012), 343

18. Victorian State Government, Housing Act 1958, Part 1, Article 5 Paragraph 1.

Olympics, could change into something more promising.<sup>6</sup> The 1956 Olympic Games have become a significant marker in Melbourne's history – seen as the turning point between a British Melbourne, and a more modern city that turned to America for inspiration. Cultural studies scholar John Hughson claims that the Melbourne Olympics also provided a platform for modernists such as Frank Beaurepaire, previous Mayor of Melbourne and member of the Australian 1956 Olympic delegation, to experiment with new design ideas from across the world, even if only glimpsed through publications and architectural monuments.<sup>7</sup> Hughson argues that "Beaurepaire saw hosting the Olympic games as an opportunity to enhance Melbourne's reputation as a cosmopolitan city for international business. He thus encouraged 'futuristic' development, which at the time, largely meant high-rise buildings."<sup>8</sup>

Concurrently, Melbourne was facing a worsening housing shortage which persuaded the Housing Commission to investigate housing in overseas countries.<sup>9</sup> In developing solutions to the housing crisis that the HCV was battling, HCV employees Jack Gaskin and Ray Burkitt were sent on an international trip as part of an "investigation of housing matters in overseas countries."<sup>10</sup> One of the three principal matters for Gaskin and Burkitt to examine was "the construction and management of Multi-storey flats."<sup>11</sup> Their report outlined the advantages and disadvantages they found in relation to multi-storey flats. They argued that "by incorporating one or more high-rise buildings in a layout that would otherwise consist only of row houses, walk-ups and maisonettes it is possible to achieve a more pleasing aesthetic development."<sup>12</sup> They also found that these high-rises create "more open space on the ground of gardens, etc."<sup>13</sup> Overall they surmised that "In all overseas countries visited where slum reclamation or urban renewal schemes were being undertaken in the inner areas of large cities, the Housing Authorities have, without exception, adopted the same solution to the problem, namely, the erection of multi-storey flats."<sup>14</sup> Gaskin and Burkitt returned to Melbourne in 1958 with proof of the positive effects of high rise developments internationally. Their findings spurred on the quest for modernisation which the Olympics had already started in the city.

The HCV's desire to adopt Modernist design principles through aesthetic and economic frameworks resulted in integrating large open spaces with garden areas around the high-rise towers, and the use of concrete, enabling economically viable buildings with low maintenance costs.<sup>15</sup> As the efficiency of the design methods created large modernist high-rise beacons on the inner-city skyline, questions turned to their effects on the urban environment and the communities who lived there.<sup>16</sup>

### Position 1: The Housing Commission, Victoria

Established in 1937<sup>17</sup> the Housing Commission's objectives were "a) the improvement of existing housing conditions; and b) the provision of adequate and suitable houses for letting or leasing to persons who are displaced from reclamation areas or living under unsatisfactory housing conditions and to other eligible persons."<sup>18</sup> The HCV was given powers to investigate and report poor living conditions around Melbourne with

19. Victorian State Government, Housing Act 1958, Part 1, Article 5 Paragraph 2.

20. Victorian State Government, Housing Act 1958, Part 1, Article 5 Paragraph 2.

21. Housing Commission Victoria, *Report of the Housing Commission Victoria for the Year ended 30 June 1980* (Melbourne: Government Printer, 1981), 9

the consequential powers of “reclamation and re-planning insanitary housing”<sup>19</sup> and “the condemnation and demolition of insanitary obstructive and other houses and buildings.”<sup>20</sup> They sought to “improv[e] existing housing by establishing and enforcing adequate housing standards.”<sup>21</sup> In line with the findings from their investigation into housing solutions overseas, the HCV would adopt a modernist framework for this, maximising the number of people they could accommodate in the space available to them. The 1961 and 1966 HCV annual reports reflect the evolution of social housing designs, as the HCV developed technology to fulfil their desire for Modernist high-rise towers. The 1961 report documents the reasoning, success and excitement surrounding the building of the first and smaller high-rise tower, the 16-storey tower in South Melbourne. The 1966 annual report reveals the design process and construction of the 30 storey towers that would cause protests and residential anxiety in 1968. A comparison of these two reports allows the mapping and locating of key shifts in the HCV’s intentions as well as identifying the building development that occurred.

### *The Housing Commission, Victoria – the beginning of the High-Rise Movement*

22. Housing Commission Victoria, *Twenty Third Annual Report of the Housing Commission Victoria for the Period 1st of July, 1960 to 30th June 1961* (Melbourne: Government Printer, 1961), 5.

23. Housing Commission Victoria, *Twenty Third Annual Report*, 5.

24. Housing Commission Victoria, *Twenty Third Annual Report*, 5.

25. Housing Commission Victoria, *Twenty Third Annual Report*, 5.

26. Throughout the development of these plans there were a series of surveys conducted throughout the perceived slum areas, the first in 1937, detailing the slum conditions, and a series of follow up sample and suburbs specific studies done in 1938, 1939 and 1941 and 1943. These are detailed in Chapter 2 of Renate Howes’ *New Houses for Old*, 1988.

The annual report for 1961 details the construction and design of the 16-storey social housing tower and the surrounding ‘walk-up’ 4 storey flats in South Melbourne. Deemed “one of the most important works”<sup>22</sup> that the commission had carried out, the HCV describes the benefit of this first tower and the surrounding walk-up flats as being able to house “some 800 persons compared with the 284 who lived in the same areas prior to the reclamation activity by the Commission.”<sup>23</sup> They indicate that these densities were necessary due to the rise in the cost of acquiring the land, and further that they are “contributing in a significant way to the arrest of the suburban sprawl with its inherent costs.”<sup>24</sup> The project at South Melbourne reflected the ideal housing scenario as described in the Report on Overseas Housing, combining the use of walk-up flats, with more ambitious 16-storey tower designs in the same area. It also captured the changing architectural ideals that the HCV were experimenting with. Previously walk-ups had been firmly established as a method of designing higher density living across the city. Now, with demand for accommodation “greatly exceeding the number of dwelling units the commission can build with its reduced finance,”<sup>25</sup> the proposed high rise towers provided a way of building and accommodating people whilst working within the budget constraints given to them by state and federal governments. The combination of these housing designs represented the implementation of the modernist ideals, creating spaces for families in the lower walk-up flats and providing accommodation for single people and couples without children in the towers.<sup>26</sup>

### *Housing Commission, Victorian – High-Rises take over the Inner-City Suburbs*

Between 1961 and 1966 the Housing Commission stretched the design for the social housing towers from 16 storeys to 30 and abandoned the walk-up flats altogether. The walk-ups were no longer

27. Stretton, *Ideas for Australian Cities*, 220.

28. Stretton, *Ideas for Australian Cities*, 220.

29. Housing Commission Victoria, *Twenty Eighth Annual Report of the Housing Commission Victoria for the Period 1st of July, 1965 to 30th June 1966* (Melbourne: Government Printer, 1966), 12.

30. Housing Commission Victoria, *Twenty Eighth Annual Report*, 12.

31. Housing Commission Victoria, *Twenty Eighth Annual Report*, 18.

32. Housing Commission Victoria, *Twenty Eighth Annual Report*, 18.

33. Housing Commission Victoria, *Twenty Eighth Annual Report*, 18.

34. Housing Commission Victoria, *Twenty Eighth Annual Report*, 18.

35. Housing Commission Victoria, *Twenty Eighth Annual Report*, 17.

36. Housing Commission Victoria, *Twenty Eighth Annual Report*, 17.

37. Housing Commission Victoria, *Twenty Eighth Annual Report*, 8.

considered the success originally touted. In 1970, Australian historian Hugh Stretton wrote "They were discontinued after some independent researchers persuaded the commission to permit a thorough survey of their tenants experiences of them."<sup>27</sup> Stretton notes that the developments "combin[ed] high rise disadvantages with doubled walk-up disadvantages."<sup>28</sup> This left the HCV with high rise towers only - the modernist ideal - as their solution to the slum reclamation issue in the inner-city suburbs around Melbourne.

The HCV stated in the 1966 annual report that the highlight of their architectural work for the year had been "designing a 30-storey block of 299 flats to be erected at South Melbourne."<sup>29</sup> The Housing Commission wanted to be seen as "[i]ncorporating the latest ideas"<sup>30</sup> into their designs, thus realising the lessons they had learned overseas and implementing the designs in the Melbourne context. They were pleased to note that the high-rise towers that they had already constructed "compare[d] more than favourably with what has been done anywhere in Australia or overseas, particularly in the field of lone person accommodation, the standard of which is higher than has been seen elsewhere."<sup>31</sup> The HCV was convinced that their construction was "superior to the pre-clearance standard"<sup>32</sup> of the residential slums they had targeted, which directly correlated with the aims that the HCV developed in the 1958 Housing Act. Like the 1961 annual report, the HCV's statement reflected a strong conviction that these high-rise towers were a successful solution to the demand for housing and the limited funds available to them.<sup>33</sup> Subsequently however, the HCV acknowledged that there was a need to consider the effects of the high-rise towers on an urban scale, so that the HCV could "determine priorities for the whole of the inner suburbs."<sup>34</sup> They sought to ascertain what development was occurring across the whole of the inner suburbs, public and private. The report states that "any redevelopment should be part of a coherent overall redevelopment plan for whole areas, including the defined slum areas and adjacent lands."<sup>35</sup> They cite the growing need to consider where schools, recreational areas and other community services are in relation to the housing that is being built.<sup>36</sup> The development of the intentions as revealed in the 1966 report begins to show how the scope of works that they were attempting to complete was incrementally changing. It was no longer simply an issue of housing people, they became increasingly concerned with how the entire suburb was functioning. In the opening address of the 1966 report, the HCV argued that "consideration should be given to expanding the Commission's charter to meet the wider concept of urban renewal with a change of name to Housing and Urban Development Commission."<sup>37</sup>

The work that the HCV completed across the 1960s shifted from modest low rise interventions to large scale tower developments in the space of six years. The HCV struggled to meet the demands they had set themselves, to reclaim the slums, to then rehome the displaced people in good accommodation, and to prevent Melbourne's urban sprawl. The "Modernist Ideals" that they had seen in practice overseas seemed to be the ideal design solution to these pressing issues.

## Position 2: The Residential Associations

38. Laurie O'Brien, 'Oral History Project', Interviewed by the Fitzroy Historical Society, September 14, 2015, <https://oralhistory.fitzroyhistorysociety.org.au>.

The new housing works that the HCV was undertaking, particularly the demolition of large tracts of existing residential housing, increasingly came to the attention of the residents of the suburbs who lived there. Long term Fitzroy resident Laurie O'Brien recalls that "people were anxious, a lot of them were very anxious"<sup>38</sup> that the HCV was going to proclaim an area for demolition. O'Brien describes the process that the Housing Commission went through in detail, relating the threat to her own home:

39. O'Brien, Interview.

The Commission was obliged first to 'proclaim' a selected area and, sometime later, to serve householders in that area with a 'notice to treat', meaning that they were required to negotiate the sale of their property to the Commission... it was pretty frightening. Naturally we objected. You had the right to object.<sup>39</sup>

40. Anne and Paul Coughlan, Oral History Project', Interviewed by the Fitzroy Historical Society, December 12, 2016, <https://oralhistory.fitzroyhistorysociety.org.au>.

The residents of the inner-city suburbs were living in conditions that the HCV deemed unacceptable: "The Housing Commission took a view that you could serve a notice on the basis that a house had an external toilet which wasn't something that most people would've worried about".<sup>40</sup> The residents felt that the HCV did not notice that the owners of the houses were doing their best to make the houses more liveable. Greek resident Sam Stasinopoulos remembers how he bought a "tumble down"<sup>41</sup> house, with "broken windows, broken walls"<sup>42</sup> and "fix[ed] the house"<sup>43</sup> and "buil[t] the kitchen".<sup>44</sup> Barry and Margaret Pullen recollected such actions, "we could see that there's these people who had bought their houses and spent their effort fixing them up, they were not going to be helped by their house being demolished".<sup>45</sup> Official government visits traumatised local residents. For example, O'Brien remembers having the Minister for Housing visit her house as part of an inspection for the exemption process:

41. Sam Stasinopoulos, Oral History Project, Interviewed by the Fitzroy Historical Society, May 25, 2016, <https://oralhistory.fitzroyhistorysociety.org.au>.

42. Stasinopoulos, Interview.

43. Stasinopoulos, Interview.

44. Stasinopoulos, Interview.

45. Barry and Margaret Pullen, Oral History Project', Interviewed by the Fitzroy Historical Society, May 30, 2016, <https://oralhistory.fitzroyhistorysociety.org.au>.

46. O'Brien, Interview.

Some parts of our house were in reasonable shape but other parts looked pretty raw. I remember that just before the ministerial visit rushing out and buying a cyclamen, God knows why a cyclamen, and putting it in a pot on the staircase windowsill, anything to distract the Minister from gazing at walls and floors.<sup>46</sup>

47. O'Brien, Interview.

48. Tony and Mary Caroll, Oral History Project', Interviewed by the Fitzroy Historical Society, May 22, 2015, <https://oralhistory.fitzroyhistorysociety.org.au>.

Fortunately, the Minister's visit to their house was deemed a success, with the house being declared exempt from demolition. Those around her were not so lucky however, as O'Brien recounts, "The [government] were certainly practised at exerting pressure on householders if not at intimidating them."<sup>47</sup> Greek resident, Tony Caroll, remembers his step mother and father selling their house to the HCV when the first flats were built, recalling the move from one house to another, and the eventual decision as an adult to move to the outer suburb of Rosanna in the early 1970s.<sup>48</sup> As diverse communities were impacted by the HCV's actions, the newer, younger residents of the suburbs became more angered at the changes the HCV were forcing on these suburbs. There was an "acute feeling of outrage at the policy of displacing people."<sup>49</sup>

49. Barry Pullen, *Inaugural Speech for Pullen*, Barry T. Hansard Volume: 365 Page: 1929, 29 June (1982)

A direct result of the distress caused by the HCV's actions, was the gradual formation of Residential Associations across Melbourne's inner-

50. Sam Marasco, Oral History Project, Interviewed by the Fitzroy Historical Society, May 6, 2016, <https://oralhistory.fitzroyhistorysociety.org.au/wp-content/uploads/2017/08/FHS-Sam-Marasco-2016.pdf>.

51. Marasco, Interview.

52. Pullen, Interview.

53. Pullen, Interview.

54. Renate Howe, David Nichols, Graeme Davison, *Trendyville, The Battle for Australia's Inner Cities*, (Melbourne: Monash University Publishing, 2014), 11.

55. Howe, Nichols, Davison, *Trendyville*, xiii.

56. Marasco, Interview.

57. Howe, Nichols, Davison, *Trendyville*, 15.

city suburbs. These groups were formed by young couples new to these neighbourhoods. The new residents were concerned about the threat to the traditional culture built by migrants who were seeking to keep their own "customs"<sup>50</sup> alive here in Australia and the "community feel"<sup>51</sup> this had created. Barry Pullen, an active group member, remembers, "we were the only WASPs [white Anglo-Saxon persons] we knew and what we remember distinctly is I could just about say the street, Greek, Greek, Greek, Italian, Italian, Italian, it was like that."<sup>52</sup> Pullen also recounts the reasons for his involvement: "I wasn't motivated really by saving the houses then, I was about people."<sup>53</sup> The residential action groups invested in the "village, intimate, cooperative in spirit"<sup>54</sup> culture that characterised the places they inhabited; a culture developed by the migrants who established themselves there in the post war years.<sup>55</sup> As described by Italian migrant Sam Marasco "There's just sort of this camaraderie because it is a little town."<sup>56</sup> Pullen and his colleagues were looking to preserve and further develop a neighbourhood, cultivating a community influenced by "new ideals and the arrival of a new generation of university educated professionals, attuned to international, as well as Australian, movements"<sup>57</sup> and inclusive of the culture the migrants had created.

### *The Carlton Residents Association*

58. Howe, Nichols, Davison, *Trendyville*, 73

59. Peter Yule, *Carlton: A History*, (Melbourne: Melbourne University Press, 2004), 156

60. O'Brien, Interview.

61. Yule, *Carlton: A History*, 156

The Carlton Residents Association formed in 1969 after the amalgamation of the North and South Carlton Associations,<sup>58</sup> and reached its peak membership in 1972 with 2000 members.<sup>59</sup> By the end of the 1960s, the population of Carlton had changed and the influx of academics, intellectuals and rising house prices<sup>60</sup> saw more people developing a keen interest in the suburb, displacing the existing migrant communities that had dominated the area previously.<sup>61</sup> O'Brien remembers the community:

62. O'Brien, Interview.

... attract[ing], from the beginning, a number of academics from the 'other side of town'... such as architects – David Saunders, Miles Lewis and George Tibbits as well as Frank Strahan, who was the University's chief archivist, all of whom lived either in Carlton or Parkville.<sup>62</sup>

63. David Beauchamp in *Trendyville*, 73.

64. Howe, Nichols, Davison, *Trendyville*, 74.

65. Howe, Nichols, Davison, *Trendyville*, 75.

In the beginning, the North and South Carlton Associations did not have the same aims. The North Carlton Association, "intended to assist residents with many different issues... schools, social welfare, the environment and so on."<sup>63</sup> The South Carlton Association on the other hand, strongly influenced by demolitions in Sydney, desired to "mobilise the entire community"<sup>64</sup> against the proposed demolitions in Carlton. Within two years of the two groups amalgamating, the HCV proposed the demolition of the 'Lee Street Block' – which accounted for 80 hectares of housing - and the Melbourne Transportation Study proposed a new six lane highway which would cut the suburb in two.<sup>65</sup> Such significant demolition would effectively destroy the entire suburb, and any ideals that the residents had had in relation to building a community would be obliterated along with it.

Opposing the intended demolition of the Lee Street Block would be a significant milestone for the Carlton Association, as David Beauchamp recalls:

66. David Beauchamp, in *Trendyville*, 75.

We went and looked at the houses, and decided that they were certainly not slums; they were no different to many of the other houses in Carlton, including the houses that we were living in ourselves. So, a group of us lodged an objection to the Housing Commission on that slum clearance, which was rejected by the Housing Commission.<sup>66</sup>

67. Howe, Nichols, Davison, *Trendyville*, 75.

68. Yule, *Carlton: A History*, 159.

69. Yule, *Carlton: A History*, 159.

70. Howe, Nichols, Davison, *Trendyville*, 78.

71. Howe, Nichols, Davison, *Trendyville*, 78.

In response, the Carlton Association decided to hold an open day, "when anyone in Melbourne could view the neatly and proudly kept homes of the Lee Street Block."<sup>67</sup> They effectively showed the wider population the conditions of the area, that "the residents were certainly not debauched, immoral, unclean, receivers of charity, purposely unemployed or criminal"<sup>68</sup> and "thousands of visitors from across Melbourne agreed that 'These are not slums!'"<sup>69</sup> These protests by the Carlton Association were typical of the Residential Associations at the time, characterised as "paper warfare rather than street demonstrations"<sup>70</sup> However, the scale of the actions of the Carlton group, the strong mix of academic opinions, and the large percentage of people prepared to stand up for what they believed in, meant that this was not always the case. The Carlton Association were one of the first groups to hold a significant demonstration, at which an effigy of Ray Meagher, the State Housing Minister, was burned.<sup>71</sup> The extreme lengths to which the residents went to preserve the ideals of their community would be shown en masse through large radical demonstrations.

### *The Fitzroy Residents Association*

72. Howe, Nichols, Davison, *Trendyville*, 47.

73. O'Brien, Interview.

Unlike Carlton, Fitzroy was known as a "notorious slum"<sup>72</sup> throughout the 1950s, and therefore high on the HCV's agenda for reclamation and rehousing. By the mid 1960s the HCV had already demolished and rebuilt large tracts of this inner-city suburb. These actions replaced the existing "narrows" with "walk-up flats and eight two storey row houses (then called maisonettes)."<sup>73</sup> Despite these long-term developments, the Resident Association there was not immediately concerned with housing demolition, but like the North Carlton Group, was concerned with smaller neighbourhood issues. As Anne Coughlan explains:

74. Coughlan, Interview.

Things like parking, pointing out that you had schoolyards around inner Melbourne filled up with teachers' cars parked in them rather than being used... the alteration of the houses, to try and preserve the Victorian character when [people] would quite like to remove the windows and put bigger windows in the front and do all of that.<sup>74</sup>

This smaller local agenda of the Fitzroy Residents' Association manifested as a series of motions directed at the local council:

75. Coughlan, Interview.

So, we battled on a bit and we'd move various motions about trying to get things done, directed to the caucus, and nothing would ever happen. I mean they'd just get filed. You could not move a motion that was binding on the members of the caucus in any event. But anyway, we moved various things and then thought we're not going to achieve very much if we don't get elected onto the Council.<sup>75</sup>

76. Couhglan, Interview.

By 1972, to achieve the goals of the Residents' Association, a number of members were elected to the local council, where they "altered a lot things in the council framework."<sup>76</sup> Perhaps most significantly was their united opposition to the HCV, or in their own words "declaring war," as they faced the rising numbers of towers being built in their neighbourhood. Their position was clear:

77. Couhglan, Interview.

We thought block clearance wasn't the way to go. You must be able to preserve these houses and we demonstrated that by looking at a number of little individual houses they'd tried to condemn. If people spent a bit of money on them they were perfectly good houses for people to live in.<sup>77</sup>

The Fitzroy Residents' Association quickly found themselves in a similar position to the Carlton Association, trying to protect a large housing area against a government body. Like the Carlton Association, the Fitzroy Association would develop a paper protest strategy, using documentation, lawsuits and publications, to build support against the HCV. A key part of this was the publication, *Brooks Crescent: A Study of current slum reclamation procedures of the Housing Commission of Victoria*, which would draw heavily on information gathered by local association member Alan Jordan. Pullen recounts Jordan's involvement:

78. Pullen, Interview.

[Jordan] designed some questionnaires that we did with the people at Brookes Crescent. We went around and talked to people about how they felt about losing their houses and so on. They were very strongly opposed to it and we held public meetings and so on and people expressed very strong opposition.<sup>78</sup>

79. Howe, Nichols, Davison, *Trendyville*, 102.

Such an account provides insight into the strength of paper protests characterised by intense and comprehensive documentation processes as instigated by the Residential Association, it also captures the way in which the various demographic and ethnic groups had their opinions gathered and recorded by the Residents Association. The questionnaires were complemented with photographs, portraying the state of the houses. The resulting report *Brooks Crescent* was presented to the HCV and the courts. The Fitzroy Residents' Association eventually won the 'Battle of Brookes Crescent'<sup>79</sup> through a combination of paper protests, documentation and street demonstrations. Subsequently the area was marked for infill development and the high-rise towers were stopped across the city.

### **Beyond the Debate**

The heated debates between the Housing Commission and residents in Melbourne in the 1960s, not only highlighted the opposing ideals of the HCV and the Residential Associations but showcased the important role of community in designing neighbourhoods, and put the spotlight on the international sources each group drew on. The HCV sent its people overseas to conduct a 'global' search, whereas the Residential Associations found their ideals in contemporary publications. The result of this was the creation of new architectural styles in Melbourne and retention of existing housing that acted as icons that represented the desired community identities for each group.

80. Jane Jacobs, *Death and Life of Great American Cities, The failure of Town Planning*, (Victoria: Penguin Books, 1964), 1.

For the residential activist groups, Jane Jacobs 1961 book *The Death and Life of Great American Cities* was a strong influence. Jacobs' book was an "attack on current city planning and rebuilding,"<sup>80</sup> as she championed the street, the sense of community and the importance of self-governance enabled through good design. In his 1970s book, *Ideas for Australian Cities*, Hugh Stretton remarks,

81. Stretton, *Ideas for Australian Cities*, 217.

The book [Death and Life of the Great American City] is the bible of the Carlton and Richmond intellectuals who read claret-stained copies of it (sometimes, I do hope, by the light candles stuck in bottles) in their refurbished terrace houses under the long shadow of the Housing Commission towers.<sup>81</sup>

82. Renate Howe, *MTalks – Parlour Presents 'Woman Transforming the City' Interview by Parlour*, October 15, 2015, <https://library.mpavilion.org/mtalks-parlour-presents-women-transforming-the-city/>.

Many years later, Renate Howe additionally reflected that Jacobs' ideas were undoubtedly a strong influence on the Residential Associations, providing them with an ideological platform from which to build their own solutions to the slums in their suburbs.<sup>82</sup> For the Fitzroy Association the battle for the preservation of the blocks would be remembered by the activists as "about the people"<sup>83</sup> rather than the preservation of heritage and architecture. The changing demographics of these inner-city areas, from largely migrant communities to communities dominated by academics and intellectuals, embedded new ideas that were emerging overseas into the rhetoric of the Residential Associations. For them, the architecture of the 'narrows', became a means of creating a future that retained and celebrated their identity, and so they aligned themselves with Jacob's position.

83. Pullen, Interview.

Alternatively, the HCV found that the towers were a way of projecting a new forward-thinking, internationally-influenced identity onto the inner-city suburbs. The findings from the international research by the HCV marked a significant moment in Melbourne's search for new architecture, materiality and construction methods. For the HCV, the towers were icons of the future, of efficiency in housing many people without the need of endless suburban sprawl around the outskirts of the city. As historian Bree Carlton describes,

84. Bree Carlton, "Machine Living;" *The Discourses and Ideologies of Spatial Order which informed the high-rise developments of the Housing Commission Victoria 1950-1970*, *Melbourne Historical Journal*, 27, (1999):101.

Into the 1970s, the Commission estate towers dominated Melbourne's skyline as architectural monuments to the modernist urban landscape. In 1966, upon the completion of the South Melbourne thirty storey block 'Park Towers', the Commission received international acclaim for their technologically advanced construction methods and architectural forms and during this peak in construction and acclaim, the towers became symbols of modern material progress.<sup>84</sup>

85. Islip, '1956 Olympic Decorations', 29.

As Carlton states, the modern city that the HCV desired to create was intrinsically linked to the style of architecture it chose for the residential towers. This fitted with international perceptions of what was 'modern' and aligned with the same goals that the city had established when seeking to host the Olympic games: to become the 'promising' city that the American press had envisaged for Melbourne.<sup>85</sup> Despite its emphasis on the future through the tower designs and the strong worldly ideals these embodied, the HCV would be strongly criticised by the residents for its inability to focus on the present and the people it was displacing through its vast demolition schemes.

In spite of the stand-off between the Housing Commission and the Residential Associations, the long-term outcome of the slum reclamation and rehousing project in the form of the high-rise towers, showcases architecture as an expressive medium through which to discover shared ideals and opposing positions which shape inner urban communities and their identities.

Beyond the drama of the heated debate, the paper proposes that the opposing positions of the Housing Commission and the Residential Associations are not mutually exclusive, but rather, are interrelated and informed by each other. Such a notion is important because it operates on two levels: first, it expands our understanding of how architecture can stimulate a broader public discussion and engagement with the political and social issues arising from the growth of metropolitan cities such as Melbourne, with respect to housing shortages and urban sprawl. And second, it reinforces the potential power of academic debates and activist battles as necessary public exchanges that not only have political and social implications, but significantly contribute to the shaping of localised, often less visible community identities.

## Afterword

The present state of the Housing Commission high-rise towers supports the paper's contention that architecture plays a significant role in community identity and social value beyond the two polarising positions held by the HCV and the resident associations in the 1960s. The high-rise Housing Commission towers continue to have real and perceived impacts on urban living in inner city Melbourne.

86. Bianca Hall, 'Iconic': Residents seek heritage listing for Fitzroy high-rise housing estate, *The Age*, June 24, 2020, <https://www.theage.com.au/politics/victoria/bid-to-make-fitzroy-high-rise-housing-estate-a-site-of-heritage-significance-20200623-p555cu.html>.

87. Bianca Hall, "'Iconic': Residents seek heritage listing for Fitzroy high-rise housing estate".

88. Bianca Hall, "'Iconic': Residents seek heritage listing for Fitzroy high-rise housing estate".

89. Margaret Fitzherbert, High Rise estate finally in the spotlight after years of Neglect, *The Age*, December 22, 2018, <https://www.theage.com.au/national/victoria/high-rise-estate-finally-in-the-spotlight-after-years-of-neglect-20181220-p50nhc.html>.

90. Alan Weedon, Melbourne's tower lockdowns reveal the precarious future of Victorian public housing, *ABC*, July 17, 2020, <https://www.abc.net.au/news/2020-07-17/melbourne-victoria-public-housing-social-mix-redevelopment/12459870>.

91. Alan Weedon, "Melbourne's tower lockdowns reveal the precarious future of Victorian public housing".

Today the residents of Atherton Gardens Estate in Fitzroy are seeking a Heritage Victoria listing on their towers, attributing the iconic image of the towers and landscaping around them as key features behind their reasoning for significance.<sup>86</sup> They claim the development has now created its own vibrant community, which is an important part of the suburb as a whole.<sup>87</sup> Not only do the towers here demonstrate an example of successful 1960s housing design in Australia, they also represent a period of disconnect in Melbourne's history, which should be remembered.<sup>88</sup> However, not all of the Housing Commissions High-Rise towers have the same positive community representations found at Atherton Gardens. In contrast, the South Melbourne Towers have regularly made news headlines for the squalor and violence that occurs in the Park Tower and at Emerald Hill Court.<sup>89</sup> Most recently during the 2020 Melbourne Coronavirus lock down, 9 towers across North Melbourne and Flemington were put into lock down, due to the high risk of the virus spreading through the communal areas, such as the shared laundries and corridors.<sup>90</sup> The tower residents here are not described as a cohesive 'community' as at Atherton Gardens. Instead articles demonstrate how these communities are stigmatised; that the towers themselves are associated with poor maintenance and a lack of government interest in increasing the habitability of accommodation.<sup>91</sup> Here the ideals of the HCV seem to have been undermined. The desires for modern facilities and adequate open space have been swept aside by economic imperatives alone.

# A Hundred Local Cities and the Crisis of Commuting: How Nodal Suburbs Shaped the Most Radical Change in Melbourne's Suburban Development, 1859 -1980

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## Abstract

The major crisis in the evolving urban form of Australian cities came in a single development: when work patterns and separation from the central activities' districts outran walking distance. The key enabler was commuter transport, first with horse-drawn omnibuses and then with trams and suburban trains. At this point the average area of suburban lots exploded, the 'worker' cottage' was eclipsed as the most numerous housing type, house sizes increased, house footprints became almost sprawling in celebration, and suburban shopping centres began to break from the long lines of shops and municipal buildings lining major road arteries to the central cities.

This centripetal tendency had all manner of typological and developmental results, and Melbourne is taken as an initial example in a wider Australian study. Houses entered a newly diagonal composition and connection to their streets; new neighbourhood relations focussed on garden displays and broader individual expression in specific house designs. An equally major change, though, came as railways and a series of new tram routes dragged newer shopping and municipal precincts away from simply lining arteries to the city, setting up nodal suburban centres with new, 'hub' plan forms that either cut across arterial roads at right angles or clear obliques, or developed away from existing arteries altogether. Each node 'commanded' between three to five surrounding suburbs. Suburban nodes became both service referents and impetus-centres or sources for suburban growth, and, significantly, new centres of regional identification and loyalty.

With Federation comes a waning of central city significance, observed long ago in Graeme Davison's *Marvellous Melbourne*, a suburbanism generated by and inflecting on *nodes*. This challenges the long-accepted picture of Australian cities having a small, towering central business district and encircled by a huge, undifferentiated suburban sprawl. This study also looks at what a nodal suburb generally comprises- its critical mass.

## Introduction

Australian suburbs, if Melbourne is an example, are typically perceived as undifferentiated sprawl- a bin for living lacking inherent political or social agency but present in consistent bulk and apparently repetitive imagery. Since the later nineteenth century though, and commuting, the pattern has changed to development around suburban nodes, spaced regularly from two to ten-kilometre intervals, to 18-20 km in more recent outer suburban regions. Nodal suburbs have gained a specific architectural character, and quite specific social and service patterning, in worship, sport and geographical identification.

In Australia, certain suburbs distinctly recreate urban rituals, imagery and ceremony in high fidelity. Oddly, this conscious attempt is prompted by dissonance – that which is set in binary opposition to the city. In Australia the city and the suburb are often perceived as having developed visually independently of each other, despite their obvious co-dependencies. Given the long-growing dominance of Australian central city areas by commercial offices and government buildings (1945-95), with the matching 'dead after dark' phenomenon of Australian CBDs, it is therefore not inconceivable to assume an expansive suburb – a suburban metropolis –not needing a central city as a core. In Australia, the suburbs distinctly challenge 'the city' in their capacity to manifest plurality and indeed democracy. But how do they accomplish this if they are a homogeneous and politically inert mass centred on houses, as their long-term critics have maintained?

1. Building Codes, Traffic and Zoning, etc.

Where Australia's central cities are increasingly artificial terraformations of economics and capital, suburbs are often pragmatism embodied in marginally smaller buildings and an easily graspable local connection, but without a conspicuous overriding programme. This measure of pragmatism meant suburbs had the capacity to switch between as much urbanism as they wished, or a little as they wished. This alternation is not easily measured in central city terms or morphology. The evolution of suburbs often moves in and out of the normative, procedural forces of the metropolis. Suburbs often rely on the most basic self-regulation<sup>1</sup>, often imperceptible up close but which then assumes massive importance when seen in retrospect.

A range of Australian suburban forms spiral from the 1830s on through to the postmodern period. Over time an uncritical normalisation driven by consumerism and inept metropolitan development strategies have galvanised a virtually unrestrained multiplication of extremely low-density peri-urban forms. The 'investment' in putting distance between people and their services is substantial, and usually not quite matched by any physical or infrastructural ventures to connect them. But this embedded separatism is countered by other more collective currents in suburban form leading to cohesion, and the most important of these is Australian suburbs' tendency to form around particular and visible *nodes*. The first wave of these emerged when trams and commuter railways culture broke the walk-to-work scale of Australian cities, and the means of commuting, railways especially, pulled suburban retail and administrative precincts away from the main road arteries along which earlier suburbs had been aligned. This produced as generation of heavy-rail or tram-generated node-suburbs.

Architectural and urbanist *modernism*, as an arena for social or political change, has traditionally proceeded by tracking system perceptions and innovations in urban form. Like a teeming series of overlapping currents, these do not usually have a conscious historical dimension; but they make the city a largely open-ended composite of myriad forces and meetings. This constant nomination of intricate systems has an inbuilt periodicity: its industrial and assemblage modelling usually reflects functionalists' industrial paradigm and the idea that industrial culture could be harnessed in systems to radically transform and improve society. Concepts of Australian cities are therefore dominated by a simple binary of 'convergence' where CBDs are widely pictured as sitting in otherwise undifferentiated and often unexamined suburban oceans.

2. Conrad Hamann and Ian Nazareth, 'Urban Emulation and Australia's nodal cities', conference and published paper for *Living Cities 2018*, Melbourne, submitted 2017. Conrad Hamann and Ian Nazareth: 'Cities as Arenas of Social Change: Restatement and Emulation of Urban Form', for *Architecture and Collective Life: reading Cities Politically*, Architectural Humanities research Association, 16th Annual Conference, University of Dundee, 23 November 2019.

But Melbourne, and other Australian cities later, reflect a very different sourcing from the systemic, plausibly intricate yet essentially ahistorical *urban planning* model, and this casts light on similar aspects of cities overseas. These more distinctive, more local urban forms are connected to three Australian phases of wholesale urban transformation, which might be described collectively as *urban emulation*.<sup>2</sup> This paper takes Melbourne as a case study in this development of nodal suburbs, but its examples resemble those in all other large Australian cities.

### **Two Preceding Phases: Perimeter Urbanism (1788-1837) And Urban Emulation (1840 ff.)**

The first is in the early colonialist eclipse of the traditional walled cities, still widespread in nineteenth century Europe (The Vienna Ring) and carried in the legacy of North American stockade cities, (New York, Detroit). From 1788 to c 1880 Australia replaced these with *charged boundaries*: streets at the perimeter of their original gridded town plans lined with major government and institutional buildings. Witness Macquarie Street in Sydney, Macquarie and Davey Streets in Hobart, St George's Terrace in Perth, North Terrace in Adelaide, Queen and William Streets in Brisbane, Spring and Flinders Streets in Melbourne. These were invariably paired with or faced water courses and stylised wilderness in large and adjacent domains and parkland areas. The courts, post offices and town halls often went deeper into the initial grids of these colonial towns, but everything else thought publicly significant was lined up along these perimeters.

3. Conrad Hamann and Ian Nazareth, 'Urban Emulation and Australia's Nodal Cities', *Living Cities Conference*, Melbourne, 2018.

In a second, overlapping phase, beginning c1840, Australian cities re-created the imagery and precinct-forms of previous centuries and realms in precincts of new buildings, an extension of nineteenth-century eclecticism. Collective visual images of other cities were extended to cover precincts, in collective action by grouped developers or contractors. In Melbourne this sees a conscious, sustained emulation: of Venice as the Renaissance (c1855-93), Haussmann's Paris (c1867-1925), and of Paris and London Theatre and entertainment precincts (1887-1920).<sup>3</sup> Melbourne's more recent but still highly visual emulations include 1950s *corporate* New York (office towers and their enabling demolitions), British welfare-state slum clearance (public housing towers, 1956-72), Atlanta/Portman and mirror-glass models (1980-1992), London recovery urbanism ('Docklands' and 'Southbank' applications,

1993 ff.), a celebratory Hong Kong congestion imagery (Southbank, 2010-14), and most recently New York *above-it-all* imagery (pencil towers, 'Tribeca' and 'Upper West Side' sales pitches).

### **Nodal Suburbs, 1855 ff.**

4. Hamann and Nazareth, 'Urban Emulation'.

Despite its official pursuit of planning *method*, Australian urbanism has become based in *collective, often impressionistic imagery*, of which Melbourne provides a leading example. The third phase of this comes between c1885 and 1918, when developing commuter suburbs begin to form *nodes* of regional importance, breaking from their mid nineteenth-century pattern of lining their retail and business precincts along radial road arteries leading to the central city. These break from arterial geometry and early strip shopping centres, by either utilizing the miniature CBD imagery of bunched street grids *off* main road arteries, often pulled clear of arterial roads by development round nearby railway stations, or in focusing retail and civic buildings on roads transverse to the central city rather than main arteries, again, largely pulled sideways by railway stations. In Melbourne, Sydney, and Adelaide, then Australia's three largest cities, this emerges slowly, between c 1855-60 and the 1920s. In these, the visual imagery of a CBD is harnessed *in miniature* to differentiate shopping and civic areas that would otherwise have continued at standard suburban scale. They gain greater density, and their streets and alleyways gain the scales and sense of crowding that become closer to those of central activities districts.<sup>4</sup> Melbourne is a good starting point in tracing this development.



Artefact 1: The Centripetal City – the forces and elastic infrastructures that catalyse a constellation of settlement patterns, staged as a grand urban vision at the Town Hall. (Image Credit – Ian Nazareth, Rosemary Heyworth)

### **Centripetal Cities**

*An elaborate undifferentiated figure that evolved through a loosely controlled addition and reconciliation of programs, comprised of a constellation nodal points and centralities, a definitive trajectory directed and deflected away from the centre. The city as multiples, in a seemingly endless spatial field. A diagram of domains illustrates a centre, CBD or downtown, a vast suburb and hinterland, held within a weak force*

*of generic allotments and land carve-ups – a relentless substrate of detached houses and commuter suburbs. A now- decentralised fabric of a central city.*

## Traditional Perceptions of Australian Suburbs: Undifferentiated Sprawl

5. Robin Boyd, *Australia's Home: its Origins, Builders and Occupiers*, Melbourne University Press, 1952, 1961 edition, 3-4: 'each town was in essence a great sea of small houses around a commercial and industrial island'.

6. The principal architectural books published in Australia to 1960 were predominantly on suburban houses and, to a marked degree, suburban Australia as individual houses and their issues. Besides Boyd's *Australia's Home* came Walter Bunning's *Homes in the Sun*, Nisbet, Sydney, 1945, George Beiers' *Australian Houses*, Ure Smith, Sydney, 1948, and the prevailing magazine coverage in *The Women's Weekly* and *Home Beautiful*. Boyd's *Victorian Modern*, Melbourne, 1947, had surveyed institutional or non-domestic buildings, but there was not another sustained survey of non-domestic design- at least of contemporary work, till Jennifer Taylor's *Australian Architecture Since 1960*, Law Book, Sydney, 1985.

7. For Boyd's general framing of suburban discussions see Conrad and Chris Hamann, 'Anger and the new order: some aspects of Robin Boyd's career', *Transition, Discourse on architecture*, 2, 3-4, September-December 1981, pp. 26-35 Reprinted in *Transition* 38 with revisions (c.f. item 7 in this list), 1992, pp. 17 – 44.

8. In Boyd's account the suburbs' 'public' dimension really only meant public bars and cinemas. See his *Australia's Home* Ch. 18. They were arenas for Australian abasement and comportment hypocrisy. Other than that they were really only 'the bare neon tubes of the milk bar', or 'twisted streamers in the Oddfellows' hall' (p. 6).

9. Peter Sculthorpe, *Small Town*, originally part of his chamber music *The Fifth Continent*, Faber Music, 1963; released as an independent piece, 1977.

Architectural thought in Australia has sustained an article of faith: that its suburbs are characterised primarily by *sprawl*: largely undifferentiated, this sprawl is assumed to stretch from towering CBD precincts through to the outer perimeter of Australian cities.<sup>5</sup> Its portrayal focusses on oceans of houses, with little real interest in what institutional or collective buildings –and life –suburbs might include. This probably derived from the economics of 1940s and 1950s architectural publishing: write on houses, central in post-war community need, and you sold books.<sup>6</sup> But it led to problematic assumptions: Robin Boyd sought general images and worked constantly in generalisations: 'Australia is the small house', 'a million private rooms' 'the Australian housewife'.<sup>7</sup> These all joined in and homogenizing a received image of Australian suburban living, as much for his own rhetorical use as anything else. Boyd made a convincing claim for suburbs remaining essentially the same *formally* from early settlement, –at the level of individual house designs and property sizes. This was his way of virtually denying suburbs any real internal dynamics or capacity to substantially change. For him suburbs became, literally, a spreading *lake* of problematic houses, mostly impeding a path to cultural and political maturity –a dominant narrative in Australia till c 1975. In Boyd's picture they did not *really* have shopping or civic centres, transport hubs, hospitals, schools, sports teams, local histories, or local oddity. But if individual house design improved, everything else followed.<sup>8</sup>

In this Boyd followed critical constructs of suburbs that gained currency round the world during the 1940s and 1950s. In Australian architectural circles suburbs went from being a staple to an inert expanse on which successive influences- bright baubles or popular styles continually caught Australians' collective eye but left everything largely undisturbed. Boyd's view of most suburbs resembles the *admass* characterisation Marshal McLuhan used describing areas of popular culture. Australia's suburbs or suburb-like surroundings- and the 24 million who live in them, were like the main street pictured in Peter Sculthorpe's musical piece *Small Town* (1976) and its clopping hooves: nothing much happening, nothing much there, punctuated only by two bugle calls (1914 and 1939).<sup>9</sup> General Australian *vignettes* of suburbs (they were seldom more than vignettes) pivoted on collective political and social characteristics: 'conformity', uniformity, 'treeless', 'insular', 'stagnation', 'conservatism', consumerism, rituals and automaton behaviour. This had origins in early British critiques of *Metroland* developments northeast of London in the 1900s but sharpened markedly with American critiques (*The Lonely Crowd*, 1950, *The Organization Man*, 1956). Robin Boyd and others' Australian critiques are directly in this tradition, but Boyd and his Australian contemporaries were at pains to make such suburbs seem an only-in-Australia phenomenon. Australian travel overseas was limited in the 1950s, especially to the United States: what they did not know was certain to improve them.

10. Hugh Stretton, *Ideas for Australian Cities*, Private publication, Melbourne, 1970; Georgian House, Melbourne, 1971 ff. For Edmond and Corrigan's response to suburban circumstance in their architecture see esp., Richard Munday, 'Passion in the Suburbs', *Architecture Australia*, 66, 1, February-March 1977, pp. 52-61; Conrad Hamann, *Cities of Hope: Australian Architecture and design by Edmond and Corrigan, 1962-1992*, Oxford, Melbourne, 1993; *Cities of Hope Remembered*, Part 2, Thames and Hudson, Melbourne, 2012. A number of cultural commentators, notably Brigid Rooney, have examined suburbs in the Australian literary imagination, and she includes Boyd in her surveys. Brigid Rooney, 'The View from Above from Below', *Australian Humanities Review*, 29 November 2016, via PDF. See also her *Suburban Space, the Novel, and Australian Modernity*, Anthem, Melbourne, 2018.

11. There is an interesting study to be made on whether architectural Modernism was actually a major factor in *narrowing* Australian perspectives on architectural possibility by requiring gravitation to the perceived mainstream of its day (1940-1960), asserting an increasingly circumscribed Overseas Metropolis endowed with harmonies and simplicity it never had, and by increasingly restricting historical scrutiny to within a comparatively narrow range of external Modernist forms. See, for example, Conrad Hamann, 'The Misty Metropolis', *Fabrications*, 30, 2 (August 2020), 241-61.

The generalisations and stereotyping in all this are to a degree recognised, as with the 1970s studies of book reading and library usage in middle-range Australian suburbs, though in design circles they have yet to gain much extended public reappraisal outside of Hugh Stretton's *Ideas for Australian Cities* in 1970 and Edmond and Corrigan's architecture, 1974 ff.<sup>10</sup> Architectural responses have been both highly *general*- Australia was evidently 'waking from the suburban dream' or facing mass societal improvement through highly *specific* Good Design: invariably projected through single houses or housing schemes. Victor Gruen and others were developing textbooks on shopping centre design, but that was kept right outside official ideology and culture in Australian architectural commentary. The most they allowed were the civic centre prescriptions for British New Towns.<sup>11</sup> In Australia's architectural history writing a consistent focus on houses and stylistic changes led commentators to overlook, effectively, a major overturning in Australian urban and suburban underpinning- a crisis and its decades-long aftermath- that is embedded in suburban development. Put simply, this was when most Australian city dwellers found they could no longer walk to work.

### **Nodal Suburbs Take Shape**

Before about 1890 most working class and small middle-class housing was within ten to 25 minutes of work- by walking. Suburban amenities of that earlier period- mechanics institutes, corner pubs, corner shops, schools round the corner, neighbourhood shopping clusters, long shopping strips along the major road arteries, town halls on the major arteries toward the central city- were almost all in walking distance. But trams and the concerted development of commuter trains made both an opportunity and a solution to a growing problem: they freed workers to commute, often to distant employment. Commuting assisted Australia's early moves to planned zoning, so workers in noxious industries did not literally have to sleep in their own works yards. Walk-to-work suburbs persisted here and there in new company-town developments ameliorated by Garden City form, as in HV McKay's Sunshine (1906) or Cadbury's Claremont peninsula (1922); but the die was cast.

The switch to railway commuting had a major physical effect. It pulled suburban shopping strips away from the road arteries and toward railway alignments and stations determined by terrain. These were usually several hundred metres distant from the road arteries and main city-focussed streets - as with Glenferrie station away from the Burwood Highway in Hawthorn (1881), and a kilometre or more from the principal Melbourne-based road arteries in Moonee Ponds, Camberwell (1881) and Oakleigh (1877-9). Oakleigh developed as a small township around the station in a miniature of Melbourne's central grid. In this Oakleigh had two precursors linked to central Melbourne by railway: Footscray (1859) and Brighton (1859-61). Footscray had an earlier focus in an amphitheatre site on the Maribyrnong River, looking across river flats to central Melbourne. In a gloriously nineteenth-century decision its council gave it all up to noxious but lucrative chemical works and abattoirs and moved its core to the new railway station on Footscray Hill -700 m away from the Ballarat Road. Brighton was laid out as a small seaside town,

placing it two km from its arterial road, the present Nepean Highway. A fourth township in this mode, Box Hill, was 250 m south of Whitehorse road, its main road artery and, being a small town for some time, shaped its retail core in a grid rather like Oakleigh's. Caulfield's retail and teacher's college centre was pulled 300 m south from Dandenong Road, in a triangle-pattern of streets that broke from the standard grid nearby. These centres can all be seen now in their retail streets, which have remained surprisingly true to their nineteenth-century formations.

Several other suburbs, their foci pulled away by railway stations, used transverse roads, serving primarily themselves rather than the city. This meant Hawthorn-Glenferrie, 200 m from Burwood Road; Camberwell, 550 m from its main roads at Camberwell Junction; Yarraville, 700 m from the Williamstown Road; Fairfield, a similar distance from Heidelberg Road; Heidelberg itself, 550 m from Upper and a similar distance from Lower Heidelberg Road; Moonee Ponds, 550 m from its main roads at Moonee Ponds' road Junction; Coburg, 250 m from Sydney Road. A measure of how acute this tipping point was is seen in how much these centres reshaped themselves away from either their main roads or earlier main road shopping strips, when the new foci were often only c250 m away. As it turned out, Sunshine, though conceived as a walk-to-work suburb, utilised an existing railway and became one of these new centres as well, at least by the 1920s, focussed 1 km south of the Ballarat Road. The one real exception is Kew, sited on two converging Melbourne arteries, but for many years Kew also had a railway station.

Earlier, shopping, and municipal centres lined the major arteries leading to the city: High Street Northcote; Sydney Road, Brunswick; Bridge Road, Richmond; Burwood Road, Hawthorn; Brunswick and Smith Streets, Fitzroy. The central city was the crowning, encyclopaedic point in Colonial life. But the new railway-based suburban nodes all assumed another identity. Pulled away from the road arteries, they worked as both magnets and generators- centripetal and centrifugal- in form and in the gravitational and generative power they exerted on surrounding suburbs. The central city defined and determined nineteenth-century suburbs in large degree. But with Australia's new framework of perceptions in the 1890s and 1900s, Melbourne became 'just' another ex-colonial capital, and though it was also made the temporary Federal capital, the permanent destiny was soon projected for Canberra.

### **Nodal Suburbs at Their High Tide, 1900-1940**

But a Federated Australia was now more congenial to a hundred local cities. In greater Melbourne almost all these emerging nodes developed three to five surrounding suburbs, reached from these nodes by walking, train, or tram. Box Hill, for example, gathered round it Mont Albert, Surrey Hills, Blackburn East, and North Box Hill; Oakleigh gathered Hughesdale, Murrumbeena, Chadstone (which formed its own node with a new shopping mall on Victor Gruen lines in 1960). Camberwell became the core for East Camberwell, Hawthorn East, Deepdene, and Canterbury. Malvern was the core for East Malvern, Armadale, Caulfield North, and sections of Glen Iris. By the 1920s, with electrification of suburban railways, towns and suburbs further out took on similar roles and gathered suburbs in similar clusters, forming, in turn, a series of inter-

12. Suburban railways in Melbourne were electrified, and usually duplicated, to include these contemporary or eventual nodes: Moonee Ponds/Essendon, Brighton and Hampton in 1919, Coburg, Footscray, Yarraville and Williamstown, 1920; Reservoir, Sunshine, Heidelberg/Ivanhoe, Eltham, 1921; Oakleigh, Springvale, Dandenong, Frankston, Hawthorn, Camberwell, Box Hill- Ringwood 1922-3; Glen Waverley 1930. Useful sources for dating railway connections are Robert Lee, *The Railways of Victoria 1854-2004*, Melbourne University press, 2004, the VICSIG website, and the Victorian Railways' 1928 *Grades and Curves Manual*, via VICSIG. The high tide of the railway-based nodes dates from this period.

war suburban nodes. Dandenong, Moorabbin, Frankston, Hampton, Ringwood, Reservoir, Springvale all became nodes between c1920 and c1965.<sup>12</sup> Three of these, Frankston, Dandenong and Reservoir, all older country townships, were sited in main arterial roads as well as on railway lines. But Reservoir spread right out to each side away from its arteries, after 1945 especially, and Frankston and Dandenong both filled out grids, as Oakleigh and Box Hill had done. All three were in those years terminus stations for their electric railway lines. Like Reservoir, Eltham was right on a main artery toward central Melbourne, but it was self-contained with a particular bohemian and socially progressive community cohesion, and again grew tributary suburbs and areas: Diamond Creek, Lower Plenty, Montmorency, Research- like the other nodes. Till the 1950s all four of these nodes were termini for their electric railway lines. With property or terrain constraints, two nodes developed twin centres: Heidelberg developed a large shopping centre and municipal headquarters at Ivanhoe, 2.5 km down the railway track, on both the Upper Heidelberg Road artery and two major streets running sideways off it. Caulfield had a similarly sized shopping centre at Carnegie, a kilometre by train to its south-east.



Artefact 2: The Centrifugal Suburb - Novelty, variety and compression – a dense sprinkling of amenity localised in the archetypal highstreets. (Image Credit – Authors, Ian Nazareth, Rosemary Heyworth)

## Centrifugal Suburbs

*A centre for a centre, a focus of nodes. These patterns are articulated by an archetypal, representative urban form underpinned by an encyclopaedic urbanism. The high street as a civic condenser – a collage of typologies and topologies. A blip in the continuum. Movements are largely inscribed within this nodal fabric, differentiated, and exaggerated. A catalogue and index of programs where the excesses and inefficiencies of planning, not its shortcomings are laid bare, and positively enjoyed. A distributed network of cities in miniature.*

The primary cultural sense of the nodes is in loyalty and identification. Footscray and Sunshine gained and held identity as working-class and industrial regions. Box Hill was always *Bokky* during the 1960s with its athletics and its cluster of schools. Camberwell, which sought to style

13. The Temple Beth Israel building in Prospect Hill Road, left incomplete between 1964 and 1968. This was surprising as liberal congregations had held services in the area for ten years previously. Two other liberal centres were established in Kew, and the Camberwell building was later demolished. <https://tbc.org.au>, viewed 23 October 2021: 'History of the Leo Baeck Centre'.

itself as a Garden City in the 1920s, was famously not-in-my-backyard and even managed to close a near-completed Synagogue.<sup>13</sup> Hawthorn was marginally more relaxed but gained what was ultimately a national league football team and for several decades the suburb resounded to crowd roars from Glenferrie football ground, effectively integral with its main shopping strip, and its central streets would fill with chaotic car parking. Footscray, along with Brighton the oldest Melbourne node, has the one national league football team that still has its original suburban base; the rest have since been made national corporations and few play in their named suburbs.

Nodal suburbs challenged people's idea of where the central Melbourne actually was. As with other Australian CBDs, it had become a complex of office blocks with relatively few residents, much of it dead after dark and at weekends. Monash University students, in the early 1970s at any rate, widely saw The City as not Melbourne CBD, but as Oakleigh, the nearest interwar node, or the new car-fed node of Chadstone shopping mall. Apart from Chadstone, Monash University's buses travelled almost entirely to train-generated suburban nodes: Oakleigh, Bentleigh, Brighton, Box Hill, Dandenong. In turn, students at Monash's outer-suburban Berwick campus around 2000 saw Dandenong, for religious and shopping reasons, as their city centre: the perception was renewed.

There were two broad consequences, one physical, the other cultural. Suburban development did not just spread outwards in an even wave, like water on a flat surface, as the 'sprawl' idea would have it. These nodes were growing points and their tributary or associate suburbs spread around each *radially*. It was only when the tributary suburbs touched boundaries that a continuous suburban fabric emerged. Melbourne's fabled sprawl, portrayed as without order for polemical purposes, was in fact scaled and nuanced to its nodes. This explains the long-lasting anomaly of its lopsided east and west development: there were more nodes on the east than on the north side, and only inflated house prices of recent years have worked to redress the balance.

14. Graeme Davison speaks of their Bible belt character in his 'Suburbs and Suburbanisation', in Andrew Brown-May and Shurlee Swain (eds., contrib.). *The Encyclopedia of Melbourne*, Cambridge, Melbourne, 2005, pp. 692-6. Outside of Camberwell and Box Hill, the only statutory authorities to enact outright liquor prohibition in the 1920s were Finland and the United States.

Each node had distinct local services. There was the optics of political scrutiny in MP's offices, the economics of health services, the reach of the law courts, the new municipal libraries, the swimming pools, the state high and technical schools (for many years, one of each per node), for years the major churches, the regional Catholic Secondary Schools, the fire stations, the halls of the Returned Services' League. The nodes were also epicentres of high and popular culture. Most to all of them had municipal public libraries, designated football and cricket teams, two or more usually three cinemas in their core precincts, the local newspaper, suburban Anzac Day marches (at least till they waned in the 1960s) and prominent war memorials. Camberwell and Box Hill initiated Australia's only 1920s prohibition- on local pubs – and in turn saw that become part of their distinctive Bible Belt identity.<sup>14</sup> In another way, Springvale prides itself on its extraordinary religious diversity: over sixty religious groups and their buildings in the one municipality. These groups came, in large measure, because Springvale, a former country town on the Gippsland railway line, had already emerged as a node in the 1950s- at least a 'railway' node on interwar lines, almost 2 km south of the nearest highway to Melbourne.

Nodal suburbs often had talismans: the Junction's neon airline signage at Moonee Ponds; the Whitehorse emblem at Box Hill, reminder of a pub closed by local prohibition in the 1920s; the green neon clock at Heidelberg Town Hall, beckoning the faithful to weekly dances. The nodes often had a prominent manufacturing dimension, with more icons and networks of company (or union) loyalty: Williamstown's shipyards, Sunshine's Harvester, Dandenong's Holden, Heinz and International Harvester, Footscray's Kinnear Rope Works and the Angliss and Michaelis meatworks, Box Hill's Holeproof hosiery and Bowater Scott paper. Ringwood's post-war rise to node level saw its artery road overwhelmed by its Car City roadtown of automotive yards and accessory shops; almost alone among the later nodes, Ringwood had a main road artery and railway junction side by side. Beauty, history, and often visual clamour all became part of these nodes' identity and workplace history. Brighton, Glenferrie, Footscray: all gathered in large technical Colleges. As Melbourne's many large-house private hospitals coalesced toward the mid-twentieth century, their new buildings went straight to the developed nodes: Caulfield (1916); Frankston (1941); Dandenong (1942); Sunshine (1946); Footscray (1947-53), Box Hill (1949-56). Heidelberg was effectively a hospital node: it gained both the Austin and the Repatriation Hospitals (1882, 1941).

15. Favourites of Camberwell, Box Hill, Nunawading and other Melbourne *city* councils from c 1945 through to around 1980.

These hospitals and factories brought even more people and amenities into the nodes, so their status became more prominent still. Almost all were municipal centres, with town halls and council offices, invariably splendid in Melbourne's nineteenth-century tradition. The later ones- Box Hill 1935, Footscray 1936, Heidelberg 1938, Moorabbin 1963, were all monumental designs, though two- Oakleigh and Sunshine, opted to blend in with their local streetscapes. Most managed a prominent park or garden, usually to augment their municipal buildings: Camberwell, Kew, Sunshine, Box Hill, Ringwood, Footscray had Botanical gardens in the nineteenth century manner and another park around its town hall. If they did not have gardens, the next best thing was local council favourites: melaleucas on the street verges and serried football ovals for parks.<sup>15</sup>

At all levels, therefore, the nodal system upended the prevailing urbanism and suburban development of Melbourne's Victorian period. Many new buildings were now predicated on the nodal status of their given suburb. Even when regional assets, such as swimming pools, were not in the actual node but in a tributary suburb, they still reflected the majesty and beneficence of the node: Box Hill's pool was built 1.5 km from Box Hill centre; Malvern's, now the Harold Holt centre, the same distance.; Kew was 1 km from its node, once a glorious affair with gal iron sheds and broken glass topping its red brick walling.

### **Links to the Federation Perspective**

All of this restates, constantly, the general characteristics of Melbourne's suburban nodes: their conjunction with railed commuting- especially train commuting and its alternative to the pattern of nineteenth century road arteries to the central city. With that came a major challenge to the centrality of Marvellous Melbourne of the 1880s: a rejection of Melbourne as the supreme embodiment of Victoria the Colony, as much

as the increased ruralism Graeme Davidson argued in 1978. National sentiment, oddly, overrode the splendours sought by colonial cities in favour of the nodes and their suburban clusters, which were more clearly subordinate to national cohesions and ambition. Australian Federation in 1901 comes at just the moment the wave of nodes- from their early precursors, was starting to coalesce and grow characteristic in Melbourne suburbs.

Not just Melbourne: Sydney, Perth, Adelaide, even Hobart, gain nodal elements. Brisbane, with a long-unified city administration, is the one city where this sense is less developed. Canberra's New Town influences in its satellite cities end up looking and feeling suspiciously like older Australian nodal suburbs. And as with national sentiment in architecture Australia was hardly alone. From c1900 nodal suburbs mark Californian cities, Los Angeles especially, and their examples and imagery have in turn fed parts of nodal suburb development in Melbourne.

### Later Challenges to the Rail-Generated Nodal Suburbs

16. Victor Gruen, Larry Smith, *Shopping Towns USA: The Planning of Shopping Centers*, Reinhold, New York, 1960. Chadstone was completed six years after Gruen's first mall, Northland-Detroit (1954). The first generation were closer and in appearance to Melbourne's railway nodes, having semi-open streets, several closely positioned buildings for both smaller shops, the supermarkets and the major retail chains. The walkways usually had palms and similar foliage, and a polygonal gazebo for radio stations to do visiting broadcasts. The car parks circled them, much as they do now, which isolated the malls from surrounding housing and existing suburban fabric.

Almost all these nodes were connected with suburban railways, but their pattern has been resilient enough to ride out the post-World War II eclipse of suburban railways by the car and the corporate shopping malls on Victor Gruen's pattern.<sup>16</sup> The new-build malls were suburban nodes by design and function but in chain-store retail, integrated entertainment venues and most of all their car and bus reliance they challenged Melbourne's earlier nodes. Chadstone took on Oakleigh, Doncaster took on Box Hill. Southland took on Moorabbin. But the nodes had established municipal power and municipal booster ideology, and all manner of community linkages to go with that- especially real estate headquarters and parliamentary offices, and their own councils. The new malls' determined car basis actively limited their engagement with commuter culture. Of Melbourne's largest suburban shopping malls in their first wave, Chadstone (1960), Northland (1966), Eastland (1966-7), Southland (1968), Doncaster (1969) and Highpoint West (1975) and Knox (1977), only one, Eastland, was remotely near a railway station. Southland was near a railway line but placed neatly halfway between two quite distant stations, and Highpoint has a tram. All the others were as far from rail, and hence mass transport, as they could possibly get. A generally token access to buses, and their barely visible stops (Bus Bahns were an Adelaide idea), virtually announced malls as a new celebration of car-borne individualism, and to a degree this shaped a new nodal development that challenged the older 1900s-based system. Melbourne's two new universities of the 1960s, Monash and La Trobe, were similarly instant suburban nodes, and similarly distanced from any mass transit, rail or tram. They shared much shopping mall typology, with partly sheltered street-width pavements flanking their central union buildings, surrounded by similarly vast car parks, filled, in their foundation days, with suitably Oxbridge Morris Minors, Austin A 40s and Standard 8s. In the end though, all these automotive malls never eclipsed the 1900s-1940s nodes. They have no fallback on institutional buildings and roles when online shopping or rack-renting curtails their retail. The shopping malls' disc-jockey gazebos fell into disuse and cinemas are the only other trophy they captured from Melbourne's earlier nodes.

## Conclusion

So, what marks out Melbourne's suburban nodes architecturally? Why have they been resilient enough to have wrought the largest change in Australian urban form outside of high-rise and freeways? Arguably, it is because the nodes took on the imagery of central cities themselves. They certainly saw themselves that way legally: most Melbourne nodes bear, or bore pre-amalgamation, the official title *City of-*. Their individual buildings certainly try hard: the town halls are monumental; the hospitals increasingly bulky, the banks as sculpted and a presence as much as their early twentieth century architecture will allow; their churches and religious buildings are all-stops out at a local level and some (Hawthorn, Preston or Oakleigh Catholic, for example), have enough monumentality to match CBD equivalents. The nodes that were developed as country towns - Dandenong and Frankston especially, have marginally more presence in individual buildings as their fairly large pre-suburban population and service needs warranted a greater per capita effort. But it is in the density, the array in which these buildings come together, that usually makes the nodes rather than how they work individually. Their boundaries and perimeters, how they meet their parkland, how they link with their railway stations, sometimes how they marshal their churches and religious buildings- these all give Melbourne nodal suburbs their presence and force.

17. Canberra Civic's major shopping mall precinct and its post office, essentially an enlarged suburban business building, command much more urban presence than its careful piazzas and its British New Town court and administrative buildings designed by Yuncken Freeman in the late 1950s.

Oddly, the railway stations, later buried in cuttings as at Camberwell or Moorabbin, or set under shopping malls and car parks, as at Box Hill, are now often the least conspicuous part of suburban nodes, despite their role in the nodes' creation. Of contrasting prominence are the functions the nodal suburbs perform independently of the malls: the law and social service offices, the doctors' suites, the commercial offices, the real estate agents' head offices, the warehouses serving the nodes' retail, the upstairs extensions of retail, the increasing identification of nodes with large ethnic groups. These all need restaurants, food courts and service industry, and while the pandemic office closures in central Melbourne have torn their CBD counterparts to shreds, it has been noted that outside complete lockdowns nodal suburbs are often doing well. New buildings and construction are still a strong presence in the older suburban nodes, in and out of Covid. They are often tilt-slabs of the just-add-water variety, but as in Canberra Civic, their bulk often adds as much urban weight as more consciously urbanist designs.<sup>17</sup> Alongside those, nodes have become a new focus for apartment and office towers, inadvertently increasing nodal bustle by introducing hundreds of on-site cars. Glen Waverley, a newer node, crowns its long ridge with a startling array of bulky buildings on a car-park podium, like a citadel. Box Hill, now gaining the presence that its Chatswood or Bondi Junction counterparts have in Sydney, had specified nine or ten apartment and office towers to ring its old grid like sentinels. So what is the imagery accompanying reports of buoyant suburbs? In Melbourne, invariably, it is still *nodal suburbs* and their shopping centres.

While the research unpacks critical elevational changes in the history of Melbourne's growth, it is important to consider the projective manifestation of these developments. In particular, the COVID-19 pandemic introduced a limited scope for mobility and movement to and from the CBD, and extended lockdowns inscribed residents within

a 5-10km radius of their homes. The direct implication of this has been the re-orientation and reiteration of centralities and the distributed city – a finer grain and resolution of development that intensifies the decentralised model. Once again, we observe a restatement of the foundational hierarchies and morphologies of Melbourne's nodal development.

# Labour Housing and the Normalisation of Modernity in 1970s Iran

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## Keywords

Labour Housing  
Public Housing  
Second Pahlavi  
Pre-revolutionary Iran  
Architecture and Ideology  
Westernisation  
Westoxification

## Abstract

In the 1970s, rapid modernisation fuelled population displacement and increased the number of workers in the large cities of Iran, in particular Tehran. In response, the Imperial Government initiated several housing programs focusing on the provision of megastructures on a large scale. Consequently, a new opposition formed among some sectors of society, regarding the dissemination of gigantic buildings in the International or Brutalist styles. Critics and clerics argued that the radical government interventions not only polarised the image of Islamic identity in cities, but also affected the behaviour of people towards, and their opinions concerning, the Islamic lifestyle. Additionally, some claimed the state aimed to normalise its project of modernity and rapid westernisation for the mid- and lower classes using housing. In this regard, this article investigates the 1970s imperial government social housing programs to verify these claims.

Using an extensive literature review, documentary research, observation, and descriptive data analysis, this article argues that, despite the government politics and modernisation tendencies in the 1970s, consumerism, political competition, the state of Cold War, and the emergence of new construction techniques, all resulted in the emergence of mass-produced megastructures offering a new luxurious lifestyle to residents. While the life and hygiene of the different classes were improved, these instant products inevitably facilitated the normalisation of Western lifestyle among the mid- and low-income groups of the society. Eventually, this visible social transition was utilised by opposition leaders as another excuse to topple the Pahlavi regime under the 1979 Islamic Revolution.

## Introduction

The notion of modernisation in the developing countries has been an interesting subject for many scholars. In the case of societies with old traditions, the process is more complex because of the advancement of globalisation, and the ongoing conflict between tradition and modernity. As a developing country with a rich architectural tradition, Iran has also been confronted with challenges in relation to different modernisation programs. In this regard, the state of architecture during pre-revolutionary Iran has been a hot research area for many scholars. At this juncture, the country saw rapid modernisation under the power of the Pahlavi Dynasty (1925-1979). Akin to the process of modernisation in many third-world countries, the provision of affordable housing was a part of the state development program to respond to the existing shortage of housing. However, it was in the 1970s that the provision of high-rise and large-scale housing complexes became a key factor in the modernisation program, with an intention to form and advertise a modern image for the country.

With a focus on the public housing program of the 1970s, this article will discuss how the imposed megastructures and building types were formulated by the state to accelerate the provision of affordable housing, and to introduce a progressive image for Tehran, as the core of the modernisation program. Using an extensive literature review, documentary research, observation, and descriptive data analysis, this paper will briefly report on the important events and socio-political developments affecting the transformation of the public housing concept between 1940s to 1960s. This article will also highlight the emergence of gigantic housing complexes in the 1970s and identify the possible reasons for the dissemination of megastructures that quickened and normalised the process of Westernisation from the late 1970s onwards.

## Social Housing and the Agency of Social Transformation (1940s – 1960s)

1. See Gholam Hossen Mirza Saleh, *Political Memories of Ghavam Al-Saltaneh* (Tehran: Moyin, 2017). See also Rana Habibi, "The Institutionalization of Modern Middle Class Neighborhoods in 1940s Tehran – Case of Chaharsad Dastgah," *Cities* 60 (2017): 37-49.

In Iran, the idea of social housing for the public did not become a priority until the end of the Second World War, and the reign of Mohammad Reza Pahlavi (the Second Pahlavi). Prior to this, the government delivered a small amount of affordable rental housing for Iranian military staff and cadres in the late 1930s; however, the state of stability and subsequent exit of foreign soldiers after the end of the Second World War resulted in a suitable situation for the continuation of the country's housing development. Made necessary by the rapid expansion of governmental organisations, the concept of affordable housing for low-income public employees was first suggested by the cabinet of Ahmad Qavam (1873-1955), who was elected Prime Minister five times between 1921 and 1952.<sup>1</sup>



Figure 1: The Rahni Bank Headquarter in Tehran, 1976 (Source: Maskan Bank Archive. Photograph reproduced by permission from the Maskan Bank Archive, 2017)

2. The Rahni Bank transformed to Bank Maskan (the Housing Bank) after the Islamic revolution in 1979.

3. "A Brief History of the 20 Years Rahni Bank's Services," (Tehran: The Rahni Bank, 1960), 7-9. See also "A Brief History of the 40 Years Rahni Bank's Services," (Tehran: The Rahni Bank, 1979).

4. "A Brief History of the 40 Years Rahni Bank's Services."

5. "A Brief History of the 20 Years Rahni Bank's Services," 33.

6. "A Brief History of the 20 Years Rahni Bank's Services," 33.

7. "A Brief History of the 20 Years Rahni Bank's Services," 33.

8. "A Brief History of the 20 Years Rahni Bank's Services," 34.

To design and build the social housing projects, the government introduced a mortgage bank, known as the Rahni Bank, as the administrator responsible for the provision of affordable housing (Figure 1).<sup>2</sup> The Rahni Bank was established in 1939 through the collaboration of the Iran National Bank or *Bank Melli*, and the Ministry of Finance.<sup>3</sup> Shortly, the bank took the first steps in the early 1940s by setting up new housing standards and training its staff.<sup>4</sup> To this end, at the suggestion of the state, the bank contacted British and American authorities due to their experience in the provision of mass-produced social housing projects.<sup>5</sup> For example, the Rahni Bank received assistance from Britain's Cooperative Building Society. The Cooperative Building Society invited the director of the Rahni Bank to London, and later sent two members of the board to study the Rahni Bank's policies and supervise the subsequent design and construction.<sup>6</sup> Similarly, a number of American economic advisors and design experts were sent to Iran with the financial support of the American authorities; the intention was to design and code the upcoming public housing projects based on the latest American housing standards.<sup>7</sup> Later, the Rahni Bank began to send groups of staff to England for education and training under the supervision of some English design departments and mortgage institutes.<sup>8</sup> Given these points, the core structure of the Rahni Bank was formed and coded based on the English and American post-war thinking, and this effectively "modernised" the language of the public housing projects from the beginning. The bank's early reports show a clear image of the ideology behind the housing policies and the overall modernisation plan. According to a Rahni Bank report:

Considering the emergence of modern dwellings all over the country, the traditional and old adobe-brick houses could no longer satisfy the people's desires. Nowadays, people are seeing more comfort, hygiene and welfare in the modern buildings. These modern houses changed the people's criteria

9. "A Brief History of the 20 Years Rahni Bank's Services," 9.

10. See Habibi, "The Institutionalization of Modern Middle Class Neighborhoods," 37.

11. See also Hamed Khosravi, "Planning a Revolution Labour Movements and Housing Projects in Tehran, 1943-1963" (paper presented at the 17th IPHS Conference: History-Urbanism-Resilience, Delft, TU Delft, 17-21 July 2016).

12. Pamela Karimi, "Dwelling, Dispute, and the Space of Modern Iran," in *Governing by Design: Architecture, Economy, and Politics in the Twentieth Century*, ed. AGGREGATE (Pennsylvania: University of Pittsburgh Press, 2012), 123.

13. See the introduction of Willia E. Warne, *Mission for Peace: Point 4 in Iran* (Bethesda: Ibex, 1999).

14. Seyed Mohamad Ali Sedighi, "Mega Structure Reloaded: A New Technocratic Approach to Housing Development in Ekbatan, Tehran," *ARENA Journal of Architectural Research* 3, no. 1 (2018): 1-23.

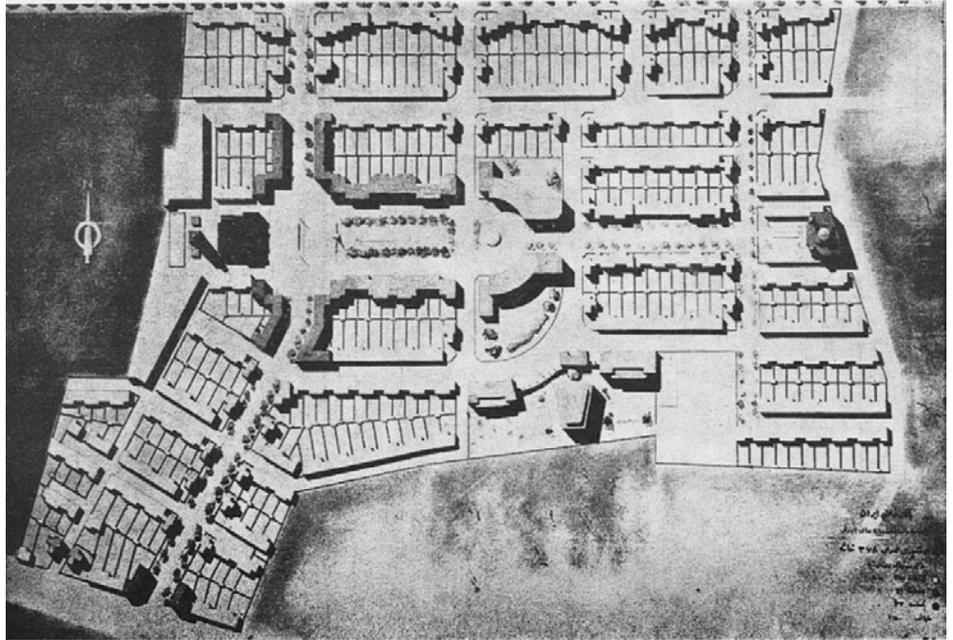
15. Read the introduction of Michael Latham, *Modernization as Ideology: American Social Science and "Nation Building" in the Kennedy Era (the New Cold War History)* (North Carolina: The University of North Carolina Press, 2000).

16. Rahmatollah Amirjani, "Architectonics in Pre- and Post-Revolutionary Iran" (paper presented at the 35th Annual Conference of the Society of Architectural Historians of Australia and New Zealand: Historiographies of Technology & Architecture, Wellington, New Zealand, 4-7 July 2018), 22.

concerning beauty and life, and they replaced the domination of materialism (caused by the luxury traditional houses) with new aesthetic taste brought by the abstract features of the imported modern buildings.<sup>9</sup>

Considering the Rahni Bank design ideology, one could see the emergence of functionalism, standardisation, and minimalisation with the first public housing project, known as *Chaharsad Dastgahl* 400-Unit Housing (Figure 2). This project was delivered in the Farah Abad district, and attempted to accommodate 400 families with four to eight members. Indeed, this project was the first official attempt to push the middle and lower classes towards global modernity using the concept of public housing.<sup>10</sup> Due to this tendency, the design created some cultural difficulties in terms of space and function. Unlike the Iranian traditional detached houses, the project's form was based on a terrace house typology with courtyard, presenting the first cost-effective townhouse typology that showed strong dependency on the work of the modern movement in the West; Jacobus Johannes Pieter Oud's workers' housing, the Kiefhoek complex, in Rotterdam, Netherlands (1925-1930) is an example of this. The design also imposed certain functions and way of life to residents. For instance, the bedroom design was based on the Western "bedroom sleeping style." However, in the traditional Iranian lifestyle, family members typically sleep in the living room, or in a big separate room also designated for sleeping; they sleep on the floor, side by side, on large wool mattresses. Traditionally, all rooms were multifunctional, and living spaces could easily be adjusted for different day or night-time activities. However, the logic of the proposed units dictated not only very specific activities and functions but also a certain family size and way of living.<sup>11</sup>

Despite the Rahni Bank administration tendency, the rapid growth of the post-war relation between the Iranian government and the United States also intensified the Westernisation of the public housing projects. During the Cold War, the US struggled to keep Iran free of the spread of communist tendencies, and this marked the beginning of heavy US support for the Pahlavi monarchy. In a short period of time, America stimulated its influence by offering different political, cultural and humanitarian programs that could reframe the country's based on the emerging global culture of capitalism.<sup>12</sup> For example, Truman's Point Four Program was one of the introduced humanitarian programs used as a tool for developing the country's healthcare, education, agriculture, construction, and urban planning.<sup>13</sup> More relevant to this paper, Americans also mentored various organisations responsible for the provision of affordable housing, and they brought different strategies, most importantly construction technologies, for mass producing mid- and high-rise public housing units in Iran. Additionally, as the Cold War began to intensify in the early and mid- 1960s, the administration of US President John Fitzgerald (Jack) Kennedy also initiated a new foreign strategy to defeat communist groups in so-called "emerging nations," including Iran.<sup>14</sup> Similar to Truman's Point Four Program, it also aimed to introduce cutting-edge American technologies and scientific knowledge into under-developing countries.<sup>15</sup> As a result of the mentioned points, between the 50s to late-60s, one could see a significant transformation in the typology of the public housing dwellings due to the imported building technologies, including prefabricated concrete and steel frame systems.<sup>16</sup>



17. Copied from an issue available at The National Library and Archives, Tehran, Iran.

Figure 2: The 400-Unit Housing Layout (Source: The Architect magazine. Photograph reproduced from the cover page of the *Architect* magazine (4), 1946)<sup>17</sup>

18. Fatemeh Farnaz Arefian and Seyed Hossein Moeini, *Urban Change in Iran: Stories of Rooted Histories and Ever-Accelerating Developments* (Cham: Springer International Publishing, 2016), 107. See also Ali Soltani, "Iran," in *The Urban Transport Crisis in Emerging Economies*, ed. Dorina Pojani and Dominic Stead (Cham, Switzerland: Springer, 2017), 129.

Despite the influence of American post-war ideology on the Iranian public housing programs, one should consider the King, Mohammad Reza Shah, as a key player in the emergence of big-scale worker housing complexes with the language of modern architecture. In general, the Shah had strong tendencies towards "building big", and his administration employed many foreign companies possessing the capacity to construct large-scale projects in a short period of time.<sup>18</sup> Personally, the Shah adored the mystical and aesthetic aspects of Iranian traditional architecture, and his family mostly lived in the Saadabad and Niavaran palaces in Tehran. Both palaces were small in size, expressing a strong language of Iranian vernacular architecture. However, as with other projects related to the regime's social reforms, the Shah wanted to see the realisation of his so-called "modern" perceptions in the country's housing programs; he strongly believed that the social housing projects should express the country's project of modernity, and he also directly supervised and commissioned a number of controversial projects at the time of his power. This is the reason that there are many photographs of, and speeches by, Mohammad Reza Shah during housing project briefings and opening ceremonies.

### **Towering Up: Normalisation of Modernity and the Dissemination of High-Rise Social Housing (1970s)**

19. "A Brief History of the 20 Years Rahni Bank's Services," 68.

20. Sedighi, "Mega Structure Reloaded," 8.

21. "A Brief History of the 40 Years Rahni Bank's Services."

Between the 1940s and the 1960s, the Pahlavi regime successfully housed 230,000 families in social housing projects.<sup>19</sup> In the early 1970s, it was estimated by the Iranian authorities that they needed to erect more than 283,500 dwellings in Tehran to only house middle-income employees and civil servants.<sup>20</sup> Subsequently, the Rahni Bank employed other strategies to accelerate the provision of housing to effectively respond to the lack of housing and the rapid increase of population.<sup>21</sup> For instant, due to the success of the Cooperatives Movement in England, with the recommendation of Western advisors, the Rahni

22. See the "formation of cooperatives in Iran in "A Brief History of the 40 Years Rahni Bank's Services."

23. "A Brief History of the 40 Years Rahni Bank's Services."

24. Ann Crittenden, "The Shah in New York," *The New York Times*, September, 26 1976.

25. "A Brief History of the 40 Years Rahni Bank's Services."

Bank created new regulations that pushed governmental institutions and private companies to provide housing to their own staff through creating non-profit cooperatives.<sup>22</sup> The new policy also encouraged the private and public sectors to participate in construction, especially in providing accommodation for low-income employees.<sup>23</sup> Shortly after, some semi-private companies and institutes also took responsibility for housing construction, most notably the Pahlavi Foundation. The Pahlavi Foundation was established by the Second Pahlavi monarch in 1973, as a non-profit governmental group intended to advance Iran's investments and charitable interests in America.<sup>24</sup> The Rahni Bank also employed other actions: providing a variety of housing construction loans to private builders and public organisations, offering free land or affordable plots to cooperatives and low-wage people, and giving financial aid and loans to construction material producers in order to accelerate the production of construction materials and decrease the price of building supplies.<sup>25</sup>

Despite the attempts, the Imperial Government of Iran eventually realised that building megastructures could be an effective tool to overcome the housing crisis. Most importantly, building unique high-rise habitats with the language of Brutalist architecture or International Style would secure Iran's place in the global group of progressive modern nations, and, of course, put Iran in the headlines of architectural journals. Indeed, using megastructures and manifesting futuristic architecture were seen in line with Shah's ideology and tendency regarding the image of country; this would enable the state to showcase the distinctive housing style of so-called "progressive Iran." Additionally, the concrete high-rise buildings could be constructed in a short time and could accommodate large numbers of people.

26. Kamran Diba, "The Recent Housing Boom in Iran - Lessons to Remember," in *Housing, Process and Physical Form*, ed. Linda Safran (Jakarta: The Aga Khan Award for Architecture, 1979), 40.

27. The Association of Iranian Architects-Diploma (AIAD) was established in 1944 by architects who had mainly graduated in Europe. These architects, also known as the First Generation, were trained under the influence of early Modern architecture movements in Europe.

28. Sedighi, "Mega Structure Reloaded," 11.

To design and deliver the early megastructures, the authorities hired foreign architects and construction companies as the country was entirely unexperienced in terms of building large-scale high-rise projects. This could also bring an extra promotional gimmick for the state and to cultivate a reputation for superiority.<sup>26</sup> A review of the commissioned architects and construction firms of the early 1970s clearly verifies the above argument. For example, with the help of some members of the Association of Iranian Architects-Diploma,<sup>27</sup> the authorities commissioned Kenzo Tange, Moshe Safdie and Moshe Bashan, due to their experience in designing high-rise habitats and skyscrapers.<sup>28</sup> Simultaneously, different American designers assisted the Pahlavi Foundation to initiate a number of high-rise housing projects in different cities, in particular Tehran. Shortly after the implementation of these habitats, the expected progressive image of "Modern Iran" started to form, an image which manifesting everything "modern and Western" except what the country was globally known for: a profound history and authentic culture.

Interestingly, even the foreign architects and international construction firms correctly understood the strong power and great value of local traditions, and many of them attempted to address some aspects of Iranian culture in the design of megastructures. However, it was mainly the authorities that rejected any interpretations regarding the country's vernacular architecture and traditions. Building in the early 1970s, The Navy Residential Complex and Eskan Towers are clear examples of the

29. Neta Feniger and Rachel Kallus, "Israeli Planning in the Shah's Iran: A Forgotten Episode," *Planning Perspectives* 30, no. 2 (2014): 231-51.

30. Feniger and Kallus, "Israeli Planning in the Shah's Iran," 236.

31. Feniger and Kallus, "Israeli Planning in the Shah's Iran," 238.

mentioned inclination towards regional cultures. Both projects were designed and constructed by different companies from Israel through the Pahlavi Foundation commission. The Navy residential projects were given to Dan Eytan in 1972, due to his high-rise residential works in Israel.<sup>29</sup> This Navy housing scheme intended to deliver 12,000 dwelling units in two southern coastal cities, Bandar Abbas and Bushehr.<sup>30</sup> As Eytan explained, given his sensitivity to local traditions, he dedicated a lot of time to examining the dominant culture of the region, which resulted in delays in the planning process. In response, the authorities asked Eytan to accelerate the design process. A short quote from Eytan demonstrates the Westernising agenda behind the government's housing policy: "At one point, the Navy asked me why the project wasn't moving faster. I told them that I needed to learn locals' culture. They said – 'No. Bring your own culture. That's why we hired you.' So, I told them I only brought my profession."<sup>31</sup>

32. See Figure 9 in Feniger and Kallus, "Israeli Planning in the Shah's Iran," 243.

At the same time as the Navy project in 1972, Israeli engineers were also engaged with a progressive residential project in Tehran, the Eskan towers. The project was designated for the cosmopolitan elite and middle-income people, who were increasing in number as a result of the rapid modernisation process. Designed by Moshe Bashan, three towers of 32 floors each were intended to deliver a mixed-use complex with luxury facilities. Interestingly, Moshe Bashan also attempted to apply a number of vernacular quotations to reduce the alien expression of raw concrete in his building.<sup>32</sup> For example, he carefully used different interpretations of vernacular arches to articulate the facade of commercial floors in addition to openings in upper levels (Figure 3). However, similar to the Navy complex, the Pahlavi Foundation pushed Bashan to disregard any culturally friendly manifestation. According to Feniger and Kallus:

33. Feniger and Kallus, "Israeli Planning in the Shah's Iran," 244.

Eskan's chief architect, Moshe Bashan, claimed that he was trying to adapt the tower to the local *modus vivendi*. He saw it as his duty to 'help the Iranians move from traditional living in private courtyard houses to modern high-rise dwellings'... A team member claimed that the Pahlavi Foundation representatives were offended by the suggestion of including [vernacular] arches in the facade, and [they] insisted on a building 'like everywhere else in the world.'<sup>33</sup>

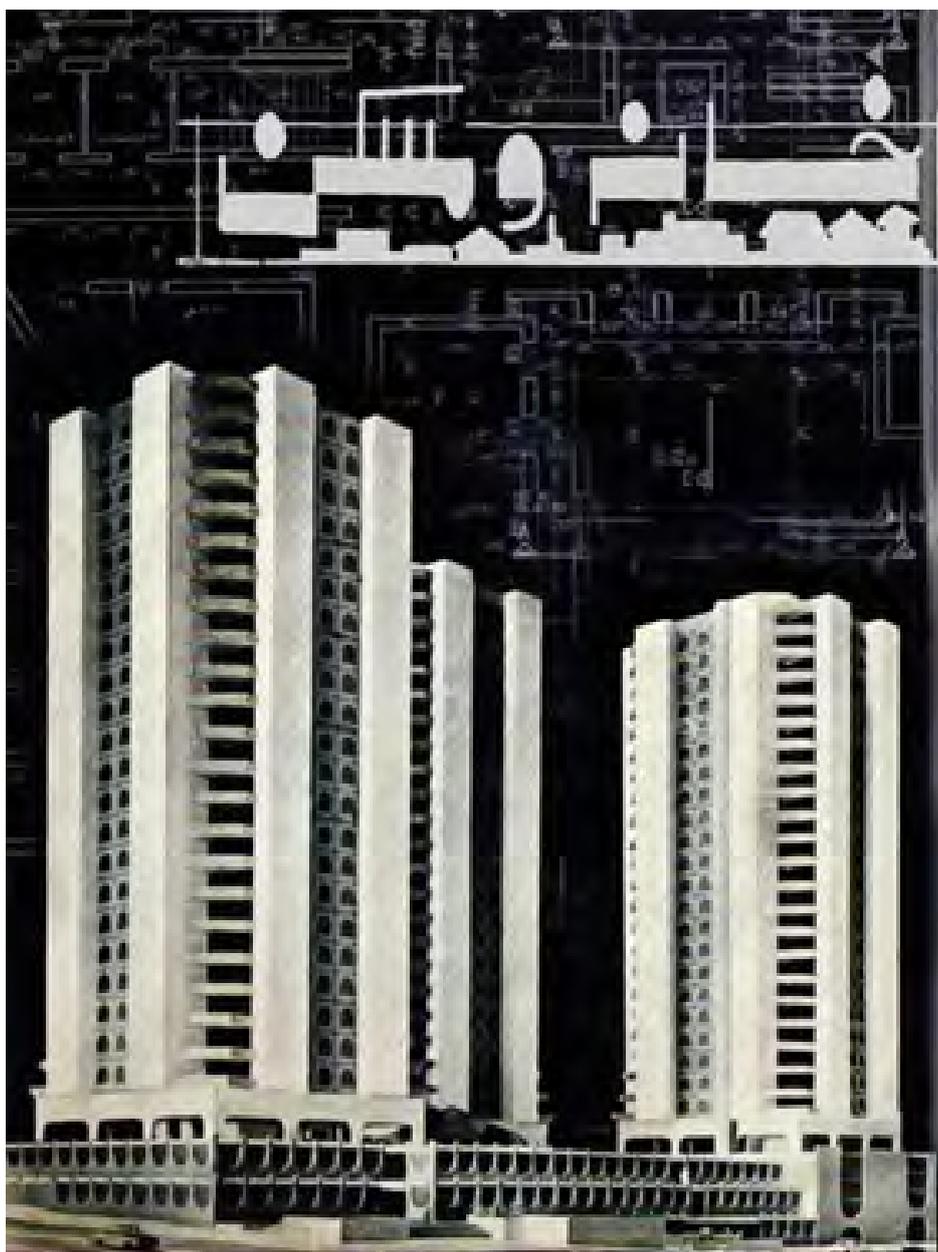


Figure 3: The original model of the Eskan project by Moshe Bashan (Source: The *Khaneh va Maskan* Internal Magazine, Ministry of Housing and Urban Development, 1978. Photograph reproduced by permission from the Maskan Bank Archive, 2017)

34. See Ruhollah Khomeini's quote cited in Pamela Karimi, *Domesticity and Consumer Culture in Iran: Interior Revolutions of the Modern Era* (New York: Routledge, 2013), 135.

### 1970s Labour Housing and Consumer Culture of Capitalism

In the early 1970s, as the Iranian middle- and upper-classes were expanding, ideas on the desirability, or even necessity, of buying refrigerators, automobiles, televisions, processed food products, and other symbols of American consumer culture were disseminating. Tehran was becoming a modern mega-city, the value of the Iranian currency was increasing, and the society was becoming richer by the day due to the rapid increase in petrol-dollars, largely a result of the global energy crisis. In the case of architecture, vernacular houses, which had been a symbol of Iranian culture, were rapidly replaced by luxury villas expressing the wealth and power of the newly rich classes.<sup>34</sup> Apparently, the masses were adapting to the Western lifestyle, and this brought about a justification for the state to continue their affordable

housing program based on Western post-war proposals. As a symbol of having a modern life, living in high-rise flats gradually became popular among groups from the middle classes, especially for those who preferred to live close to central Tehran. Interestingly, due to its growing market, private construction companies and real-estate agencies also started to develop –luxury medium-rise and large-scale residences to attracting the middle- and upper-class of the society. Most of these projects were equipped with modern premium facilities, including swimming pools and playgrounds, to attract the masses. Interestingly, it is at this time that even the main government's affordable housing providers, most notably the Rahni and Construction banks, started delivering lavish high-rise and megastructure habitats for lower-income earners.



Figure 4: The Apadana complex (Source: Photograph by the author, 2017)

35. "A Brief History of the 40 Years Rahni Bank's Services."

36. "A Brief History of the 40 Years Rahni Bank's Services."

37. "A Brief History of the 40 Years Rahni Bank's Services."

38. "A Brief History of the 40 Years Rahni Bank's Services."

39. The construction of the project was hindered in 1979 due to the Islamic Revolution, but it was eventually completed in 1984 with the help of a new branch of the Rahni Bank, known as *Bank-e Maskan*, and Tehran Municipality

40. After the 1979 Islamic Revolution, many open-plan kitchens were transformed into enclosed kitchens by *Bank Maskan*.

The 1971 Apadana social housing project in the south of Tehran is the best example of the government's new design inclination towards housing low-income groups in the early 1970s. Supported by the Rahni Bank, the Apadana habitat was designed by Nezam Ameri S.A.E Consulting Engineers, with the collaboration of a French construction company.<sup>35</sup> Located in the *Mehrabad* district, this complex has been the Rahni Bank's biggest high-rise project<sup>36</sup> delivering 2901 units in 46 apartment blocks.<sup>37</sup> Using a prefabricated concrete structure,<sup>38</sup> the Apadana blocks were designed based on the language of Brutalist architecture, manifesting bare concrete in detached and stepped volume patterns with different levels (Figure 4).<sup>39</sup> Compared to the previous social housing projects, the interior spaces were designed on a smaller scale, showing a clear functionalist and minimalist planning approach. The plans also clearly eliminated the cultural norms, in particular, the notion of privacy for housewives, by imposing semi open-plan kitchens and living rooms.<sup>40</sup> Interestingly, the complex offered outdoor swimming pools, gym, and tennis courts, along with other amenities such as shops, schools and open gardens. One should understand that it was so radical to offer this level of Western living style to the more traditional and conservative classes of society. Of course, the image of the country was becoming so-called "modern"; however, in the deepest layers of the society, a large group of people was

struggling to acclimatise to the modernisation. As a result, many critics and opposition groups understood these housing projects as attempts based on a social-engineering program to normalise Westernisation across the country and transform the low-income classes of the society.

### The Failure of Social Housing: The Search for Alternatives

41. Fredric Jameson, *Postmodernism, or, the Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991).

42 See Karimi, *Domesticity and Consumer Culture in Iran: Interior Revolutions of the Modern Era*, 135.

43. The term Westoxification refers to a fascination with western technologies and lifestyle which erodes traditional Iranian cultural practices. The phrase was first coined by Ahmad Fardid, a professor of philosophy at the University of Tehran, in the 1940s. The term came to the fore, and into common usage, when Jalal Al-e-Ahmad published a clandestine book in 1962, known as *Occidentosis: A Plague from the West*.

In the early 1970s, a new opposition formed among some sectors of Iranian society toward the dissemination of buildings with the language of modern architecture, in particular large buildings in the International or Brutalist style. The state radical interventions, along with the effects of what Fredric Jameson calls "market ideology,"<sup>41</sup> affected people's behaviour towards, and their opinions concerning, the Islamic lifestyle. In addition, the simplicity of the traditional lifestyle was being replaced by luxury consumerism, especially among the middle and upper classes of society. Tehran and other major cities became polarised between traditional and modern expressions, causing a sense of disorientation and lack of belonging among middle to lower classes. As a result, some intellectuals argued that Mohammad Reza Shah had poisoned the country with Western ideas and products, and they used this as an opportunity to stand against the regime.<sup>42</sup> In addition, the Shah's policies concerning social and individual freedom, as features of modern democracy, faced difficulties. It was at this time that terms such as Westoxification<sup>43</sup> came into common usage in reaction to the Shah's development programs. Ultimately, the state project of modernity, and the provision of megastructures as a solution for the housing shortage, were not able to continue in the face of opposition from the hard-conservative core of the society.

44. Ali Mozaffari and Nigel Westbrook, "Shushtar No'w: Urban Image and Fabrication of Place in an Iranian New Town, and Its Relation to the International Discourse on Regionalism," *Fusion*, no. 6 (2015)

45. Nigel Westbrook and Ali Mozaffari, "A Return to the Beginnings of Regionalism: Shushtar New Town Seen in the Light of the 2nd International Congress of Architects, Persepolis, Iran 1974" (paper presented at the 32th International SAHANZ Conference, University of New South Wales, Sydney, 7-10 July 2015), 720.

46. Hamed Khosravi, "Politics of Demonstration," *San Rocco* 6 (2013): 28-37.

47. Westbrook and Mozaffari, "In Search of the Authentic Modern," 5.

Through Empress Farah's efforts, and with the help of the new generation of architects who were influenced by the 60s and 70s humanist discourses of architecture, the authorities attempted to find a solution to overcome the sense of disorientation, fading culture, and lack of belonging caused by the existing housing. With the help of Empress Farah Pahlavi, new cultural reform took place in relation to government health and educational foundations, and, most relevant, institutional architecture, mass architectural production and affordable housing.<sup>44</sup> As a consequence of the new agenda, between 1970 and 1974 the state organised a number of international congresses, and invited a large number of prominent international architects and urban planners, including Louis Kahn, Georges Candilis, Kenzo Tange, James Stirling, and Buckminster Fuller.<sup>45</sup> The intention was to map challenges involved in the creation of new habitats<sup>46</sup> and seek solutions to mediate between local cultures in the non-western countries that were facing rapid modernisation.<sup>47</sup> As a consequence of these transitions, even the highest ranks of the royal government began to share their concerns regarding the state interventions. This can be tracked in the 1975 *Honar-e Memari Magazine's* interview with Amir-Abbas Hoveyda, the last prime minister of the Pahlavi dynasty. In a short speech, Hoveyda mentioned that:

For the last 20 years, the architecture that we have offered to the people did not reflect the society's behaviour and manner. In terms of housing, what we have built were just copies of

48. "Prime Minister's Speech at Luncheon with Art and Architecture Magazine Editors," *Art & Architecture 1957*, 9-11.

Southern France, American and North African houses: learn from the people and build for the people.<sup>48</sup>

### Rapid Normalisation and The Continuation of High-Rise Housing

49. Various scholars categorised Ekbatan as an affordable housing project, mainly for the middle-income groups. See Amir Bani Mas'ud, *Iranian Contemporary Architecture: An Inquiry into Tradition and Modernity* (Tehran: Honar-e Memari-e Qarn Publications, 2016), 276. See also Sedighi, "Mega Structure Reloaded," 8&11.

50. Sedighi, "Mega Structure Reloaded," 11.

51. Sedighi, "Mega Structure Reloaded," 12.

Although the government showed more flexibility towards local cultures in the mid-1970s, this new tendency did not practically impact the regime's radical approach towards the housing programs. Ironically, the government had founded the architectural congresses of the early 1970s; however, it failed to follow the offered guidelines regarding the provision of appropriate housing. The emergence of Ekbatan housing<sup>49</sup> is the clearest example of the government's unchanged approach to the provision of instant housing to the middle- and low-income groups. Two years after the first international congress of architects in Isfahan, the Tehran municipality commissioned the Tehran Redevelopment Company (TRC) to implement the largest housing complex in the country's contemporary history, known as *Shahrak-e Ekbatan*, or the Ekbatan Town (Figure 5). The project planned to house 15,500 families, with a total population of about 80,000, in a 220-hectare area.<sup>50</sup> To implement the Ekbatan project, the TRC commissioned different international firms, including Gruzen and Partners, in partnership with a New York firm, the Starrett Housing Corporation, and later, a South Korean company, Space Group, founded by Kim Swoo Geun. These companies and architects were experienced in designing and constructing concrete megastructures. Accordingly, similar to Apadana complex, Ekbatan project also manifested a strong dependency on prefabrication techniques addressing International and Brutal styles by delivering 33 Y and V shape gigantic concrete blocks in different zones.<sup>51</sup>



Figure 5: A concrete block of the Ekbatan complex (Source: Photograph by the author, 2018)

Indeed, the continued construction of high-rise public housing, and the dissemination of Western lifestyle among labours and middle classes in the 1970s were driven by a number of different political and economic factors. First of all, one should understand that the country's project

52. See the "The Turning" in Andrew Scott Cooper, *The Fall of Heaven: The Pahlavis and the Final Days of Imperial Iran* (New York: Henry Holt and Co, 2016), 217.

of modernity was programmed and led by the Shah, and changing his ideology on his modernisation strategies and their effects on people was something that was almost impossible. Of course, there were some influential key players, including Empress Farah, who moderated and domesticised some aspects of the existing Westernisation program. However, it is convincing to conclude that Shah could not tolerate any criticism regarding his approach and thinking, and that's why most political activities and parties were banned or isolated. Indeed, in the mid-1970s, Iran was a one-party state under the control of the Second Pahlavi monarchy, and the party members, in addition to most of the individuals around Shah, all praised and admired the state interventions.<sup>52</sup>

53. Mozaffari and Westbrook, "Shushtar No'w."

54. Diba, "The Recent Housing Boom in Iran - Lessons to Remember," 38-39.

Another reason for the continuation of instant high-rise housing was the ongoing migration from rural to urban areas due to the 1970s' rapid industrialisation, high rate of employment and overall state of economic frenzy in Iran. As a consequence of the migrant displacement, squatter housing and slums were developing on the fringes of Iran's so-called "modern towns," especially Tehran.<sup>53</sup> This severely challenged the progressive-appearing image of Iran. As a result, the government preferred to consider foreign contractors who could deliver instant housing through fast building technologies, including prefab. The proliferation of high-rise public housing also accelerated the Iranian government, as a profit-driven political state, to achieve more profits and economic benefits. The instant public housing brought more financial benefits by reducing building costs and construction time. Consequently, the provision of mass housing helped the state to keep more of its budget for its capitalistic agenda and other programs concerning the Shah's project of modernity<sup>54</sup>

55. Diba, "The Recent Housing Boom in Iran - Lessons to Remember," 38.

56. "Prime Minister's Speech at Luncheon with Art and Architecture Magazine Editors," 9-11.

The domination of technocrats in the body of the royal government could be counted as the third major cause for the continuation of megastructures. In the 1970s, the increase of petrol-dollars and ambitious political leadership resulted in the emergence of a breed of achievement-oriented super-technocrat. The new generation of technocrats realised that the public housing market could be employed as a potential political and financial tool to be manipulated for the sake of power and reputation.<sup>55</sup> The provision of affordable housing within a short time, along with the construction of fancy high-rise buildings for the middle class and the wealthy, became a bewitching slogan. The technocrats understood that their capacity to commission and deliver a large number of units in a short time could play a key role in increasing their reputation among the population, especially among the Iranian politicians. Through building luxury "instant" high-rises, politicians could achieve "instant" political success by contributing to the Shah's modernisation program. Subsequently, these kinds of successes would help them to be seen by Mohammad Reza Shah and the Royal family, and achieve more projects, and, of course, more profits. Indeed, the regime's deceptive slogan, "Learn from the people, and build for the people,"<sup>56</sup> simply lost its legitimacy.

Of course, one could find some incidents indicating the social engineering agenda of authorities in different levels, however, it can be concluded that the Shah's main intention was to improve the condition and social life of his people using modernity. However, like the process

of modernisation in many third-world countries, the Shah's development program consisted of three major features: technology, products, and most importantly, architectonics with a particular focus on mass-produced Western style housing. All these aspects inevitably influenced the behaviour of large groups of people and brought something of a Western consumer culture and social transition to Iran. It is convincing to conclude that, since the 1970s, the introduced megastructures and housing models have rapidly accelerated the normalisation of modernity, in particular, for the more conservative groups of people. Ironically, the 1970s housing typologies, which were criticised by many radical Islamic groups, became the favourite prototypes for the government of Iran after the 1979 Islamic Revolution. Interestingly, the aforementioned shifts in aesthetics could also be seen in different layers of the Islamic regime. This paradox clearly shows the psychological power of architecture.

# ULTRA

## **Positions and Polarities Beyond Crisis**

**SESSION 3: *Typology and Agency***

# Campus Crisis: Materiality and the Institutional Identity of Australia's Universities

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## Keywords

Campus Architecture  
Materiality  
History

## Abstract

In the current century the extreme or 'ultra' position on the university campus has been to argue for its dissolution or abolition. University leaders and campus planners in Australia have mostly been unmoved by that position and ploughed on with expansive capital works campaigns and ambitious reformulations of existing campuses. The pandemic, however, provided ideal conditions for an unplanned but thoroughgoing experiment in operating universities without the need for a campus. Consequently, the extreme prospect of universities after the era of the modern campus now seems more likely than ever. In this paper we raise the question of the dematerialised or fully digital campus, by drawing attention to the traditional dependence of universities on material and architectural identities. We ask, what is the nature of that dependence? And consider how the current uncertainties about the status of buildings and grounds for tertiary education are driving new campus models.

Using material monikers to categorise groups of universities is something of a commonplace. There is the American Ivy League, which refers to the ritualised planting of ivy at elite colleges in the late nineteenth and early twentieth centuries. The English have long referred to their "red brick" universities and to a later generation as the "plate glass" universities. In Australia, the older universities developed in the colonial era came to be known as the "sandstones" to distinguish them from the large group of new universities developed in the postwar decades. While some of the latter possess what are commonly called bush campuses. If nothing else, this tendency to categorise places of higher learning by planting and building materials indicates that the identity of institutions is bound up with their materiality.

The paper is in two parts. It first sketches out the material history of the Australian university in the twentieth century, before examining an exemplary recent project that reflects some of the architectural and material uncertainties of the present moment in campus development. This prompts a series of reflections on the problem of institutional trust and brand value in a possible future without buildings.

## Introduction

In 2020 university campuses around the world were temporarily abandoned due to the global pandemic. Yet teaching and learning, as well as most research activities, continued without them. Almost without warning, the physical settings for university life were rendered obsolete. A rapidly devised experiment in digital pedagogy and the campus-less university was proof positive for many that tertiary education could and should principally exist in the online environment. What had been the extreme or 'ultra' position on the campus, complete digital dissolution, was suddenly a reality.

1. "The Future for Campuses is Digital First", *Campus Morning Mail*, 21 February, 2021, <https://campusmorningmail.com.au/news/the-future-for-campuses-is-digital-first/> Accessed 21 June, 2021; full report is Vector Consulting, "The Tipping Point for Digitisation of Education Campuses", [https://www.cisco.com/c/dam/global/en\\_au/solutions/industries/resources/education/the\\_tipping\\_point\\_for\\_digitisation\\_of\\_education\\_and\\_campuses.pdf](https://www.cisco.com/c/dam/global/en_au/solutions/industries/resources/education/the_tipping_point_for_digitisation_of_education_and_campuses.pdf) Accessed 21 June, 2021.

2. Sue Williams, "Universities and Schools look to their Property Portfolios to Restore Cashflow after the Pandemic", *Commercial Real Estate*, June 7, 2021, Accessed June 21, 2021 <https://www.commercialrealestate.com.au/news/universities-look-to-redevelop-campuses-as-means-to-restore-cashflow-after-the-pandemic-1061484/>

3. Michael Guerriero, "Are College Campuses Obsolete?", *New Yorker*, April 22, 2014, <https://www.newyorker.com/news/news-desk/are-college-campuses-obsolete>, Accessed June 20, 2021.

4. Michael Haggans, "The 21st Century Campus", *Planning for Higher Education*, 44:3, April-June 2016, 1.

Tech companies quickly adopted an aggressive stance. Cisco and Optus collaborated on a piece of research, widely publicised in the Australian media, that purported to show that tertiary institutions needed to move rapidly to become digital first. "(S)tudents will start to differentiate institutions", they warned, "on the quality of their digital services and engagement, perhaps more than the quality of buildings".<sup>1</sup> Real estate capital also circled. In a piece for *Commercial Real Estate*, one industry player noted that there are two significant opportunities for private capital interested in university assets. "It can work with universities to develop smarter, more sustainable and more strategically located campuses, and it can provide the capital required to redevelop land no longer needed by universities."<sup>2</sup> In other words, private asset owners can benefit from the downsizing and sell-off of existing campuses as cash strapped institutions seek new sources of income that enables them to reinvest in digital technology and reduce their overall stock of fixed capital.

The message being driven by real estate and digital tech are not, of course, entirely new propositions for the higher ed sector. In the middle part of the last decade the drumbeat of edX and other online providers was resonating in chancelleries and causing comment in the pages of newspapers and magazines. In 2014 the *New Yorker* reported on a debate held at Columbia University around the proposition, 'More Clicks Fewer Bricks: The lecture hall is obsolete'.<sup>3</sup> The evangelists from the tech sector, strongly represented in that debate, were not alone in foreseeing big changes for education and for the college and university campus. In 2016 architect and campus planning consultant Michael Haggans warned universities that their estates were headed the same way as those of the English gentry in the nineteenth and twentieth centuries if they didn't embrace digital transformation. Haggans' mantra is simple. Acknowledging that reports of the death of the university have been exaggerated, he nevertheless asserts unequivocally that "institutions over-invested in obsolete bricks and mortar will be at a competitive disadvantage."<sup>4</sup>

As architectural historians we have great sympathy with the architecture and landscape qualities of Australian campuses and those in other parts of the world. But this paper is not a plea for the campus as such. Rather it sets out to understand the various cultural investments of Australian tertiary institutions in bricks and mortar and other materials. We do this to understand the current predicament of tertiary institutions with respect to architecture and campus planning and the very real material obstacles to dissolving the campuses. There is abundant evidence that

tertiary institutions continue to derive great value from their estates even as they represent a significant ongoing cost. As such, universities seem likely to go on investing in new buildings and campus landscapes even as the profile of the estates change in both character and their tenure status.

The paper explores this issue in two main parts. First by briefly attempting to synthesise the material history of Australian university campuses across the twentieth century. And second, by exploring the complex set of forces driving new campus developments and alternative models of tertiary teaching and academic research.

### **The Sandstones - UWA Renaissance**

5. Stefan Muthesius, *The Postwar University: Utopianist Campus and College*, New Haven and London: Yale University Press, 2000; Paul Venable Turner, *Campus: An American Planning Tradition*, Cambridge, Mass.: MIT Press, 1984.

The term 'campus' was first used in reference to a field in a military context, and later adapted to the higher education context, with Princeton first perhaps the first to designate a section of the college site as a campus in the late 19th century. As Stefan Muthesius and Paul Venable Turner have both pointed out, 'campus' was therefore attributed to, initially, the defining of a location, but then became interchangeable in meaning with the physical entity of the whole University institution itself. Campus planning, in its modern sense as opposed to the more organic Ox-bridge English college model, is a largely American tradition that becomes more expansive from 1900 onwards. It defines a consciously located, planned, designed and mostly unified ensemble of buildings in careful relationship to one another, and typically takes the form of a distribution of built form and open gardened spaces through multi-axiality in either Beaux Arts or later Modernist modes.<sup>5</sup>

6. Turner, *Campus*, p.37-42; note withheld to maintain the anonymity of the paper.

The rate of campus building slowed in the U.S. and elsewhere between the two world wars, with a focus more on the building of smaller colleges. However, it was during this period of the 1920s to '40s that we witness a growth in university campus planning in Australia. After the inauguration and evolution of the oldest 19th century campuses — University of Sydney, University of Melbourne, and Adelaide University — it is the universities of Western Australia and Queensland that pick up and run with the American-inspired campus model. This is not to say that either institution drew directly on a particular American model, only that the campus idea was viewed as the best. Funding shortages, however, slowed the rate of development at both UQ and UWA in the early years. The material moniker, sandstone campus also first appeared around the same time.<sup>6</sup>

In Perth the siting for the new University on the Swan River in Crawley in 1914 —which was located adjacent to existing Western suburbs and Kings Park but slightly apart from and the river's edge — would become one of the campus's defining characteristics. An international design competition for the initial campus plan, which called for a central grouping of faculty buildings, residential colleges and sporting and ceremonial amenities, was won by Melbourne-based architect Harold Desbrowe-Anneer. This elegant plan of radiating axes was revised in the 1920s by the Public Works Department, and then again heavily modified to cater for a higher density of buildings by Leslie Wilkinson with the consolidation of a clear spine and open spaces for ovals and gardens.

7. Gordon Stephenson, *Planning for the University of Western Australia 1914-1970: a review of past plans and future prospects*, Nedlands WA: Langham Press, 1986.

8. Alois Riegl, "The Modern Cult of Monuments: Its Character and its Origins", trans. K. Foster and D. Ghirardo, *Oppositions* 25 (Fall 1982): 21-51.

9. Christine Shervington, Frank Roberts and Matthew Wallwork, *A Walk through the University of Western Australia*; Nedlands, W.A.: University of Western Australia, 1991, p.5

10. Women's University College Fund Committee, *The University of Western Australia*, Nedlands, W.A.: University of Western Australia, 1947, p. 4.

The scheme was expanded by the British planner Gordon Stephenson's Radburn-style, functional plan in 1954. The campus, under Stephenson, further defined its relationship to river and city, and consolidated the language, style and palette of its early suite of buildings which will be examined in a little more detail.<sup>7</sup>

Designed by architect Rodney Alsop, Hackett Memorial buildings were completed in 1932 and comprise Winthrop Hall, Hackett Hall and the administration building. Built from a local Tamala limestone and dressed with Donnybrook stone – these ancient masonry materials invested an immediate sensibility of natural 'age-value' (to adapt Riegl's term) to the campus architecture, along with their Mediterranean palette of terracotta tile, jarrah timber and eclectic historical styles.<sup>8</sup> These anchoring elements on the Crawley campus included covered colonnaded walkways, gardened cloisters, a gateway and turrets likened to a pylon structure from ancient Egypt or Tudor Ox-bridge.<sup>9</sup> At the opening of this first small step in the building of the UWA campus Alsop said of his historical sources of inspiration: "Italy, Spain, Greece, England, the Stockholm Town Hall – we have learnt from them all ... 'Renaissance' is the only definite term that can be given as the style of the Hackett Buildings — and the Renaissance began in Italy."<sup>10</sup> He then charted the progress of this Renaissance (in a roundabout narrative of nationalism akin to explanations of Palladian style being adopted in 18th century England) through Europe and England to the colonies of Tasmania and NSW, and then finally to the campus of Crawley, where it was "found necessary" to return to the style's sunnier Italian roots so as to better suit Perth's equally strong Mediterranean light.



Winthrop Hall, University of Western Australia, 1932. Architect Rodney Alsop. Photograph by Michal Lewi

11. Shervington et al, *A Walk through the University of Western Australia*, P.6.

Winthrop Hall, which defined the ceremonial heart of the campus, replete with 50 metre clock tower and glazed terracotta frieze copied from a 5th century Greek work at Persepolis, amplified the allusion to a Mediterranean 'townscape' of higher learning. The marble mosaic floor by Napier Waller sourced from various European locations created an instant patina of age, while the commemorative and war memorial plaques and church-like interior with pipe organ and Rose Window, take on an air of reverence. Amongst all these classical allusions — including a bust of Socrates (Paul Montford, 1932) — the ceiling decoration of the hall by George Benson depicts Aboriginal motifs.<sup>11</sup>

The administration building (also featuring mosaic artwork by Napier Waller), the Hackett and Winthrop Halls, an undercroft that was used as a gathering and gallery space for many years, ceremonial reflection pool, outdoor amphitheatre and sunken gardens comprise other key

architectural and landscaped areas in this initial ensemble of the 1930s. Together they would create an enduring identity for the Perth campus, with later highlights including the Mediterranean-style Arts building (Marshall Clifton); the Economics and Commerce buildings (Clifton, Stephenson and Johnston); and the Law School (Gus Ferguson) all completed in the 1960s. Ferguson would go on to craft a robust Modern and Mediterranean-inspired idiom on campus for the rest of the 20th century translated into off-form and block concrete, terracotta and copper.

## Concrete and Clinkers in the Bush

12. Committee on Australian Universities (CAU), *Report of the Committee on Australian Universities* [Murray Report], Government Printer, Canberra, 1957.

13. Philip Goad, 'Moderate modernism', in P. Goad (ed.), *Bates Smart: 150 Years of Australian Architecture*, Thames & Hudson, Melbourne, 2004, pp. 157–158; Susan Holden and Cameron Logan 'Core, courtyard, grid: civic form and the (late) modern campus in Australia'. *Australasian Urban History Planning History Conference*, Melbourne, VIC, Australia, 31 January - 2 February 2018. Melbourne, VIC, Australia: RMIT Centre for Urban Research, 295-302.

14. University of Newcastle, *Bushland Campus: A History of the Natural Ecology and the Human Development of the Grounds of The University of Newcastle*, University of Newcastle and The Friends of the University of Newcastle: Newcastle, 1994.

Ferguson thus translated the original set of architectural cues at UWA, with their overt historical references and sense of material refinement, into a modern idiom that spoke directly to the natural setting. As Ferguson realised these buildings at UWA, he and others were also planning and designing a new generation of university buildings and campuses around the country that were funded and developed following the release of the landmark Murray Report (1957) on Australian universities.<sup>12</sup> While some of the new campuses, such as Monash University, strove to convey a sense of industrial modernity and technical refinement in their early buildings, typically the expansion era campuses were unabashed in their material embrace of rawness. They were developed on peripheral sites in outer suburbia or at the edge of regional centres, cultivated native landscaped settings often in an informal manner, and adopted a basic approach to materials, most commonly using unpainted brick and raw concrete.<sup>13</sup>

The University of Newcastle (UoN) and Macquarie University were exemplary of this trend. UoN exploited and developed its natural bushland setting on the lands of the Pambalong Clan of the Awabakal people at Shortland (later Callaghan). At the time the campus site was at the north-western edge of suburban Newcastle. The masterplan by Laurie and Heath (1963) emphasised the retention of existing forested areas on the site and focused on enhancing the strong presence of the native landscape. This approach to developing the new campus was so successful that it became a cornerstone of the institution's identity. A history of the university's development, published in 1994, was called *Bushland Campus*.<sup>14</sup> Similar approaches to site and setting were pursued at Griffith and for a series of technical colleges in NSW, the best known of which is the Kuring-gai College of Advanced Education (KCAE).

Macquarie University, sited on the other side of the Lane Cove River Valley from KCAE, acquired a slightly different environmental character to UoN and the other so-called bush campuses. But, its architect-planner Walter (Wally) Abraham nevertheless adopted an approach to materials and campus quality that was also quite raw, or at least deliberately unrefined. The ensemble of key buildings that surrounded and constituted the campus core, known as the Central Courtyard — the Library (NSW Department of Public Works, Peter Hall Project Architect, 1967-71), the Council Building (Edwards Madigan Torzillo, 1972), and the Union (Ancher Mortlock, Murray and Woolley, 1969) — was treated uniformly as a composition of off-form and precast concrete buildings that were intentionally monumental. While clearly

15. Holden and Logan 'Core, courtyard, grid'. *Australasian Urban History Planning History Conference*, 295-302.

distinguished from the more, utilitarian surrounding academic buildings, which were predominantly dark brown face brick, they did share an ethic of materials-as-found that was formative for the character of the campus.<sup>15</sup>



Off-form or board concrete and brick used for the academic buildings at Macquarie University. One of the former Arts buildings, W5, now demolished, c.1967-1971. Architect: NSW Govt Architect. Photograph by Cameron Logan

16. University of Newcastle, <https://architectureau.com/articles/plans-for-third-vertical-campus-for-western-sydney-university-revealed/> Accessed 222 June 2021.

Board-marked concrete and native bush landscapes stand in for a whole generation of tertiary institutions in Australia — those developed in the 1960s and 1970s — just as the American-derived campus settings of the interwar decades and sandstone quadrangles of the Victorian era are institutional emblems for earlier waves of university life. But the image of languid eucalypts, brick and concrete is not one that enjoys great sympathy among the current crop of university leaders. Latrobe, Macquarie, Monash and other expansion-era universities have recently invested significant resources in renewal programs at their campuses to align their institutions with the latest campus development trends. Unfortunately for those institutions, many of the trends in higher ed, those that have shaped campuses in current century, are anathema to the expansion era campuses. UoN, for example, is now more likely to highlight its NUspace building (2017), designed by Lyons Architecture to house its law school among other things, and centrally located on Hunter Street, than its bushland campus when promoting the institution. The expansion era universities once sought to create civic gestures and associations in their suburban and bushy settings – new theatres, public spaces and recreational facilities – using the tools of late modern architecture and campus planning. But today tertiary institutions are more likely to seek existing public amenity and civic quality in established urban settings rather than invest in the slow and uncertain process of carving out public places on the urban periphery.<sup>16</sup>

One of the key objectives of the city campus development trend of recent decades has been to integrate teaching and research activities

17. Hannah Lewi and Andrew Murray, "'Town and Gown Concordat?'" Notre Dame and the remaking of the City of Fremantle' 14th Australasian Urban History Planning History Conference, 31 January-2 February 2018, Australasian Urban History, Planning History Group: Melbourne, 2018, 284-294

18. ArchitectureAu, 'Plans for third vertical campus of Western Sydney University Revealed', 13 November 2019, Accessed 22 June, 2021.

into the economic and social life of the host city- town and gown concordant - rather than envisaging universities as places apart.<sup>17</sup> With central cities struggling to overcome the impact of the pandemic and inner urban land use trends in flux it may appear as risky or even a mistake. But if we look beyond the pandemic, the city campus idea might be viewed instead as a single step on the path to the fully dissolved campus. The latest developments in Australia all point to some version of this desire to shed the traditional spatial models and to some extent the distinctness of the campus itself. Western Sydney University is divesting itself of some of its traditional campuses and focusing its activities in high-rise buildings in the Parramatta and Bankstown CBDs. While maintaining its major campus Bedford Park, Flinders has redirected its estate development efforts into a reused Mitsubishi Factory at nearby Tonsley. The former factory site is supposed to be a kind of tech incubator and the host for a range of start-ups, while also housing traditional teaching and research functions of the university's engineering and computer science schools.<sup>18</sup>

The institutional tendency to diminish the distinctiveness of the university campus and make it more porous with surrounding urban environments has had equivocal architectural results thus far. In fact, there are some signs that the uncertainty about the nature of the institutions and their physical presence is leading to a confused and confusing architectural response. While the mantra of management thinking is that every crisis is an opportunity, the initial evidence suggests that for campus development the opportunity is a rather confused experiment.

### **Identity Crisis on the Campus: Melbourne Connect**

19. Faculty of Engineering and Information Technology Welcome Pack (University of Melbourne), Melbourne Connect document, April 2021.

20. Sandra Kaji-O'Grady, Chris Smith and Russell Hughes, *Laboratory Lifestyles: the construction of scientific fictions*, MIT Press, 2018.

One of the latest major developments adjacent to the University of Melbourne to come to fruition, despite Pandemic-related setbacks, is the opening of Melbourne Connect. Designed by a large team of Woods Bagot, Hassell, Hayball and Architectus, and facilitated through a consortium led by Lendlease and smaller industry startups, it is described as the University's "newest purpose-built innovation precinct".<sup>19</sup> The collection of buildings and street level open spaces, occupies the site of the former Royal Women's Hospital in Carlton across a main thoroughfare and to the south of the University of Melbourne campus proper. After some serious consideration as a candidate for adaptive reuse of the former medical buildings — and despite sustainability credentialing — they were demolished in 2017 and completely replaced by the new development. (There is still promise of a heritage interpretation plan to evoke the history of the hospital.) Taking its cue from recent biomedical facilities built on wealthy international campuses, the precinct provides a new home for the Faculty of Engineering & Information Technology, plus the Melbourne Entrepreneurial Centre, various data hubs and digital design start-ups. Along with flexible, open plan works spaces of various configurations, the site includes purpose-built accommodation for over 500 postgraduates.<sup>20</sup>

The project is consolidating the university's gradual southward drift that is bringing its activities closer to the Melbourne CBD and RMIT and away

from Parkville and the residential colleges. In doing so the the university is underlining the purpose and drive of Melbourne Connect that is oriented more towards industry than the formal campus. This reflects much broader shifts in higher education in Australia over the last decade or more.



Detail of the 'digital brick' at the entrance to Melbourne Connect, University of Melbourne, Carlton, Vic. 2019. Photograph by Hannah Lewi

21. Melbourne Connect official website: <https://melbconnect.com.au/place/the-superfloor/> Accessed, 20th June 2021

22. Shapin, Steven & Simon Schaffer *Leviathan and the Air-pump: Hobbes, Boyle, and the Experimental Life* (Princeton, NJ: Princeton University Press, 1985).

23. 'Macquarie University Art Gallery About Us', online at: <https://www.mq.edu.au/about/campus-services-and-facilities/museums-and-collections/macquarie-university-art-gallery/about-us>, accessed 22 June 2019.

At ground level, the various ten or so storey buildings congregate to form a street frontage on the prominent corner of Swanston and Grattan Streets. Here visitors will be able to experience the Science Gallery as "a cultural anchor", which at the moment is a fairly flexible, generic and empty white gallery space.<sup>21</sup> A member of the Global Science Gallery network, its purpose is to showcase and render visible to the broader public, new work. It's mission seems strangely reminiscent of the 18th and 19th-century mode of demonstrating scientific knowledge to the public through public collections, lectures, and exhibitions like early demonstrations of Boyle's air pump at the Royal Society London.<sup>22</sup> And it is part of a recent trend in developing museums, laboratories and galleries for the interdisciplinary exploration and demonstration of the "intersections between art, science, history, philosophy, media, music and culture,"<sup>23</sup> and the visualisation of science and technology. For example, current pop-up installations ask audiences to reimagine waste, to experience an experiment around blood, or to view an expression of perfection in physics. The building of dedicated campus galleries, as a functional type, reinforces the belief that universities should be accessible and profound places of cultural and critical engagement with knowledge. They can, of course, also be very useful in attracting attract media attention, sponsorship and philanthropic support.

Also at ground level, the central focal outdoor space formed by the building footprints – and represented in the sketchy logo of Melbourne Connect as emblematic of connection – is the Womin-djerring (meaning Come together) plaza. Access to this sparsely landscaped plaza is

24. Melbourne Connect official website: <https://melbconnect.com.au/place/the-superfloor/>  
Accessed, 20th June 2021.

via four simulated laneways named natongerambi kalk way (birthing tree); ngang-gak djerring walk (listening together); yagila-djerring walk (learning / searching together); and toom-djerring walk (speaking together), complete with a thin veneer of red brick and urban grit.<sup>24</sup> This introduction of Indigenous naming and presence on Australian campuses is again emblematic of a wider shift in recognition and often vaguely articulated aspiration to 'decolonise' the campus, as seen in the support for First Nations artists to work on campuses and the design of new campus plans that recognise the former occupation and symbolic attachment to campus places. However tokenistic, their instigation represents a potentially promising desire for universities to become places that promote contested or shared thinking and learning between formal academic traditions and Indigenous knowledges.

With a nod to the trend for city campuses that have come to inhabit existing buildings in urban centres, and consequently abandon former conceptions of isolated bush campuses, (perhaps harking back to the 'red brick' and 'plate glass' technical campuses of Australia and the UK), at ground level the red brick laneway language of Melbourne Connect transitions above to modulated glass and panelled facades with a terracotta-inspired colour palette. Functionally, the precinct also provides for the colocation of residential accommodation, flexible working spaces, catering facilities, cultural amenities and even an early learning centre – again stimulating or perhaps simulating the urban vibrancy that is one of the key drivers of the city campus idea.

25. Melbourne Connect official website: <https://melbconnect.com.au/place/the-superfloor/>  
Accessed, 20th June 2021.

26. Melbourne Connect official website: <https://melbconnect.com.au/place/the-superfloor/>  
Accessed, 20th June 2021.

Despite prominent aims to 'activate' campus living, working and studying through the buildings' design, students are not anticipated as playing any major role in this activation and inhabitation, as they largely cannot gain access to any of the building's facilities other than ground level and the first level 'Superfloor'. As we have become accustomed to in landmark university precincts, the expansive open plan space of the Superfloor, designed by Woods Bagot, aims to impress by setting "a new global benchmark for innovation, community curation and partner amenity."<sup>25</sup> Following new tech-sector facilities, defined within the Superfloor is the "Launch Pad," a dynamic space that can be used for "creating, prototyping, pitching and testing."<sup>26</sup> The minimal teaching spaces that are included are fully flexible, flat floor areas that can double up as dining or event spaces. While the upper floors are designed around the now ubiquitous mix of open plan, flexible configurations, glazed cubicles, meeting rooms, lavish communal kitchens and prominent circulation spaces for enabling 'chance' encounters. Visible tech displays and exposed servicing add to the Silicon Valley vibe, along with small windowless rooms on each floor, earmarked as wellness spaces. Unfortunately, they more resemble smoking rooms in airports than say Google or Amazon's enticing wellness amenities.

27. Michael Bhaskar, *Curation: the power of selection in a world of excess*, Platkis, London, 2016.

Melbourne Connect attempts to physically shape and thereby represent what 'work' looks like in the hybrid corporate, knowledge sector campus. We are all 'curators' and 'connectors' now, and our work is promised to be made visible, and thereby presumably more accountable through 'activations' and events, 'pitches', 'demo-days', 'hackathons', and launches.<sup>27</sup> Other kinds of work that campuses used to support, at least pre-pandemic, like teaching and administration have been designed out of this vision, and consigned to take place elsewhere in existing ad hoc

spaces on the campus proper. This is in stark contrast to how campus architecture was articulated through evolving conceptions of pedagogy, ceremony and research over the course of the 20th century: the raked lecture theatre, the library, the atomised tutorial spaces, laboratories and individual offices for academics. While unprogrammed open, landscaped spaces including agoras, forums and secluded gardened courtyards have now been enveloped into precincts that exercise real or implicit control over entry and exit and function as spill over spaces for cafes and student accommodation.

Big on ambition, but perhaps unfortunate in timing, Melbourne Connect arguably encapsulates the current identity crisis apparent on Australian campuses. Although admittedly steeped in inevitable, self-conscious marketing and branding spin, the rhetoric accompanying the precinct's opening is indicative of where campus design and management has landed in 2021. This new campus conception, now admittedly eerily empty in Melbourne in mid-2021, is envisaged far less as a "University" and more as part start-up, innovation hub, part speculative office transaction, with commercially operated student accommodation also adding heft and bulk to the eastern side of the development facing into neighbouring Carlton. And it is the corporate that comes out on top of this mess of aspirations and identities.

## Conclusion

While the rapid dissolution or abandonment of traditional campus estates seems unlikely in Australia, it would be foolhardy to assume their ongoing centrality for higher learning. This moment of crisis provides us then with an opportunity to denaturalise them and at the same time to see their function and meaning in stark relief. It affords, in other words, an opportunity for the historian to see the campus and its designed spaces, buildings and precincts with some clarity. The clear sense of what the campus has been in a material sense, however, arguably does not help illuminate the question of where it is going and why universities are building and developing as they are today. If one was to try and understand what it is universities want for their students and for the society as a whole from looking carefully at Melbourne Connect, one is left puzzled. In another moment the multiple things going on at Melbourne Connect might be hailed as complexity or inclusiveness, but in our own moment, unfortunately, it is hard to avoid the conclusion Melbourne Connect represents only an absence of sincere conviction. The salient idea of the university in Australia represented by the sandstone campus and bushland campus respectively, do not seem likely to be replaced by whatever it is that Melbourne Connect represents. While undoubtedly a real material ensemble, Melbourne Connect gestures toward the primacy of the digital in our current situation. But somehow it seems to be caught between the 'ultra' proposition of digital dissolution and the durable material identity of the nineteenth and twentieth century campuses.

# A Brief History of the Short-Term Parklet in Australia

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## Keywords

Parklet  
Park(ing) Day  
Temporary urbanism  
Pop-up urbanism  
Tactical urbanism

## Abstract

This paper examines the history within Australia of the 'parklet', a small architecturally-framed open space installed temporarily on an on-street car-parking space. The paper traces parklets' varied and evolving forms, materials, production processes and functions. It examines how parklets have adapted to rapidly-changing social needs and priorities for economic activity, health, safety, socialising and on-street parking, and changes in street function.

The contemporary parklet began in 2005 as a localised, grassroots activity to temporarily reclaim street space for public leisure, as part of the wider movement of 'tactical urbanism'. Parklets rapidly became a worldwide phenomenon. Starting in 2008, parklets were absorbed into institutional urban planning practice, as a strategic tool to enhance community engagement, test possibilities, and win support for longer-term spatial transformations. From 2012, commercial parklet programs were developed in Australian cities to encourage local businesses to expand into street parking spaces, to calm traffic and enhance pedestrian amenity. A new generation of commercial 'café parklets' has emerged during the COVID-19 pandemic, facilitated by local governments, to support the heavily-impacted hospitality industry. Their design and construction show ongoing innovation, increasing scale and professionalism, but also standardisation.

This paper draws on diverse Australian parklet examples to chart the emergence of varying approaches to their design and construction, which draw upon different materials, skills, local government strategies and international precedents. The findings also illustrate several convergences in the evolution of parklet design across different Australian cities, due to strong similarities in the spatial contexts, needs, risk factors, and technologies that have defined this practice.

## Introduction

1. Dan Hill, "A Sketchbook for the City to Come: The Pop-Up as R&D," in *Pavilions, Pop-Ups and Parasols. AD Profile. No 235*, L. van Schaik and F. Watson eds, 2015, 32–39, <https://doi.org/https://doi.org/10.1002/ad.1898>.

This paper examines the evolutionary history of the 'parklet,' a small open space installed temporarily on an on-street car-parking space, which started to develop its contemporary form in 2005. Research into the history of parklets can contribute to the history of architecture in several ways. Much architecture begins from, or is inspired by, simple, temporary, makeshift and vernacular constructions, and is then refined. Many parklets are designed by architects. The parklet is, like other furniture and temporary pavilions, a mode of spatial practice where architects can have complete hands-on control over the details of a built outcome, and can explore creative possibilities. Parklets also allow architects to explore design in the public domain, with broad public use. Because they are built in the street, parklets allow architects to demonstrate design ideas about the allocation, form and use of street space; extending their influence beyond the boundaries of individual properties and buildings. Like furniture, a well-designed parklet can also become a mass-produced object. As a low-cost, short-term pavilion within a tightly-defined spatial envelope, the parklet encourages architects to experiment with new forms.<sup>1</sup>

In terms of architectural history, the short time frame and ready transformability of parklets, and the rapidly-changing economic and policy contexts around them, makes it possible to chart within a very compressed time frame - 16 years - many of the evolutionary aspects of designing built form, including understanding the context and limits, experimentation, standardisation, social acceptance, regulation, commercialisation, and local variation in their architecture. This paper examines varied developments in the parklet across four key phases: its emergence as a guerrilla appropriation of street space; its formalisation as a strategic tool by local governments; creative exploration of its design and construction potentials in the contexts of four different Australian cities; and its standardisation for the outdoor hospitality industry during the COVID-19 pandemic. It draws upon the few existing academic studies of parklets, and grey literature from government sponsors, the popular press, and published statements by parklet designers themselves.

## The Emergence of Park(ing)

2. Mike Lydon and Anthony Garcia, *Tactical Urbanism: Short-term Action for Long-term Change* (Washington, Island Press, 2015).

The contemporary parklet was born on 16th November 2005, in San Francisco. Design collective Rebar 'rented' an on-street parking space for two hours by feeding the meter and informally installed a temporary park using a roll of live turf, a potted tree, a bench and a sign inviting passers-by to sit and relax.<sup>2</sup> After two hours, they returned the space to its former condition. This one-off event, christened Park(ing), was shared several weeks later on one participant's personal blog. The post attracted worldwide attention from bloggers and high-profile design websites.

Park(ing) differed in two key ways from many preceding critical movements that temporarily and tactically re-appropriated street space for broader public enjoyment, such as Ciclovía, Critical Mass and Reclaim the Streets. It claimed just the part of the street used for

3. Rebar Group, Inc., *The Park(ing) Day Manual*, 2011, [https://www.asla.org/uploadedFiles/CMS/Events/Parking\\_Day\\_Manual\\_Consecutive.pdf](https://www.asla.org/uploadedFiles/CMS/Events/Parking_Day_Manual_Consecutive.pdf).

4. Catriona Stuart, "(Park)ing Day—September 21, 2006," *Places* 18, no. 3 (2006): 76–77.

5. Rebar Group, Inc., "PARK(ing) Day 2011 Participation List", 2012, <https://web.archive.org/web/20120407025914/http://parkingday.org/parking-day-2011-participation-list/>.

6. GroundplaySF, "A Look at the Human Impact of Parklets and the People Who Make Them" (San Francisco, 2020), <https://groundplaysf.org/wp-content/parklet-impact-study/index.html>.

7. Anastasia Loukaitou-Sideris and Madeline Brozen, "Reclaiming the Right-of-Way: A Toolkit for Creating and Implementing Parklets," *Transportation Research Board 92nd Annual Meeting* (Washington, DC, 2013), [https://nacto.org/wp-content/uploads/2015/04/reclaiming\\_the\\_right\\_of\\_way\\_brozen.pdf](https://nacto.org/wp-content/uploads/2015/04/reclaiming_the_right_of_way_brozen.pdf), p. 109

8. GroundplaySF, "A Look at the Human Impact of Parklets and the People Who Make Them."

9. Sarah Mirk, "From Cars to Carts," *Portland Mercury*, September 7, 2012.

parking, rather than the travel lanes. It introduced stationary elements such as seating and greenery, instead of promoting non-car forms of mobility. These factors gave Park(ing) a distinctive capacity to introduce new landscape and architecture elements into street space. This context offered new constraints and opportunities. In early 2006, Rebar published a how-to manual on their website,<sup>3</sup> and announced the first international Park(ing) Day for the third Friday of September. San Francisco's Mayor and one district councillor 'donated' their permitted on-street parking spaces outside City Hall.<sup>4</sup> Park(ing) Day 2006 was also celebrated in London, Manchester and Rio. By 2011, Park(ing) Day involved 975 sites in 162 cities worldwide.<sup>5</sup>

## The Formalisation of Parklets

Widespread experimentation through the Park(ing) Day event was fundamental to the development emergence of the contemporary parklet. Park(ing) Day's global impact inspired San Francisco's city government to facilitate several longer-term pop-up park installations. In 2008 it commissioned Rebar and architect Riyadh Ghannam to prototype two more permanent Park(ing)-style installations, to be sponsored and occupied by local businesses while maintaining free public access.<sup>6</sup> Rebar's model was comprised of various modular programming elements on a deck adjustable to varying kerb heights. The city then launched a permit program allowing businesses and residents to convert parking spaces into parklets. In 2010, the term 'parklet' was first used, by San Francisco Mayor Gavin Newsom, when unveiling the world's first commercially-oriented parklet, outside Mojo Bicycle Café. Designed by Riyadh Ghannam, it consisted of a timber platform level with the sidewalk and planter boxes linked by a steel-cable perimeter safety barrier. This project illustrated two key developments: an architectural distinction that '[p]arklets have a... platform to create a flush and safe extension of the sidewalk into the street right-of-way;<sup>7</sup> and a functional focus on hospitality business. Between 2010 and 2019, 76 publicly-accessible parklets were built in San Francisco.<sup>8</sup> Portland, Oregon's 2012 'Street Seats' program was the first to allow businesses to install parklets for exclusive commercial use, "and pay the city market rate for any lost metered parking."<sup>9</sup>

## Parklets in Australia

10. Yen Trinh, personal interview, 18 May 2021.

11. Rebar Group, Inc., "PARK(ing) Day 2011 Participation List"

Park(ing) Day was celebrated for the first time in Australia in 2007. The first Park(ing) installation, outside Brisbane's Urban Grind Café, emulated others overseas, featuring grass, many pot plants, chairs and a table. Brisbane's involvement in Park(ing) Day 2008 was the third largest worldwide, involving 47 sites.<sup>10</sup> In 2011, Park(ing) Day's website documented 86 Australian projects across most major cities.<sup>11</sup> Despite Brisbane's early enthusiasm for Park(ing) Day, and its benign climate, the city and its businesses have never erected any longer-term parklets.

While Park(ing) and San Francisco's first parklets provided the initial external stimulus and examples for Australian practice, parklet development has occurred independently within each Australian city's local milieu of ideas, needs and opportunities. This section will thus

examine the individual histories of parklets within four major Australian cities, to chart the innovations and limitations of various architectural experiments with parklets across their varying urban, governance and funding contexts.

### Perth

12. Michael Swanepoel, "Pavement to Parklets Freo style," 7 March 2012, <http://thefremantledoctor.blogspot.com/2012/03/>.

Australia's first relatively-permanent commercial parklet was erected outside Moore and Moore Café in Fremantle in late 2011 (fig. 1).<sup>12</sup> It had a timber deck custom-built to match the kerb height and was soon afterward protected from traffic by three prefabricated corrugated-steel planters. It still stands. Fremantle published a parklet policy in 2013, which defined them as publicly-accessible amenities which could also be associated with hospitality businesses, and confined them to low-traffic streets. In 2015, Fremantle's council debuted a mobile parklet, designed by tiny-home manufacturer We Are Tiny, built on a standard car trailer, which could be trialled short-term by businesses considering hosting on-street parklets. This was towable but only provided steep stair access.



Figure 1: Australia's first parklet, outside Moore and Moore café, Fremantle, September 2011. Source: Fred Oostyck (Wiki Takes Fremantle participant) - CC BY 3.0.

13. David Bell, "ORCs invade precious bays," *The Perth Voice*, 28 September 2013, p. 4.

14. NOMA, "Angove Street Off-Cut Parklet," 2016.

Perth's parklets illustrate rapid innovations in funding, design and construction approaches. From 2013, the inner-suburban City of Vincent trialled four council-funded public parklets to test ideas and promote business-funded parklets.<sup>13</sup> These public parklets did not have to maximise space for café seating. The Angove Street Parklet, designed in 2016 by Simon Venturi of NOMA, used a 30°/60° geometry. Its sculptural form was assembled from many timber off-cuts from the architect's larger project, a waterfront boardwalk, and triangular folded-aluminium planters.<sup>14</sup> Another pair of angled parklets, in Hampden Road, Crawley, designed by landscape architect Joel Barker of Seedeign for Perth City Council in 2019, were designed to fit between existing 45-degree kerb extensions within parallel street-parking bays. They were planned to be relocatable and reconfigurable, composed of twenty bolt-

15. Joel Barker, personal interview.

together modules, including angled benches, small, easily-transportable plastic plant tubs, street-library shelf units and preformed rubber kerb crossover ramps. This example shows parklet design pursuing adaptability as well as portability.<sup>15</sup>

16. Laura Gartry, "Pop-up parks prove popular in Perth," *ABC News*, 30 September 2015, <https://www.abc.net.au/news/2015-09-18/pop-up-parks-catch-on-in-perth/6788094>.

For Park(ing) Day 2015, residents Jean-Paul Horr  and Annie Matan, a sustainability researcher, developed a one-day installation outside a caf  on Fremantle's Wray Avenue and a proposal for a solar-powered community parklet, which was completed through a city solar-power generation grant and crowdfunding in 2017.<sup>16</sup> Also designed by Seedesign, this angled parklet had a custom welded steel frame and steel-sheeted planter barriers and solar panels. It was designed in two pieces shaped around the site's existing street trees and the adjacent pedestrian crossing, to which its deck was linked by a built-in ramp.<sup>17</sup> These examples all explored parklets as sculptural landscapes for community leisure, rather than platforms maximising outdoor dining capacity.

17. Joel Barker, personal interview, December 2019.

18. Rafael Lamounier Pedrosa, "Mini Gabion Parklet pops up in a Brazilian neighbourhood," *Inhabitat*, 2 March 2016, <https://inhabitat.com/mini-gabion-parklet-pops-up-in-a-brazilian-neighborhood/>.

Other innovative construction approaches included Fremantle's backpacker hostel, which in 2016 installed a parklet deck protected by limestone-filled gabions, resembling a breakwater (fig. 2). The gabion parklet, while rare, was also separately trialed by Quadra Est dio on a sloping street in Belo Horizonte, Brazil in 2016.<sup>18</sup> Also in 2016, a local Perth community organisation, The Vic Park Collective, self-built a parklet with a reading nook outside Crow Books. It combined diverse elements including converted, purple-painted shipping containers, re-used window security grilles and picket fences, and seating and planters constructed from salvaged timber. This tall parklet was subsequently removed because it blocked views to the business frontage.



Figure 2: Parklet made of gabions, Fremantle Hostel, 2016.  
Source: Eric Fidler / Flickr – CC-BY-NC 2.0.

## Adelaide

19. Adelaide City Council, "Parklet Program Review" (Adelaide, 2015).

20. Taylor Cullity Lethlean, "Bank Street Parklet," 2013, <https://tcl.net.au/projects-item/bank-street/>; Damian Holmes, "The Bank Street Parklet Project" July 18, 2014, <https://worldlandscapearchitect.com/the-bank-street-parklet-project-adelaide-australia-taylor-cullity-lethlean/#.YOaWZW6ubOY>; Ben Hyde, "Bank St parklets doomed for failure from outset," *Sunday Mail* (SA), October 11, 2014.

21. Adelaide City Council, "Parklet Program Review".

22. *The Advertiser*, "City's Yobbo Central to be given the Heave-Ho," January 30, 2016.

23. Renewal SA, "First Stage of Laneways Transformation Completed," 2017.

Australia's second formal, temporary parklet was installed in January 2012 on a low-traffic city-centre laneway outside Adelaide's Historian Hotel as part of 'Splash Adelaide,' a city-sponsored program encouraging short-term experiments that enlivened city streets. This was not designed and constructed as an architectural whole, but assembled from separate prefabricated elements: precast kerbs, 1000-litre plastic containers filled with water and trees as crash protection, and prefabricated sectional timber platforms. It had no balustrade. Its success precipitated a 12-month pilot program in 2013.<sup>19</sup> In February 2013, the South Australian government installed a row of 15 parklets along Bank Street, a busy, partly-pedestrianised laneway connecting Adelaide's railway station and nightlife precinct, West End, to enhance inner-city pedestrianisation and provide public seating. Designed by landscape architects Taylor Cullity Lethlean, this million-dollar project was robustly constructed with a welded steel frame.<sup>20</sup> It was designed as a set of linked modules terraced incrementally down the street's incline, and was carefully detailed, providing several standing-height bar-style ledges, and steel ramps and steps with handrails connecting onto the street, footpath, and between the modules.

Under Adelaide City Council's 2013 commercial parklet program, four new privately-financed parklets were erected, and the Historian Hotel's was reconstructed, following San Francisco's original model, with timber planters, steel fence, and fitted timber deck.<sup>21</sup> The award-winning parklet of the 'Food for Life' café, designed by Troppo Architects in a similar conventional format, and installed 100m from the Historian Hotel in March 2013, is Australia's second-oldest semi-permanent commercial parklet. The Bank Street parklets also won design awards, but received much media criticism for attracting drunk, fighting youth, loiterers, "junkies," take-away food rubbish and rough sleepers, and being used as toilets.<sup>22</sup> As a salutary lesson for today's pandemic parklets, by 2017, Adelaide's City Council had paid \$200,000 to remove them.<sup>23</sup> Relatively few parklets have been built in Adelaide since.

## Sydney

24. Sam Crawford Architects, "Creating edible outdoor rooms", <https://samcrawfordarchitects.com.au/portfolio/edible-gardens/>; Amelia Thorpe, *Owning the Street: The Everyday Life of Portery* (Cambridge: MIT Press, 2020).

Sydney has had few conventional timber parklets. Designers there have explored several alternative structural formats. In 2012, completely separate from Park(ing) Day, Sam Crawford Architects led development of three small parklets adjoining narrow footpaths in Surry Hills, with volunteer support from local professional consultants, residents and businesses and a City of Sydney grant. In a unique approach, these parklets were formed from bitumen poured onto a fabric sheet laid directly on the street, framed within temporary concrete kerbs. Large concrete stormwater pipe sections were installed as planters and seats (fig. 3).<sup>24</sup> These parklets' heavy three-dimensional forms and lack of tables prevented their commercial appropriation by local businesses, or relocating them. In 2013, Waverley Council installed 'Urban Lounge,' a temporary demonstration project designed by Drew Heath Architects, within its major activity centre, Bondi Junction. Its two parklets featured custom-cast concrete jersey barriers with complex imprinted surface

25. CoDesign Studio and Street Plans Collaborative, *Tactical Urbanism Vol. 4: Australia & New Zealand*, 2014. <http://tacticalurbanismguide.com/guides/tactical-urbanism-volume-4>.

designs supporting cantilevered timber seats and tables, and concrete stormwater-pipe planters. They also incorporated bicycle racks, phone charging outlets, wi-fi, and a solar-powered light installation.<sup>25</sup> These innovative design approaches were both more complex, heavy and expensive, and much less easily replicated, altered or relocated, than the simple timber-deck-and-barrier parklet solution used by Australia's longest-lasting café parklets.



Figure 3: Edible Outdoor Rooms, Surry Hills, 2012.  
Source: 'Newtown grafitti' / Flickr - CC-BY 2.0.

26. Good Design Australia, "Parklet," 2016.

27. SAMA Design, "Parklets," n.d., <http://www.samadesign.com.au/#/parklet/>.

In 2014, Sam George of SAMA Urban Design developed a parklet system pre-fitted with timber benches, planters and artificial turf inside the cut-down bottom half of a crane-liftable steel shipping container, first installed in Clovelly Road, Randwick.<sup>26</sup> Six units were subsequently moved to 14 locations across Sydney, including replacing Waverley's Urban Lounge.<sup>27</sup> In 2015, the Glebe Chamber of Commerce President, Kris Spann, initiated a local trial of the container parklets. In 2016, Spann and Sydney architects Alexander Symes and Branko Jaric formed People Parkers, and designed a parklet based on a standard car trailer with stabilisers, which could simply be towed. This obviated

28. Kris Spann, "2018/19 - People Parkers", 1 April 2020, <https://www.linkedin.com/pulse/201819-people-parkers-9years9days-kris-spann/>; Cameron Jewell, "What's a parklet and how can it boost business?," *The Fifth Estate*, 26 July 2016, <https://thefifthestate.com.au/innovation/design/whats-a-parklet-and-how-can-it-boost-business/>.

29. Urban Commons, "Parklet at Wide Open Road," 13 March 2013, <https://urbancommons.tumblr.com/post/45227970433/parklet-at-wide-open-road>

30. Moreland City Council, "Parklet Program," <https://www.moreland.vic.gov.au/aboutus/projects/shoppingareaandstreetscapeprojects/parkletprogram/>, accessed 28 November 2018.

31. Urban Commons, "Parkscape," <https://www.urbancommons.com.au/systems/#parklets>

32. Moreland City Council, "Parklet Program;" Moreland City Council, Annual Report 2018-19, p. 17.

33. *LG Focus*, "Parklet Pods," <https://www.lgfocus.com.au/editions/2014-11/parklet-pods.php>, November 2014.

34. Louise Cheer, "Skipsters! Melbourne Hipsters Create Mobile 'park' in the Street Using a SKIP Bin as an Alternative Place to Hang Out," *Daily Mail Australia*, May 2015.

the need for cranes and traffic review. The parklet shell is made from recycled plastic.<sup>28</sup> This shows independent, convergent design evolution with Fremantle's trailer-parklet example, emerging from identical site conditions and user needs.

## Melbourne

Melbourne in 2021 has many more parklets than most world cities, but it was not a major early adopter or a significant formal innovator. Melbourne's first commercial parklet was designed by Urban Commons for Moreland café Wide Open Road, and installed for just one day in March 2013.<sup>29</sup> It consisted of an astroturf-covered plywood deck surrounded by a thick, freestanding curved plywood trellis with plant pots stacked inside it to form a 'vertical garden.' As an ephemeral installation, it did not provide any impact-resistant traffic barriers or signs. Urban Commons is distinctive among parklet developers in being founded by two industrial designers and focusing on product design of outdoor furniture units that integrate greenery. Their parklets are thus not designed as complete architectural envelopes. In 2016, Urban Commons designed a temporary parklet for Small Block Café and adjoining business Bikes Please in Moreland.<sup>30</sup> This featured their now-standardised kit of 'Parkscape' components: timber decks in prefabricated steel-framed lay-in sections, triangular concrete planters supporting steel-framed timber benches, and larger, multi-coloured stackable plastic planter boxes.<sup>31</sup> It was only in June 2017 that Moreland City Council formalised a Parklet Program, after which longer-term parklets were installed by the council and by businesses, including two by Urban Commons on a cul-de-sac outside innovative residential developments The Commons and Nightingale 1.<sup>32</sup>

In parallel to Sam George's creation of a shipping-container parklet in Sydney, landscape architect Matt York, of Spiire, developed a 'parklet pod' in September 2014 from a recycled rubbish skip, in Geelong, for a bakery. The design featured a perimeter timber bench, a narrow planter at one end, an anti-slip metal floor, and cut openings for footpath access and rainwater drainage. Parklets seek to provide comfortable outdoor settings, but they are rarely permitted to have roofs. Four corner jacks under this skip accommodated variations in kerb and road profiles. Although transportable, it still sits there seven years later. A second skip was soon thereafter installed 40m away outside a café.<sup>33</sup> In another example of convergent evolution, in May 2015, CoDesign Studio also experimented with a skip parklet. While clearing out their Collingwood offices, they hired a skip bin and ran a garage sale with neighbouring businesses. Before filling the skip, they converted it into a small park during the sale, with astroturf, potted trees, and milk crates and wooden logs as temporary seats.<sup>34</sup>

Parklets only became common in Melbourne after 2018, following Moreland's successful trials. In December 2019, a five-month trial 'pop-up park' was installed across five parking spaces on Domain Road, South Yarra. Developed by The Place Agency, its purpose was to provide public space to compensate for the multi-year impacts of the nearby Melbourne Metro Tunnel construction. This large-budget parklet had timber decking and seating but extensive custom-fabricated

35. Rail Projects Victoria, "Domain CRG Meeting 16 August 2018 Presentation," p.19, [https://metrotunnel.vic.gov.au/\\_data/assets/pdf\\_file/0015/324042/MM-PRESENTATION-20180816-Domain-CRG-Meeting-9.pdf](https://metrotunnel.vic.gov.au/_data/assets/pdf_file/0015/324042/MM-PRESENTATION-20180816-Domain-CRG-Meeting-9.pdf).

steel cladding and detailing, and a full-length heavily-landscaped planter. Despite this project's name and ostensible purpose, the client Rail Projects Victoria always intended that "Retailers [would] have the opportunity to extend footpath dining into parklet space for the length of the pop-up".<sup>35</sup> Its length was divided by planters into four sections aligned to the four adjacent restaurants. The parklet won a Premier's Design Award, and with the onset of the COVID-19 pandemic, this trial was extended, and the parklet lengthened by two spaces.

## Pandemic Parklets

36. Carlos Avila Gonzales, "San Francisco's Outdoor Dining Parklets," *San Francisco Chronicle*, 26 June 2021, <https://www.sfchronicle.com/projects/2021/visuals/sf-outdoor-dining-restaurant-parklets/>.

Following the declaration of the global COVID-19 pandemic on 11 March 2020, widespread 'social distancing' and lockdown orders had a massive negative impact on both car traffic and hospitality businesses. Pedestrians maintained safe distance by spreading onto streets. On 26th May 2020, San Francisco's COVID-19 Economic Recovery Task Force invited a massive expansion of kerbside parklets through the city's existing 'Shared Spaces' program. Pre-pandemic, San Francisco had 59 active parklets. There are now almost 1400.<sup>36</sup> Australia's state governments similarly launched COVID-19 recovery funding programs during 2020 to support hospitality businesses to activate footpath space, laneways and street parking for dining use. The pandemic drove further evolution and variation in parklet design, due to social distancing requirements, a boom in demand, and the prospects of longer-term, government-subsidised investment in parklets, including for winter operations.

37. People Parkers, "Our Products," <https://www.peopleparkers.com/products>.

In October 2020, Sydney's People Parkers launched a Perimeter Parklet System, with standardised 2m x 1.1m barrier modules built around standard water-filled, interlocking plastic jersey barriers, and a set of attachable elements including bicycle racks, self-watering planters, benches, and external cladding with recycled plastic or plywood, suitable for external decoration or advertising. People Parkers have also developed parklets with built-on pergolas.<sup>37</sup>

Pre-pandemic, Melbourne had Australia's greatest number of parklets: 27. After several long-term lockdowns, Victoria's State Government allowed businesses to increase customer capacity by extending service areas onto neighbouring footpath and road spaces. They provided cash grants to businesses to develop safe outdoor dining spaces. This fostered production of many parklets. Greater Melbourne's parklets now number almost 600. The City of Melbourne purchased 200 standardised parklets, consisting of astroturf-covered timber decking, modular decking-faced barriers incorporating narrow shrub planters, concrete protective bollards and large concrete tree planters. Standard, modular solutions were also deployed by most other Melbourne councils. Yarra Council simply installed concrete bollards branded with distinctive pink and purple fabric covers, allowing businesses freedom in parklet design. Several high-end businesses have installed very luxurious parklets, including the RACV Club's, which has a steel frame, sliding glass windows, bluestone-tile flooring to match the footpath, retractable awnings, and a timber ceiling with recessed spotlights and heaters. To extend parklet use during cooler seasons, other businesses' parklets have added marquees, translucent plastic walls and heat

lamps. Three Melbourne businesses have adapted to sloping street sites by constructing parklets terraced lengthwise in separate level sections, each with step-free access, similar to Adelaide's Bank Street parklet. Some current commercial parklets are designed to match their host building's aesthetic, including a parklet made from two shipping containers outside a café in a former Richmond factory.

38. Urban Commons, "DIY Parklet," <https://www.urbancommons.com.au/systems>.

While Moreland's city council does not deploy a generic design, many of its individual pandemic-era parklets are produced by one firm, Urban Commons. They innovated beyond their kit-of-parts of 'Parkscape' approach to develop a second distinctive parklet aesthetic, their 'DIY parklet,' composed of lightweight, pre-cut marine-grade plywood elements, including planters, that can be flat-packed, palletised and easily assembled on site.<sup>38</sup> Refining the prototype of their very first parklet in 2013, this system consists of slot-jointed plywood ribs and rails, which can be shaped in cranked and curved profiles and also mounted with plywood face panels and decoratively painted. These DIY parklets were installed in late 2020 in several locations, including a 70-m long row of DIY parklets occupying 12 parking spaces on restaurant-filled Lygon Street (fig. 4). Neither of Urban Commons' parklet systems are very impact-resistant. They rely on slow-street locations, protection from existing kerb widenings, bicycle racks, adjacent parked cars and other parklets, and temporary transverse rubber kerbs.



Figure 4: 'DIY parklet' by Urban Commons, Lygon Street, Brunswick, 2021. Source: Philip Mallis / Flickr - CC BY-SA 2.0.

39. The Place Agency, "Urban Parker," PDF brochure.

40. <https://www.skiplet.com.au/>.

Melbourne's Place Agency has begun marketing a modularised 'Urban Parker.'<sup>39</sup> 'Parklet pod' developer Matt York founded supplier Skiplet in 2020, and installed 10 skip-based parklets throughout the Geelong region, also developing units with roofs and performance stages, and double-skip units for parking lots.<sup>40</sup> Skips - like shipping containers, which are also commonly used for temporary urbanism interventions - are industrially-fabricated items that designers can readily adapt into parklets because, as infrastructure units that facilitate transportability, they already conform to the dimensional constraints of road transport and parking spaces.

In both Western Australia and South Australia, which hosted Australia's first semi-permanent parklets, and in most other states, the pandemic has had very few impacts on hospitality practices, and there has been no focussed government promotion of new temporary parklets. Similarly, in Queensland, the starting point for Park(ing) Day in Australia, Park(ing) remains a one-day event.

### **The Evolution of Parklet Architecture in Australia**

Australia's parklets evolved quickly from the playful, artistic, self-organised guerrilla interventions of Park(ing) Day into a series of local-government-facilitated, carefully-designed, long-term programs to commercially appropriate parking spaces and enhance pedestrianisation. The COVID-19 pandemic catalysed parklets' production and also their architectural evolution, from a temporary, stand-alone public space to more-durable outdoor extensions of hospitality businesses.

The diverse history of Australia's parklets shows that the deck-and-planter-barrier format established in San Francisco was not guaranteed to become the default typology worldwide. Designers explored several other sets of materials and techniques to meet specific needs for pedestrian access, traffic safety and transportability, and to fit parking space dimensions. Some approaches emerged independently multiple times across Australia and overseas.

Two main factors have shaped parklets' design evolution. The first is standardisation for the hospitality market. With the earliest parklets, architects and other trained designers used self-built approaches or local government budgets to explore creative options, experimenting with in-situ bitumen, concrete pipes and custom-cast barriers, welded frames, and gabions. But parklets' site conditions - street parking spaces - are very uniform. Subsequently, firms developed to provide parklets to hospitality-industry clients as a product or service; many of them founded by professional designers. These firms have realised cost, speed, quality, transportability and configuration benefits by developing standardised, mass-produced parklet elements and systems, using pre-cast concrete bollards, plastic jersey barriers, conventional timber-frame construction, and plywood, steel, aluminium and plastic sheeting. Pioneering, ostensibly short-term projects deploying the simplest and lowest-cost typology of a footpath-level timber deck and unitised planters as barriers have actually endured longest. These parklets best meet hospitality clients' needs for maximum flat floorspace and minimal barriers to maximise visibility. This standardised parklet type is durable enough and adaptable enough (for different widths, angles and slopes) to have become the common solution. Many Australian municipalities have mass produced such parklets to donate or lease to businesses.

41. Spann, "2018/19 - People Parkers."

Other standardised typologies include transportable, readily-deployable skiplets and trailers, which are entirely prefabricated, but much more expensive and complex to deliver and relatively inflexible. These meet a niche demand for clients where local time, skills and labour are scarce, or where parklets are deployed in short-term trials across different sites, for example during the incremental extension of Sydney' light rail lines.<sup>41</sup> For

most practical applications, these types of parklets are over-designed and over-engineered.

The pandemic-era proliferation of parklets has also encouraged some diversification. Longer timeframes and larger budgets have stimulated development of weather-protecting roofs and walls, occasionally using modified shipping containers. Designs have adapted to site conditions including slopes and ninety-degree parking. Some parklets have had customised exterior decoration and branding applied. The angular, raised shapes of three different trial public parklets in Perth show there is scope for formal experimentation with geometry and landscaping, if parklet space does not have to be kept maximally clear for waiters, tables and paying customers.

The second key factor that has shaped parklet design is risk. The detailed attention to deck edging, jersey barriers, heavyweight planters and traffic signage emphasizes that parklet architecture has to address parameters rarely confronted by most architect-designed structures. Most buildings are well set back from streets. Parklets are buildings that stand on a space designed for, and used by, vehicles, and they need to withstand vehicle impacts. Parklets' main critics are traffic engineers and drivers. Low-traffic laneway locations allow more freedom in parklet design. From the footpath side, parklets have to invite safe access. Attention to railings, non-slip surfaces, steps and ramps highlights that parklet design has to address occupant risks associated with kerbs, rain, drunkenness, and parklets' narrow width. People Parkers' Perimeter Parklet System deftly integrates massive plastic crash barriers inside timber-clad planters, reconciling these divergent priorities of traffic managers and place-makers.

The short history of Australia's parklets shows both convergences and creative thinking in how designers address the needs, risks and opportunities framed within the very tightly-defined envelope of kerbside carparking spaces.

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# ULTRA

## **Positions and Polarities Beyond Crisis**

**SESSION 3: *Design Practices, Gender and Media***

# Women, Media, Design, and Material Culture in Australia, 1870-1920

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## Keywords

Women  
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## Abstract

Over the last forty years feminist historians have commented on the under-representation or marginalisation of women thinkers and makers in design, craft, and material culture. (Kirkham & Attfield, 1989; Attfield, 2000; Howard, 2000; Buckley, 1986; Buckley, 2020;). In response particular strategies have been developed to write women back into history. These methods expand the sites, objects and voices engaged in thinking about making and the space of the everyday world. The problem, however, is even more acute in Australia where we lack secondary histories of many design disciplines. With the notable exception of Julie Willis and Bronwyn Hanna (2001) or Burns and Edquist (1988) we have very few overview histories. This paper will examine women's contribution to design thinking and making in Australia as a form of cultural history. It will explore the methods and challenges in developing a chronological and thematic history of women's design making practice and design thinking in Australia from 1870 – 1920 where the subjects are not only designers but also journalists, novelists, exhibitors, and correspondents. We are interested in using media (exhibitions and print culture) as a prism: to examine how and where women spoke to design and making, what topics they addressed, and the ideas they formed to articulate the nexus between women, making and place.

## Introduction: Women Mapping the Capital

1. See Cheryl Buckley, "Made in Patriarchy: Towards a Feminist Analysis of Design," *Design Issues*, III, 2 (Autumn 1986), 3-14; Kyriaki Hadjiafxendi and Patricia Zareski (ed.), *Crafting the Woman Professional in the Long Nineteenth Century: Artistry and Industry in Britain* (Routledge, 2013); Zoë Thomas, *Women art workers and the Arts and Crafts Movement* (Manchester: Manchester University Press, 2020).

2. See Andrew Montana, *The Art Movement in Australia. Design, Taste and Society 1875-1900* (Carlton Vic: The Miegunyah Press, 2000).

3. Lynne Walker, "Home and Away: The Feminist Remapping of Public and Private Space in Victorian London" in Iain Borden, Joe Kerr, Jane Rendell and Alicia Pivaro (ed.) *The Unknown City: Contesting Architecture and Social Space* (Cambridge, Massachusetts; England: The MIT Press, 2001), 296-311.

4. Walker, "Home and Away", 299.

5. Hadjiafxendi and Zareski, "Artistry and Industry," 14.

The marginalization and under-representation of women thinkers and makers in histories of design, craft and material culture is well-known. The methodological challenge of incorporating women makers and mediators is exacerbated by women's smaller cohort and fragmented archives.<sup>1</sup> The invisibility of nineteenth and early twentieth-century women is compounded by gender ideologies that aligned middle-class women with the domestic sphere and categorized their genteel making activities as amateur handicraft. From the late 1870s onwards, however, the domestic paradigm was progressively mobilized by women to assert their professional expertise over the decoration and furnishing of the home. In late nineteenth-century Melbourne for example, women were increasingly active as artists, designers and makers and their home studios have provided a focus for scholars.<sup>2</sup>

We argue however, that women's increasing presence within the public sphere of the city across its sites, networks and media industries, offers an alternative way to situate and analyze the work of women makers and writers.<sup>3</sup> Women used the public sphere to 'negotiate a public presence' and assert their professional status.<sup>4</sup> Their access to technical training schools, transnational exhibitions, professional guilds and societies and print culture allowed them to become increasingly visible in design industries and design commentary, as they engaged with the "key structures" that defined professional making: "education, exhibition and remuneration."<sup>5</sup> This paper focuses on the sites of the museum, the salon, the exhibition and public sphere journalism. The tensions they experienced in occupying the public realm through socially legitimated roles whilst attempting to expand beyond circumscribed spheres are evident in many of these projects.

## Women and Imperial Exhibitions, 1851-1886

6. Juliet Peers, "Vale, May (1862-1945)" in Joan Kerr (ed.), *Heritage: The National Women's Art Book: 500 works by 500 Australian Women Artists from Colonial Times to 1955* (Roseville East, N.S.W: Craftsman House, 1995), 468-469.

7. *Official Catalogue/Colonial and Indian Exhibition, 1886* (London: William Clowes and Sons, 1886), 176.

Women in late nineteenth-century Melbourne were able to access the legacy of the nineteenth-century international exhibitions which had included displays of women's work such as the Great Exhibition of 1851 and the Colonial and Indian Exhibition of 1886, or erected stand-alone women's pavilions as at the Philadelphia Centennial 1876 and the Chicago Columbian Exhibition of 1893. Colonial ambitions in the exhibition sphere could offer opportunities for women, as they did for young May Vale, a student at the National Gallery School in 1880s Melbourne. May had assembled an astounding tableau of two hundred species of Victorian timber, with each timber sample bearing a painted depiction of the leaves and flowers of the tree from which it had been cut. May Vale (1862-1945) had already spent four years in London during her father's residency in the imperial capital from 1874-1878 and in 1875 she had studied at the South Kensington schools of art and design.<sup>6</sup> It was a very large commission for a twenty-four-year-old woman art student. May's connections to South Kensington, as well as her talent, were surely instrumental in securing this commission. The 1886 Exhibition afforded the colony's ambitious administrators a useful opportunity for demonstrating their achievements in furthering industrial, technical and applied education in Victoria.<sup>7</sup> The role of the Technological Museum in the production of the exhibit was noted by

8. *Colonial and Indian Exhibition, 1885-1886, Report of the Royal Commission for Victoria at the Colonial and Indian Exhibition, 1885-86, Presented to Both Houses of Parliament by His Excellency's Command* (Melbourne: Robert S. Brain, 1887), ix.

9. *Official Catalogue/Colonial and Indian Exhibition, 1886*, 190.

10. *The Art Journal New Series, 1886/ The Colonial and Indian Exhibition 1886: Supplement to the Art Journal*, 1886, 20.

11. *Colonial and Indian Exhibition, 1885-1886, Report of the Royal Commission for Victoria*, 1.

12. *The Art Journal New Series, 1886/ The Colonial and Indian Exhibition 1886: Supplement to the Art Journal*, 1886, 20.

13. See Hadjiafendi and Zareski, "Artistry and Industry," 13.

14. See Ann B. Shteir, *Cultivating Women, Cultivating Science: Flora's Daughters and Botany in England, 1760 to 1860* (Baltimore: Johns Hopkins University Press, 1996).

15. Richard Drayton, *Nature's Government: Science, Imperial Britain and the 'Improvement' of the World* (New Haven: Yale University Press, 2000).

16. Cornish, C. F. Driver & M. Nesbitt, "The Economic Botany Collection at Kew: Analysis of Accessions Data" *Mobile Museum Working Paper 1* (June 2017), accessed from <https://www.rhul.ac.uk/mobile-museum>, 24 June 2021), 20.

17. See Tracey Jean Boisseau and Abigail M. Markwn (ed.), *Gendering the fair: histories of women and gender at world's fairs* (Urbana, Illinois: University of Illinois Press, 2010).

the press who echoed the Official Catalogue in recording that the work "was executed by Miss Vale at the Museum under the direction of Mr J. Cosmo Newbery, the Superintendent." Newbery's ambitions were rewarded. By the exhibition's close the South Kensington authorities had agreed to recognize Victoria's local examinations.<sup>8</sup>

May's timber specimens were exhibited in a separate room dedicated to agricultural products and 'products of the Cultivation of Forests and of the Trades appertaining thereto.'<sup>9</sup> Her work was assembled as it had appeared in the 1884 photograph but it was complemented by a rival display featuring a book of timber samples collated by Baron von Mueller, the Government botanist and a collection of objects "made out of some of the more important (timber) varieties."<sup>10</sup> Their exhibit faced the popular Fernery, whose 600 fern specimens attracted large crowds of visitors and attention from "all the leading illustrated journals"<sup>11</sup> The Official Catalogue, the subsequent Parliamentary Report, and London's leading art and design magazine, the *Art Journal*, all noted and named May Vale as the artist of the timber work.<sup>12</sup>

Her central role in the economic botany display is an important exemplar of the ways in which women's artistic occupations helped them to "negotiate the boundaries of woman's sphere."<sup>13</sup> Women and botany had been a respectable association throughout the nineteenth century and women played a professional artistic and scientific role, notably as botanical artists and modelers of plants in wax.<sup>14</sup> May's work was a serious professional activity rather than "merely" decorative craft. It emphasized the productive potential of the colonies.<sup>15</sup> Vale and Mueller's 'mobile museum' of Victoria's timber species, was of keen interest in the age of High Empire, when Britain was trying to improve plant productivity across its empire.<sup>16</sup> In this context Vale's painting was not ornamental, but a demonstration of the productive economic value of the art training system produced by South Kensington and its network of schools. Although May was working within a traditional female genre, her craftwork was propelled into a professional, scientific sphere. Victorian women were also represented in the domestic decoration and Fine Arts sections of the Court, but May was accorded a unique place. She was publicly visible and recognized, but her alignment to women's domestic work and the private sphere was also reinforced.<sup>17</sup>

## Print Culture 1890-1907

18. Austral Salon, [https://en.wikipedia.org/wiki/Austral\\_Salon](https://en.wikipedia.org/wiki/Austral_Salon), accessed 24 June 2021.

Parallel to their occupation with international and inter-colonial exhibitions, women took the opportunities afforded by mass circulation print media to project their views into the public sphere. In 1890 journalists including Mary Hirst Browne, Agnes Murphy and Ada Cambridge founded the Austral Salon for women writers.<sup>18</sup> It was located in the Austral Building at 115-119 Collins Street which by this time was a hub of Melbourne's avant-garde. The Austral Building was a speculative venture by *Melbourne Punch* publisher Alexander McKinley and included retail, professional chambers, and artists' studios on the fourth floor. The model was Grosvenor Chambers at 9 Collins Street, built in 1888 by the Paterson Brothers, owners of a successful decorating firm, as showroom, retail and artists' studios. Between these two buildings circulated many of Melbourne's most important makers,

artists and writers. Among the last, Ada Cambridge (1844-1927?) was the most prominent.

19. Harriet Edquist, "Mapping Modernity in 'Marvellous Melbourne': Ada Cambridge's *A Woman's Friendship*," in Grierson, Elizabeth, Harriet Edquist, Helene Fricot (eds), *De-Signing Design. Cartographies of Theory and Practice*, (Lexington Books 2015), 97-108.

Cambridge is important for this history in that she successfully negotiated a public space for her voice in Melbourne's metropolitan newspapers where her fiction was serialized in the 1870s and 1880s before it was taken up by English publishers. Using serialized fiction as her platform, she asserted her expertise and knowledge of design through the concept of the "artistic home" which appears in a number of her novels such as *The Perversity of Human Nature* 1887, *The Three Miss Kings*, 1891 and *Sisters* 1904. Sometimes, Cambridge gives the reader an interior that in its aesthetic intention offers a setting for a woman's conscious self-fashioning as a modern subject such as Margaret Clive's East Melbourne cottage in *A Woman's Friendship* (1889). Cambridge's sympathy with John Ruskin's 1849 *Seven Lamps of Architecture* and the ethos of the emerging Arts and Crafts movement as promulgated by William Morris are evident here and elsewhere in her work.<sup>19</sup>

At the turn of the century Melbourne's print media offered new avenues apart from fiction for women to engage with and help shape public opinion. On the one hand there were women's magazines such as *The New Idea*, *Southern Sphere* and on the other dedicated women's pages in mass-circulation newspapers such as the *Argus* and the *Age*. Women leveraged these developing media outlets to articulate a position for themselves as journalists, critics and commentators on art and design. As consumers of these magazines women were receiving an education in architecture and design history, and instruction on interior decorating including spatial planning, wall decoration and the choice of equipment and decorative objects.

### **First Australian Exhibition of Women's Work 1907**

20. "Women's Work Exhibition Melbourne, 1907," <http://www.auspostalhistory.com/articles/199.shtml>, accessed 26 June 2021.

21. *First Australian Exhibition of Women's Work 1907 Exhibition Building, Melbourne 23rd to November 30, 2007*, Official Souvenir Catalogue, 27.

The First Australian Exhibition of Women's Work (FAEWW) opened at the Exhibition Building, Melbourne on 23 October 1907 and closed just over five weeks later. With over 16,000 exhibits from all the States of Australia, Britain, Europe, North and South America, India and Africa it showcased the work of women musicians, artists, designers and craftswomen and was visited by over 250,000 people.<sup>20</sup> It was an accelerant to women's growing professional presence in the public sphere and put women's activities as makers and knowledge workers on a national and international stage. The Melbourne project positioned itself within a lineage of women's exhibitions. The Official Catalogue described the growth of women's only presentations, from the first exhibitions in Vienna in the 1860s and more recent Arts and Crafts projects in England before staking its bold claim that the Melbourne exhibition was unique in its global scale, "none had yet been held that embraces so widely the work of women in almost all parts of the world."<sup>21</sup> The exhibition, conceived under a national rather than colonial rubric, constituted a signal achievement of organizational and logistical labour on the part of its primary organizer, Lady Northcote. As a privileged agent within imperial networks Lady Northcote drew on her status to tap the capacity of agents of empire and interested private citizens.

22. Chris Cunneen, "Northcote, Henry Stafford (1846-1911)", Australian Dictionary of Biography, National Centre of Biography, Australian National University, <https://adb.anu.edu.au/biography/northcote-henry-stafford-7861/text13659>, published first in hardcopy 1988, accessed online 27 June 2021.

23. Elizabeth Taylor, 'Lady Northcote: Leading Light and Sponsor of the First Australian Exhibition of Women's Work', [http://www.womenaustralia.info/leaders/sti/pdfs/03\\_Taylor.pdf](http://www.womenaustralia.info/leaders/sti/pdfs/03_Taylor.pdf), accessed 26 June 2021.

24. This account of Lady Northcote's leadership differs from that of Elizabeth Taylor who emphasizes the limiting aspects of class and gender on her activities.

25. Lady Northcote contacted Lady Minto in India, Lady Grey in Canada, Lord Aberdeen in Ireland, and Lady Jersey in London for contributions. Others included Princess of Wales, Princess Christian of Schleswig-Holstein, Duchess of Connaught, Princess Patricia of Connaught, Princess Louise Duchess of Argyle, Duchess of Albany, Princess Alexander of Teck, Princess Henry of Battenberg, Princess Louise Augusta of Schleswig-Holstein, Princess Mary of Denmark, Princess Gustavus Adolphus of Sweden, Duchess de Vendome, Princess Stephanie, Arch-Duchess of Austro-Hungary. See Taylor, "Lady Northcote", 48.

26. Taylor, "Lady Northcote", 46.

27. E[dwin]. F[rank] Allan, "Maori, Aboriginal and South Sea Exhibits", *Argus*, November 1, 1907. SLV Manuscripts. MS 10964 BOX 449 516. Mrs Douglas Keep, "Historical Material Relating to First Exhibition of Women's Work 1907". Typescript.

28. Ian D. Clark, "A Peep at the Blacks": *A history of tourism at Coranderrk Aboriginal Station 1863-1924* (Warsaw: De Gruyter Open, 2015), 56.

29. See Louise Douglas, "Representing colonial Australia at British, American and European international exhibitions", *reCollections*, vol.3, no.1 (March 2008). [https://reCollections.nma.gov.au/issues/vol\\_3\\_no\\_1/papers/representing\\_colonial\\_australia](https://reCollections.nma.gov.au/issues/vol_3_no_1/papers/representing_colonial_australia), accessed online 24 June 2021.

Alice, Lady Northcote had arrived in Melbourne in 1904 with her husband Henry Stafford Northcote, 1st Baron Northcote, a British Conservative politician who served in the House of Commons from 1880 to 1899. He had been Governor of Bombay from 1900 until 1903 when he was appointed Governor General to the recently federated Australia.<sup>22</sup> Lady Northcote had worked for the Countess of Dufferin's Fund for Supplying Female Medical Aid to the Women of India and has arrived in Melbourne with an active model of vice-regal engagement and a model of working in the interests of women.<sup>23</sup> Armed with a suite of possibilities enabled by her imperial networks, Lady Northcote was also supported by a favorable local environment. By 1907 Australian women had organized themselves into work associations, guilds and exhibition societies, and technical colleges had introduced applied art training from the 1890s which provided the impetus to professionalize domestic labor. While Lady Northcote operated in a context defined by her gender, class and as an agent of imperialism what is of interest here is her leadership in using the exhibition model to communicate to a large audience the value and nature of women's work, to put under notice the category of 'amateur' under which many professional women laboured and so doing, to effect social transformation.<sup>24</sup>

By virtue of her position Northcote had access to Prime Minister Alfred Deakin for support and she formed a working relationship with his wife Pattie Deakin. Using her vice-regal contacts, she sought exhibits from British and European royalty and the aristocracy.<sup>25</sup> She also proposed to the Premier of New Zealand, Sir Joseph Ward, a display of work by Maori women.<sup>26</sup> Indigenous Australian material was included through the auspices of mission societies. The Methodist Ladies Auxiliary (presumably of the Home Mission Society) ensured that material from Melville Island and North Queensland was included. Traditional artefacts (a hat and grass garments) were displayed in contrast to needlework, copybooks and drawing books, all the latter showing the work of the mission in transforming its subjects into "native Christians."<sup>27</sup> The work of women on missions and mission stations' presentation of Indigenous craft wares was threaded through the 1907 displays, across Australia, New Guinea, Canada, India and South Africa. Women's Christian work in the imperial project was a persistent but not prominent feature of the Exhibition. In this context it is noteworthy that basket work of the women at Coranderrk was not represented in the exhibition. Coranderrk, at Healesville not far from central Melbourne, had a thriving tourism industry and women had been selling their baskets to visitors since the 1860s and had exhibited at the 1866 Intercolonial Exhibition. By 1904 the settlement was included in N J Caire and J W Lindt's *Companion Guide to Healesville*, catering to motorists.<sup>28</sup> It is impossible that the organisers of the FAEWW would be unaware of the settlement. It may be that they were sensitive to the growing international condemnation of Australia's treatment of its Indigenous population.<sup>29</sup> Part of the tourist interest in Coranderrk was that its people were deemed to be 'a dying race', soon to disappear. It is also possible that the Exhibition is more evidence of the late nineteenth century development of whiteness as 'a transnational form of racial identification', a historical formation documented by Marilyn Lake and Henry Reynolds in their book *Drawing the Global Colour Line* (2008).

The opening pages of the Official Catalogue presented a pageant of black and white photographs of royal and aristocratic women, reflecting its vice-regal patronage. This portrait gallery emphasized the respectable nature of the project as a display of genteel women's leisure work. The rhetoric within the Catalogue however, was much bolder and even radical, urging Australian women to take up paid work, particularly as "The conditions of labour in Australia are said to be the best in the world."

30. "Women'sWorkExhibition,Melbourne,1907," <http://www.auspostalhistory.com/articles/199.shtml>, accessed 26 June 2021.

31. E[dwin]. F[rank] Allan, 'A Day in the Creche', the *Argus*, October 30. Typescript. Keep, Mrs Douglas, Manuscript Collection, SLV.

The exhibition made a significant leap by redefining the site of the workplace and the nature of work: home and the studios and club premises which emerged in Melbourne at this time were all sites of women's labour. Furthermore, among the thousands of exhibits of applied art were 1,000 representing teaching, cookery, horticulture, medicine and nursing signifying other sites and forms of women's work.<sup>30</sup> These presentations emphasised the importance of education for women and girls. The Exhibition also drew attention to the infrastructure that underpins women's workforce participation, by placing a creche at the centre of the project. This demonstration of organized childcare and the activities of happy children excited considerable media interest.<sup>31</sup> Women could work outside the home without neglecting their primary duty as mothers.

32. Jane E. Hunt, "Gether, Susanne Vilhelmine (1857-1911)," Australian Dictionary of Biography, National Centre of Biography, Australian National University, <https://adb.anu.edu.au/biography/gether-susanne-vilhelmine-12933/text23369>, published first in hard copy 2005, accessed online 1 July 2021.

33. Hunt, "Gether, Susanne Vilhelmine."

The impact of the exhibition can be gauged on a number of fronts: a higher profile for women makers, the entry of women as critics and commentators in the print and periodical press, and as a stimulus to the organization of societies and exhibitions around the Arts and Crafts ethos. One maker whose work made an impact was Suzanne Gether (1857-1913+) a Danish-born craft worker who emigrated to New Zealand in 1890 and spent the decade earning a livelihood by teaching her crafts. In 1899 she relocated to Sydney where she taught woodcarving. In 1906 she became a foundation member of the Society of Arts and Crafts of New South Wales and was on the New South Wales organising committee for the FAEWW for which she and 'a regiment' of wood carvers and leather workers designed a carved rosewood table and six chairs with 'elaborately embossed Australian leather upholstery.'<sup>32</sup> The following year this *tour de force* of women's work was shown in London at the New South Wales court of the Franco-British Exhibition in 1908.<sup>33</sup> In this way the impact of the FAEWW was considerably expanded into the international sphere.

34. "Arts and Crafts in Australia, A Promising Movement," *The New Idea*, VIII no 1 (January 1908): first page.

Gether had also exhibited textiles at the FAEWW woven on a Danish hand loom, presumably imported for the purpose. While the exhibition was awash with textiles constructed by the needle, hand-loom weaving was new in Australia and the impact of Gether's exhibit of woven textiles was immediate. She was invited back the following year to demonstrate her weaving at the inaugural Arts and Crafts Society of Victoria exhibition, itself an outcome of the FAEWW, as was noted by *New Idea*: "The impetus given to the homes arts and crafts movement by the Women's Exhibition has not been permitted to die, and one of the signs of its vigour was an exhibition held in Melbourne last month."<sup>34</sup> Thereafter handloom weaving was one of the crafts taught at the Arts and Crafts clubroom at 357 Collins Street. As Louise Giacco has observed, Gether had exhibited in the Trade section of the FAEWW, signalling that "she was operating as a business." She tested the limits

35. Louise Giacco, 'Suzanne Gether,' in Kerr (ed.) *Heritage*, 120.

of the 'amateur' status of women's work and redefined it by her example and practice as professional, a re-arrangement of social norms that was one of her most enduring legacies.<sup>35</sup>

36. Judith Smart & Marian Quartly, 'The National Council of Women of Victoria: Suffrage and political citizenship 1904-1914,' *Victorian Historical Journal*, 79 no 2 (2008): 232.

There is also the possibility discussed by Judith Smart and Marian Quartly, that the demonstration of Victorian women's capacity to organise in their own interests as evidenced by the FAEWW had a political outcome and was a contributing factor to the capitulation of premier Thomas Bent to their demands for a suffrage bill which went through the Victorian upper house in 1908. This was six years after non-Indigenous Australian women had achieved the vote in national parliament.<sup>36</sup> British women would not be so successful until 1928.

## Women and Print Media 1907-1920

37. Smart and Quartly, 'The National Council of Women of Victoria,' 232.

The First Australian Exhibition of Women's Work provided the opportunity for the New Zealand-born lawyer and journalist Stella May Allan (1871-1962) to become a prominent print culture voice for women's design work. Allan had come to Melbourne in 1903 when her husband Frank Allan, formerly a diplomat in the British Embassy in Beijing, joined the staff of the *Argus* as leader-writer. She swiftly put her legal training and her journalism to work as a member of the press committee of the National Council of Women Victorian branch, its social, legal and economic committee as well as the suffrage and rights of citizenship committee. It was Allan who led a deputation to the premier Thomas Bent for women's suffrage in 1906.<sup>37</sup> In 1907 the *Argus* commissioned Allan to cover the FAEWW which thus becomes a key site bringing together the exhibition and print culture modes of work discussed in this paper.

38. Patricia Keep, 'Allan, Stella May (1871-1962),' Australian Dictionary of Biography, National Centre of Biography, Australian National University, <https://adb.anu.edu.au/biography/allan-stella-may-4998/text8307>, published first in hardcopy 1979, accessed online 28 June 2021.

Allan's articles for FAEWW were so well received that she was invited to join the full-time staff of the paper the following year. Adopting the nom de plume "Vesta," her column "Women to Women" was unique in an Australian daily paper at the time, as it "extended to cover every aspect of women's affairs, children's interests and community welfare, and 'Vesta' became a household word for authoritative information and advice on such matters."<sup>38</sup> For 30 years, Stella offered knowledgeable and sensible advice and invited readers to submit their questions and opinions. Significantly, Allan leveraged her reputation in the media to promote other women's issues and institutions; she joined the Women Writers' Club, succeeding Ada Cambridge as president, and in 1912 was a foundation member and later president of the Lyceum Club. She was involved in the Victorian Association of Crèches, the Free Kindergarten Union of Victoria, the Victorian Bush Nursing Association, the Baby Health Centres Association and the Queen Victoria Hospital. She also contributed to national entities such the National Council of Women, first in New Zealand and then in Melbourne, and the Country Women's Association.

Henrietta C Walker's career as a journalist ran parallel to that of Allan, in that she edited a women's page for *The Age* newspaper for seventeen years. She redefined the nature of women's work using her own expertise in rug-making, basketry and home making as exemplars and focused on how women could negotiate their skill in the domestic

39. Henrietta C Walker, *Rafia work: a simple craft, with great possibilities* (Melbourne: Whitecombe & Tombs 1913).

40. Henrietta C Walker, "A maker of homes. What does architecture offer as a career for women?," *Everylady's Journal*, November 1916, 652.

41. Walker, "A maker of homes," 652.

sphere for professional gain. Her articles were sometimes followed by instructional books such as *Rafia work: a simple craft, with great possibilities*.<sup>39</sup> Walker's most important contribution to the articulation of women's work, however, was the book she co-wrote with Margaret Cuthbertson, the first female factory inspector in Victoria. *Woman's Work*, published in 1913, was a guide to the nature, terms and conditions of many kinds of work available to Australian women. *Woman's Work* is divided into two sections, reflecting the expertise of the two authors. The first deals with work open to women as sole agents and includes fashion and advertisement drawing, lace making and needlework, literary work, home decorating, tourism, dentistry, medicine, pharmacy and nursing among others. The second section under the heading of Industrial, deals with women as wage earners in an industrial or factory setting. The omission of architecture from *Woman's Work* reflects the difficulty Australian women faced entering this profession. Walker rectified the omission somewhat in an important but often overlooked article she published in *Everylady's Journal* in 1916, "A Maker of Homes. What does architecture offer as a career for Women?"<sup>40</sup> This is a record of an interview she conducted with Marion Mahony Griffin who had arrived in Melbourne in 1914 with her husband Walter Burley Griffin to undertake their work on the federal capital in Canberra. This article focusses on Mahony's early life, the influence of her mother and family, her early work in Chicago (illustrated), the advantages of an architectural education and affirms more than once that Mahony's drawings for the federal capital were as important as her husband's in gaining the commission.<sup>41</sup>

42. Patricia Keep, 'Allan, Stella May (1871–1962),' Australian Dictionary of Biography, National Centre of Biography, Australian National University, <https://adb.anu.edu.au/biography/allan-stella-may-4998/text8307>, published first in hardcopy 1979, accessed online 28 June 2021.

43. 'Vesta' [Stella Allan], *Recipes for all meals*, Melbourne: Argus, c.1938.

Allan and Walker remained active in the interwar years providing a generational bridge between pioneers such as themselves and younger women who would forge their careers as modernists. In 1924 Stella Allan "was appointed substitute delegate for Australia to the fifth assembly of the League of Nations at Geneva and was a delegate to the second Pan Pacific Women's Conference in Hawaii in 1930."<sup>42</sup> She continued to write for the *Argus* and published a cookbook through the newspaper in the mid 1930s.<sup>43</sup> She spent the war years in England, reporting back to the *Argus* on the welfare of women and children. Henrietta Walker meanwhile settled comfortably into the new format women's magazines such as the smart and long-serving *Australian Home Beautiful*, formerly *Australian Home Builder* until its rebranding in 1925. In its pages and as a member of the Country Women's Association, she continued her championship of a local maker culture.

## **Conclusion**

The gendered ideologies of the nineteenth century had placed middle-class settler women within the domestic sphere. Here their craft work could be described as amateur, and their artistic work could be perceived as ornamental. Nevertheless, women's role as home maker and home expert was increasingly able to be converted into expertise on home decoration and furnishing. The growth of the arts and crafts movement and the expansion of print culture afforded new sites of action, as handicraft and home circulated in public arenas. Gender segregated clubs and activities could be turned to women's advantage, Lady Northcote adroitly fused women's exhibitions with the male dominated sphere of the international exposition and women gained a permanent place in the city's major media outlets as journalists focused on women's issues.

# "Yes, You Can Be an Architect and a Woman!"<sup>1</sup> Women in Architecture: Queensland 1982-1989

1. Shrimpton, Nikki, "Yes, you can be an architect AND a woman!," *Telegraph*, 7 June 1984.

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## Keywords

Women in Architecture  
Constructive Women  
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'Functions of Architecture'  
Revathi Kamath

## Abstract

From the 1970s social and political changes in Australia and the burgeoning feminist movement were challenging established power relationships and hierarchies. This paper explores how in the 1980s groups of women architects actively took positions that were outside the established professional mainstream. A 1982 seminar at the University of Queensland galvanised women in Brisbane to form the Association of Women Architects, Town Planners and Landscape Architects. Formally founded the association was multi-disciplinary and not affiliated with the established bodies. Its aims included promoting women and working to reform the practice of these professions. While predominately made up of architects, the group never became part of the Royal Australian Institutes of Architects, it did inject itself into its activities, spectacularly sponsoring the Indian architect Revathi Kamath to speak at the 1984 RAIA. For five years the group was active organising talks, speakers, a newsletter and participating in Architecture Week. In 1984 an exhibition 'Profile: Women in Architecture' featured the work of 40 past and present women architects and students, including a profile of Queensland's then oldest practitioner Beatrice Hutton. Sydney architect Eve Laron, the convenor of Constructive Women in Sydney opened the exhibition. There was an active interchange between Women in Architecture in Melbourne, Constructive Women, and the Queensland group, with architects such as Ann Keddie, Suzanne Dance and Barbara van den Broek speaking in Brisbane. While the focus of the group centred around women's issues such as traditional prejudice, conflicting commitments and retraining, its architectural interests were not those of conventional practice. It explored and promoted the design of cities and buildings that were sensitive to users including women and children, design using natural materials and sustainability. While the group only existed for a short period, it advanced positions and perspectives that were outside the mainstream of architectural discourse and practice. Nearly 40 years on a new generation of women is leading the debate into the structural inequities in the architectural profession which are very similar to those tackled by women architects in the 1980s.

## Background

2. Women Lawyers Association of Queensland formed 1978, (website), accessed 16 July 2021, <https://wlaq.com.au/>.

3. Harriet Edquist, "Architecture and Design", in *The Encyclopedia of Women and Leadership in Twentieth Century Australia*, (Australian Women's Archives Project, 2014), accessed 15 July 2021. <http://www.womenaustralia.info/leaders/biogs/WLE0030b.htm>

4. Harriet Edquist, "Architecture and Design".

5. Russell Darroch and John Dean, *Women in the Architectural Profession: Report to the Human Rights Commission* (Royal Australian Institute of Architects, 1986), 18, accessed 19 July 2021 [https://archiparlour.org/wp-content/uploads/2012/04/Women-in-the-architectural-profession-1986\\_sml.pdf](https://archiparlour.org/wp-content/uploads/2012/04/Women-in-the-architectural-profession-1986_sml.pdf).

6. Ian Sinnamon and Michael Keniger, *Ideas into Practice*, (Department of Architecture: University of Queensland, 1987), 16.

In Australia from the 1970s, social and political changes and the burgeoning feminist movement were challenging established power relationships and hierarchies. This paper examines the interests and activities of the Women in Architecture Association established in Brisbane in 1983. This was part of a more general movement in Australia of professional women forming associations.<sup>2</sup> It paralleled groups in other states also operating outside the architectural mainstream, such as Melbourne's Association Women in Architecture founded in 1979, and Sydney's Constructive Women established in 1983.<sup>3</sup> The number of women enrolling in architectural courses in Queensland had started to grow from the early 1960s and was significantly increased by the Whitlam Government's abolition of university fees in January 1974.<sup>4</sup> As shown by the 1986 Royal Australian Institute of Architects' (RAIA) report 'Women in the Architectural Profession', in 1985 the percentages of female first year students at the University of Queensland and the Queensland Institute of Technology were 38.7% and 25% respectively,<sup>5</sup> whereas by 1987 women accounted for half the University of Queensland's first year enrolments.<sup>6</sup>

The Women in Architecture Association was formed on the wave of this influx of women entering the profession in Queensland. The Association's objective was to promote women architects in the community and combat discrimination against women in architectural practice. Its interests extended beyond conventional architectural practice to include the experience of previous women practitioners and the design of cities and buildings to be more responsive to the needs of women and children. While the group existed for only a short time, it advanced positions and perspectives that were outside the mainstream of architectural discourse and practice. Nearly 40 years on, a new generation of women are leading the debate into the structural inequities in the architectural profession which are very similar to those tackled by women architects in the 1980s.

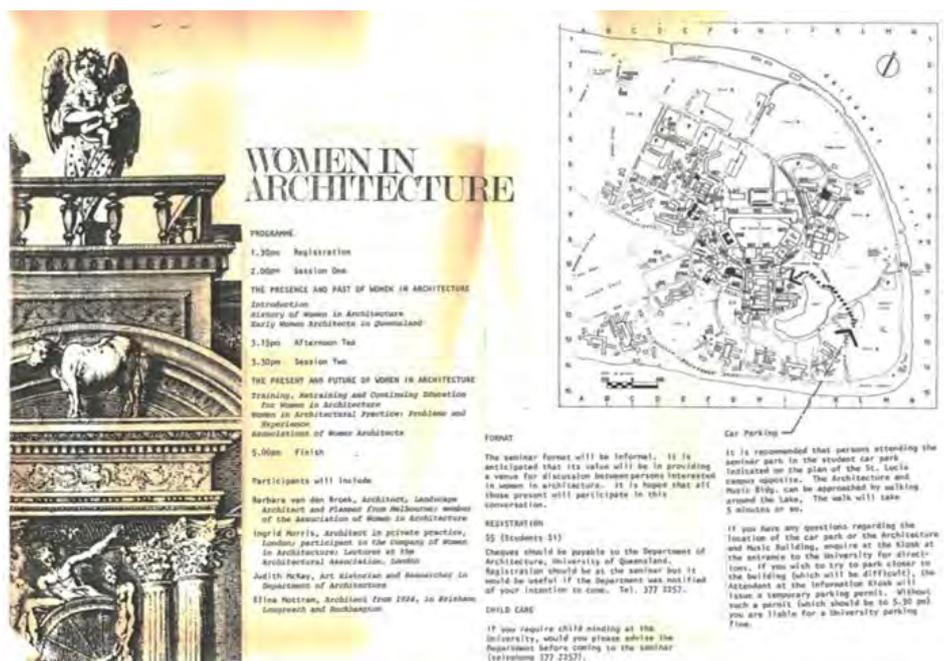


Figure 1: Program for Women in Architecture seminar, 1 September 1982. Source: Women in Architecture Records, UQFL649.

7. Donald Watson LFSAHANZ LFRAIA was awarded the 2021 Gold Medal, *Architecture Australia*, (May/June 2021).

8. Press release for the women in Architecture seminar, n.d., Women in Architecture Records, UQFL649, Fryer Library, The University of Queensland Library.

9. "Woman as architects", *Courier Mail*, n.d. and *Chapter News* (Jun-July 1982), Women in Architecture Records, UQFL649.

10. Louise Noble, "Selected works 1974-2010", *Architecture Australia*, (May/June 2021), 89.

11. Verbal communication with Judith McKay, 13 June 2021 and Catherine Baudet, 12 July 2021.

12. Digital Archive of Queensland Architecture, "Olive Cannan," (Web Page), accessed 21 July 2021, <https://qldarch.net/architect/summary?architectId=775>.

13. Georgette Boxall is first registered as an architect (number 361) on 16 February 1953 with her address as the Department of Works. *Queensland Government Gazette* (No. 61, 7 March 1953), 863.

14. Digital Archive of Queensland Architecture, "Ann Elisabeth Greenfield," (Web Page), accessed 21 July 2021, <https://qldarch.net/architect/summary?architectId=550>.

15. Verbal communication with Donald Watson, 10 July 2021.

16. Anne Watson, "Marion Mahony Griffin: Architect, Environmentalist, Visionary," Sydney Living Museums (Web Page), accessed 22 July 2021, <https://sydneylivingmuseums.com.au/stories/>.

17. Christa Ludlow, "Taylor Florence Mary (1879-1969)," *Australian Dictionary of Biography*, (National Centre of Biography, Australian National University, 1990) <https://adb.anu.edu.au/biography/taylor-florence-mary-8754/text15337>, accessed online 22 July 2021.

18. Donald Watson and Judith McKay, *A Directory of Queensland Architects to 1940* (St Lucia: University of Queensland Library, 1984).

19. Judith M McKay, "Hutton, Beatrice May (Bea) (1893-1900)," *Australian Dictionary of Biography*, (National Centre of Biography, Australian National University, 2007) accessed online 21 July 2021, <https://adb.anu.edu.au/biography/hutton-beatrice-may-bea-12676/text22847>.

20. Julie Willis and Bronwyn Hanna, XXX

21. Judith M McKay, "Hutton, Beatrice May (Bea) (1893-1900)".

22. 'Monkton' <https://apps.des.qld.gov.au/heritage-register/detail/?id=601170> and 'Scott Street Flats' <https://apps.des.qld.gov.au/heritage-register/detail/?id=601171> accessed 22 July 2021.

23. Kirsty Volz, "Women on the Heritage Register: The Case of Nellie McCredie and Uanda House" (*SAHANZ Annual Conference Proceedings*, 2013), 543-552, accessed 22 July 2021, <https://eprints.qut.edu.au/71338/13/71338.pdf>.

24. Kirsty Volz "Architect and Ceramist: Nell McCredie's Architectural Works". PhD thesis, University of Queensland, 2021. <https://doi.org/10.14264/b58cd59>.

## 1982 – Stimulus

The first seminar in Queensland on the role of women in architecture was held at the University of Queensland on 1 September 1982. This was organised by Donald Watson,<sup>7</sup> a lecturer in the Department of Architecture, and leveraged off the presence of visiting lecturer Ingrid Morris, a London-based architect, sole practitioner, and teacher at the Architectural Association School of Architecture. The publicity for the seminar stated that it would canvass issues such as: training, retraining and continuing education for women in architecture; problems of women architects in practice and experiments to overcome them; forms of association and programs emerging from such groups to help overcome problems for women architects; and the history of women architects in Australia and overseas.<sup>8</sup> With advertisements in *The Courier-Mail* newspaper and the RAIAs *Chapter News*<sup>9</sup> the seminar attracted 72 people, predominately women, including architects, graduates, students and a Toowoomba schoolgirl who planned to study architecture.<sup>10</sup> Those who attended remember it as a very exciting and inspiring day.<sup>11</sup> Amongst the participants were a number of early women architects: Elina Mottram (1903-1996), Olive Withy, née Cannan (1904-2000)<sup>12</sup>, Georgette Cusack, née Boxall,<sup>13</sup> and Ann Harrison, née Greenfield (1933- 2013).<sup>14</sup>

The program for the seminar was arranged around the topics 'The Presence and Past of Women in Architecture' and the 'Present and Future of Women in Architecture'. Donald Watson set the scene with a general history on women in architecture from an international and Australian perspective.<sup>15</sup> He discussed early women architects in the United States of America and Australian pioneers such as Marion Mahony Griffin (1871-1961)<sup>16</sup> and Florence Taylor (1879-1969).<sup>17</sup> Judith McKay, a research assistant in the Department of Architecture, who with Donald Watson was researching architects practising in Queensland to 1940,<sup>18</sup> spoke next. It was as part of this project that Judith had uncovered a number of early Queensland woman architects. She presented her research on these pioneering women architects, including Beatrice Hutton (1893-1990), the first woman admitted to an architectural institute in Australia when she became a member of the Queensland Institute of Architects in 1916.<sup>19</sup> Judith also highlighted Lily Addison who had studied architectural subjects at the Brisbane Technical College in 1914 and worked in the office of her father, architect GHM Addison. The careers of public servants Dorothy Brennan and Ursula Jones, draughtswomen and architects, in the Queensland Works Department and Housing Commission were also documented. Judith McKay's research presented at the seminar is recognised as foundational by Julie Willis and Bronwyn Hanna in 'Women Architects in Australia 1900-1950.'<sup>20</sup> It has led to Beatrice Hutton being included in the *Australian Dictionary of Biography*<sup>21</sup> and two buildings designed by Elina Mottram—Monkton (1925) and the Scott Street Flats, Kangaroo Point (1925)— being entered in the Queensland Heritage Register.<sup>22</sup> Also a successful court case to prevent the demolition of a residential building Uanda (1928) designed by Nellie McCredie (1901-1968)<sup>23</sup> and a doctoral thesis on the work of McCredie.<sup>24</sup>

Ingrid Morris spoke of her own experience being a member of a London collective, the Company of Women in Architecture, founded in 1974 by

25. Ian Woodward "Santa cause," *The Guardian*, 2 October 1974, 13.

26. Sally Loane, "These ladies are designing their futures," *Daily Sun*, 2 September 1982, 25.

27. Sally Loane, "Queensland's women paved the way," *Daily Sun*, 2 September 1982, 25.

28. Judith M McKay, 'Early Queensland women architects,' *Transition*, (Winter 1988), 58-60.

29. Marion Pennicuk, "Obituary Barbara Ruth van den Broek," *Landscape Australia*, (4-2001), 56-57.

architect Santa Raymond.<sup>25</sup> The difficulties of obtaining commissions during an economic downturn meant that the collective struggled and did not survive. Ingrid believed that while woman architects were as capable as men, the work that they were able to get when they graduated tended to be small jobs, renovations, kitchens and bathrooms. "There is a great reluctance on the part of the wealthy, cigar-smoking land developer to entrust his million dollar project to a female architect," she said.<sup>26</sup> The recently retired Elina Mottram, the star of Queensland women,<sup>27</sup> and the state's first woman architect to establish her own practice (in 1924), also spoke. She talked about her varied professional experiences including establishing sole practice and working for Queensland Railways.<sup>28</sup> Barbara van den Broek (1932-2001),<sup>29</sup> an architect, landscape architect and planner who had practised in Brisbane for 20 years was the final speaker and provided insights into her career. Barbara had just relocated to Melbourne and joined its Association of Women in Architecture.

### 1983 – Establishing Women in Architecture

30. Foundation group Catherine Baudet, Fiona Gardiner and Patrice Derrington. First President Fiona Gardiner (1983-85) followed by Catherine Baudet (1985-87) and Annabel Sachs (1987-1989), Women in Architecture Records, UQFL649.

31. Minutes of meeting 22 June 1983, Women in Architecture Records, UQFL649.

32. "Some thoughts on the formation of a Women in Architecture Group" by Margaret Tonge and Helen Josephson, 22 June 1983, Women in Architecture Records, UQFL649.

33. Minutes of meeting 22 June 1983, Women in Architecture Records, UQFL649.

34. Minutes of meeting 22 June 1983, planners Mercier Ferrier and Robin King and landscape architect Jean Sim attended the first meeting, Women in Architecture Records, UQFL649.

35. Minutes 22 June 1983 and later minutes, Women in Architecture Records, UQFL649.

36. *Newsletter Women in Architecture* 1984, 3, Women in Architecture Records, UQFL649.

37. Women in Architecture collection, minutes 18 April 1983, Women in Architecture Records, UQFL649.

38. Judy Mishinski, "Award for Patrice," *Courier Mail*, 8 November 1983, 15.

The 1982 seminar galvanised women architects in Brisbane, and a small group worked on defining the objectives and drafting a constitution for an association.<sup>30</sup> The first meeting was held during Architecture Week, on 22 June 1983, with 17 women in attendance.<sup>31</sup> There was a lively debate about the structure of the group, whether it should affiliate with the RAI and the types of memberships and fees.<sup>32</sup> The need for the group was whole-heartedly supported and a range of objectives were discussed, including the promotion of women architects in the community; combatting discrimination against women in architectural practice; providing support for women temporarily out of the workforce; job sharing; developing the confidence and self-belief of women architects; continuing education; and networking with other professional women to foster friendship and mutual support.<sup>33</sup>

From its inception the Association was multi-disciplinary, largely made up of architects with a small number of planners and landscape architects also active members.<sup>34</sup> The Association did not affiliate with any established professional bodies and this remained a subject of continued debate within the membership over its five years of activity.<sup>35</sup> Similar debates occurred within Constructive Women and the Association Women in Architecture, with both groups deciding not to become sub-groups of the professional institutes. However, the importance of the institutes was acknowledged with women's groups realising that they needed to be active within them. In 1984 Dimity Reed, a founder of the Association Women in Architecture, was elected as the first female president of the Victorian Chapter of the RAI.<sup>36</sup> In Queensland, the relationship between the Association and the RAI was cooperative, with the Association generally holding its meetings at the RAI premises in Albert Street, Brisbane and receiving funding to participate in RAI activities such as Architecture Week.<sup>37</sup> In 1982 Patrice Derrington, one of the Association's founding members, became the first woman elected to the council of the RAI Queensland Chapter.<sup>38</sup> Her presence on the RAI council meant there was a direct line of communication between the two groups. The Association encouraged the RAI to act against discrimination in employment;

39. Minutes of meeting 18 April 1984, Women in Architecture Records, UQFL649.

40. Minutes of Meeting 19 June 1986, Women in Architecture Records, UQFL649.

41. Michael Keniger, "Talking up and speaking out: Activist and advocate," *Architecture Australia*, (May/June 2021), 82.

42. Various flyers, Women in Architecture Records, UQFL649.

43. The Honourable Leneen Forde AC, Alumni and Communist, The University of Queensland, (Web Page), accessed 21 July 2021, <https://alumni.uq.edu.au/story/1299/honourable-leneen-forde-ac>.

44. Minutes of Meeting 19 October 1983, Women in Architecture Records, UQFL649, Fryer Library, The University of

45. Minutes of meeting, 18 July 1984, Women in Architecture Records, UQFL649.

46. Minutes of meeting, 17 September 1986, Women in Architecture Records, UQFL649.

47. Minutes of meeting 18 February 1987, Women in Architecture Records, UQFL649.

for example, the advertising of jobs in the 'Men and Boys' section of newspapers.<sup>39</sup> The need to encourage women to nominate for the RAlA council was an ongoing consideration for the Association and it also lobbied the Board of Architects of Queensland to have women on the panel for architectural registration examinations.<sup>40</sup>

As part of the Association's objective to provide continuing education, its monthly meetings of often featured guest speakers or were coordinated to take advantage of visiting women speakers at the Brisbane Community Arts Centre talks. The local architectural scene was energised during the period 1981 to 1985 by a series of fortnightly talks 'Architecture is a Community Art' organised by Donald Watson and the University of Queensland. The purpose of these public talks was to foster debate and interest in architecture. They included a remarkable range of local, Australian and international speakers, both prominent and early career architects, critics and commentators.<sup>41</sup> For the Association, this lecture series provided the opportunity to interact with and bring a number of women architects to Brisbane, including Suzanne Dance, Elizabeth Farrelly, Ann Keddie, Alison Smithson and Dimity Reed.<sup>42</sup> The Association was also interested in how other women's professional groups had formed and operated. It saw liaison with other women professionals as not only informative but also a means of raising the profile of women architects with potential clients. At the October 1983 meeting Leneen Forde,<sup>43</sup> the founding President of the Queensland Women Lawyers Association and later Queensland Governor, spoke about the early years of this group, how it was organised and its activities to promote law reform relating to women and children.<sup>44</sup> In following years other speakers provided practical advice for practising architects, including an accountant from Price Waterhouse on tax,<sup>45</sup> a banker on financing development projects and risk assessment,<sup>46</sup> the art of negotiating and marketing tips for women architects.<sup>47</sup>

### 1984 Exhibition - 'Profile: Women in Architecture'

48. 'An Invitation', n.d., Women in Architecture Records, UQFL649.

49. Minutes of meeting 18 April 1984, Women in Architecture Records, UQFL649.

50. Lisa Findley, "A Tribute to Ms Andresen by Lisa Findley" Australian Institute of Architects, (Web Page), 21 July 2021 <https://dynamic.architecture.com.au/i-cms?page=1.17.51.2921.2972>.

51. Media Release, "Profile: Women in Architecture Exhibition," 30 May 1984, Women in Architecture Collection, transferred to Fryer Library, University of Queensland. To date no list of the exhibitors has been found.

52. "An Invitation," n.d., Women in Architecture Records, UQFL649.

53. Photograph Fiona Gardiner and Ruth Woods at the exhibition in front of the panels listing the graduates. *The Sunday Mail*, 17 June 1984, 37.

The year 1984 was a highpoint for the Association with the membership energetic and ambitious to promote the work of women architects. The Association participated in Architecture Week by staging an exhibition 'Profile: Women in Architecture' which aimed to "...show the number of women involved in architecture and the diversity of their interests, past, present and future."<sup>48</sup> The exhibition was convened by Brit Andresen and Helen Josephson.<sup>49</sup> Brit was the first female architecture lecturer employed by the University of Queensland, taking up her appointment in 1977.<sup>50</sup> The exhibition featured the work of 40 past and present women architects, graduates and students.<sup>51</sup> Held at the John Mills Himself Building in Charlotte Street, Brisbane, it opened on 12 June 1984 and ran for four days. In the lead-up, a weekend workshop was held at the University of Queensland Architecture School to enable the exhibitors to prepare their material in a collaborative environment. Each participant was asked to provide A4 and A1 boards with black and white text and illustrations, including drawings, photographs and curriculum vitae.<sup>52</sup> Research was undertaken and exhibition boards prepared with the names of all the woman graduates from the two local architecture schools, the University of Queensland and the Queensland University of Technology.<sup>53</sup> Although nearly 90 years old, Queensland's then

54. Beatrice Hutton CV board, Women in Architecture Records, UQFL649.

55. Tapes of interviews, Fiona Gardiner and Catherine Baudet 4ZZZ FM 11 June 1984 and 4QR 12 June 1984, Women in Architecture Records, UQFL649.

56. Nikki Shrimpton, "Yes, you can be an architect AND a woman!", Telegraph, 7 June 1984, 15; Rebecca Wilson, "Women build up image", The Courier Mail, 13 June 1984, 2; Nikki Shrimpton, "Sexist city is out!", Telegraph, 20 June 1984, 39.

57. Media Release, "Revathi Kamath visits Brisbane," 16 June 1984, Women in Architecture Records, UQFL649.

58. Minutes of meeting, 18 April 1984, Women in Architecture Records, UQFL649.

59. "Bio Data of Ms Revathi Sekhar Kamath" n.d., Women in Architecture Records, UQFL649.

60. "Architects call for bigger public role in building designs," *The Weekend Australian*, 23-24 June 1984, 28.

61. Elizabeth Musgrave, "The Pleasures Functions of Architecture," (SAHANZ Annual Conference Proceedings, 2017) 506, accessed 1 July 2022, <https://www.sahanz.net/wp-content/uploads/musgrave-e-the-pleasures-functions-of-architecture.pdf>.

62. "Revathi Kamath interview by Michael Keniger," n.d., Women in Architecture Records, UQFL649.

63. "Architects call for bigger public role in building designs," *The Weekend Australian*, 23-24 June 1984, 28.

oldest woman practitioner, Beatrice Hutton, agreed to be interviewed by Association members and a profile of her career was prepared for the exhibition.<sup>54</sup> To publicise the event Association members were interviewed on radio programs.<sup>55</sup> The Sydney architect Eve Laron, the convenor of Constructive Women, opened the exhibition which was covered by the local press—in the social and women's pages.<sup>56</sup>

### **1984 Convention - 'Functions of Architecture'**

The week after the exhibition the Association spectacularly injected itself into the 1984 RAI National Convention in Brisbane, 'Functions of Architecture', by sponsoring the Indian architect Revathi Kamath as a speaker. Although some funding was available from the Institute's convention organising committee, the Association, led by Fiona Gardiner, had obtained sponsorship from Air India and AEQB drafting supplies.<sup>57</sup> The Association also lobbied successfully for day/session tickets for attendees at the convention as the cost was a barrier to many women.<sup>58</sup> Revathi Kamath, then 29 years old, practised in New Delhi with her husband Vasant Kamath.<sup>59</sup> She spoke about her work as architect of the Shardipur Development community housing project for the street artists and craftspeople squatting outside New Delhi. Kamath illustrated her methods for studying how the squatters lived, looking at their problems, how they spatially related their sleeping, cooking and storing arrangements, and how they divided space for different functions. Using traditional Indian building materials and techniques, Kamath incorporated her observations into her designs.<sup>60</sup> As a social action architect Revathi Kamath embodied many of the issues that interested the Association. Initially considered a bit of a sideshow, she made a considerable impact on the conference, with Haigh Beck<sup>61</sup> inviting her to be part of its concluding session along with Ralph Erskine and Henri Ciriani.<sup>62</sup> 'Summing up the overall effect the conference' would 'have on future architecture in Australia, the president of the NSW chapter of the RAI, Mr Chris Johnson, said that the surprise of the conference was the Indian architect, Revathi Kamath, who presented an "incredibly sensitive approach to architecture."<sup>63</sup>

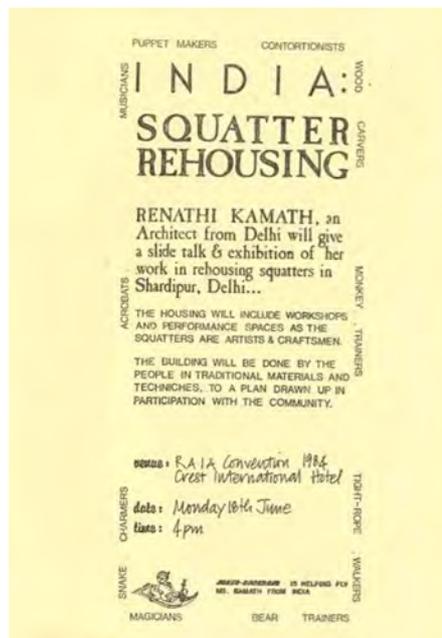


Figure 2: Flyer for talk by Revathi Kamath. Source: Women in Architecture Records, UQFL649.



Figure 3: Photo of Revathi Kamath at RAI A Convention. Source: Women in Architecture Records, UQFL649.

### Activities 1985-1988

64. Elizabeth Allen, "Hotel worth saving: Atkinson", *The Courier Mail*, 30 April 1985, 30 and letter 1 May 1985, Women in Architecture Records, UQFL649.

65. *Newsletter, Women in Architecture*, 1 September 1985, Women in Architecture Records, UQFL649.

66. "Playgrounds Child's Play?: A guide to the design of playground environments by the Women in Architecture Association", Women in Architecture Records, UQFL649.

67. *Newsletter Women in Architecture*, July 1987, Women in Architecture Records, UQFL649.

Following the successes of 1984, the Association continued to promote women architects through a range of activities relating to urban design, heritage and design for women and children. In 1985 the Association supported the newly elected Lord Mayor of Brisbane Sallyanne Atkinson in her attempt to stop the demolition of the New York Hotel in Queen Street in the city.<sup>64</sup> A lunch was then held with the Lord Mayor to exchange ideas. Submissions were also prepared on a proposed Botanic Gardens development and on a review of the Brisbane Town Plan, with comments on parking requirements at shopping centres and appropriate zoning for childcare centres.<sup>65</sup> Design for children was an ongoing interest of the Association, and in 1986 it launched a brochure 'Playgrounds Child's Play?' prepared by Catherine Baudet, Helen Davis, and Jan Seto. Committed to improving the design standards and promoting better and safer playgrounds, the brochure covered such aspects as equipment, climatic considerations, and landscape, and included information about Australian Standards and avenues for funding.<sup>66</sup> It received considerable media coverage and was widely distributed.<sup>67</sup>

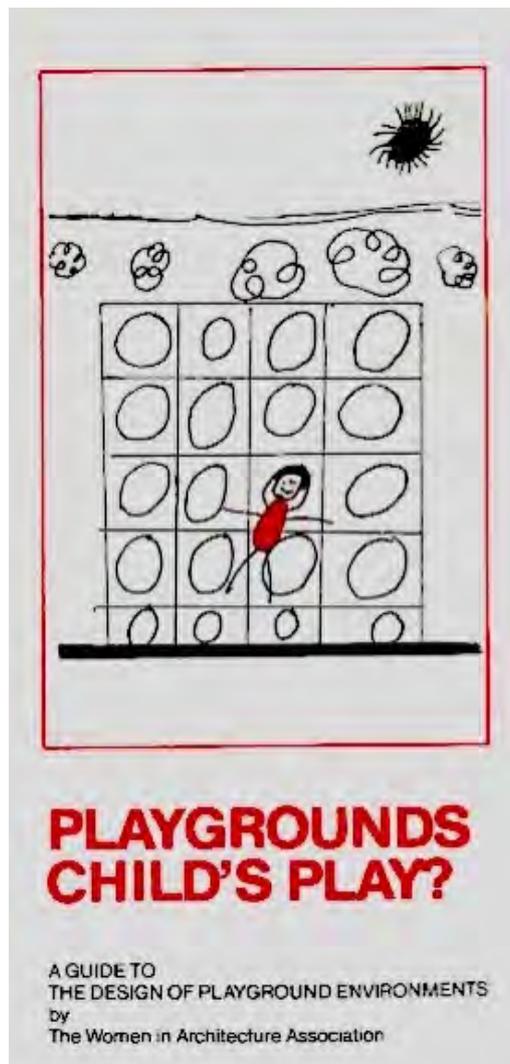


Figure 4: Brochure: Playgrounds Child's Play?  
Source: Women in Architecture Records, UQFL649.

### Exchange between Victoria and NSW

68. Newsletters, *Women in Architecture* (August 1984), and *Constructive Times*, (Number 8 July-August 1984), 4, Women in Architecture Records, UQFL649.

69. Ian Sinnamon and Michael Keniger, *Ideas into Practice*, (Department of Architecture: University of Queensland, 1987), 7.

70. Letter from Helen Wilson 31 May 1984, Women in Architecture Records, UQFL649.

71. Personal verbal communication with Helen Wilson, 20 July 2021.

72. List of Convention delegates who attended the Woman's dinner Rita Avdiev, Judith Brine, Anne Cunningham, Anne Douglas, Debbie Fisher, Penny Hammer, Meredith Harrison, Merrin James, Ann Keddie, Jennifer Nicholls, Roberta Rees, Jennifer Shannon and Jennifer Taylor, Women in Architecture Records, UQFL649.

73. *Newsletter Women in Architecture* (Melbourne, August 1984), Women in Architecture Records, UQFL649.

There was an active interchange between Melbourne's Association Women in Architecture, Sydney's Constructive Women and the Queensland group. The exchanges included sharing information, newsletters and an invitation to the Melbourne group's Women's Winter School in Architecture and Feminism. This workshop was held over the 1984 June long weekend at Healesville, near Melbourne. Most of the participants were local but a few came from Adelaide, Sydney and Nimbin.<sup>68</sup> The invitation to Revathi Kamath to speak at the previously-mentioned 'Functions of Architecture' convention came about because University of Queensland graduate Helen Wilson<sup>69</sup> was lecturing at the University of Sydney and an active member of Constructive Women.<sup>70</sup> Helen facilitated the invitation as she had visited the Shardipur community housing project and met Revathi while on a trip to India.<sup>71</sup> During the 1984 convention the Association hosted a women's dinner and 11 woman delegates from around Australia attended.<sup>72</sup> The Melbourne architect Anne Keddie reported enthusiastically to her Victorian colleagues on the convention, Revathi Kamath's workshop and meeting the members of the Queensland Association.<sup>73</sup> In 1985 the Association joined with the other two groups to sponsor an Australian

74. Newsletter *Women in Architecture*, 1 September 1985, *Women in Architecture Records*, UQFL649.

75. Minutes of meeting, 20 May 1987 and *Women in Architecture Assoc. Newsletter*, July 1987, *Women in Architecture Records*, UQFL649.

76. Newsletter *Women in Architecture*, July 1987, *Women in Architecture Records*, UQFL649.

77. Justine Clark, 'Six myths about women and architecture, (Presentation to the Making, Australian Institute of Architects National Conference, 6 September 2014), accessed 20 July 2021 <https://archiparlour.org/six-myths-about-women-and-architecture/>.

78. Personal verbal communication with Catherine Baudet, 12 July 2021.

lecture tour by the internationally renowned architect and educator Dr Aase Eriksen. Aase was the designer of the America Architect-in-Schools program, a participatory design process in which children were involved in the design and construction of their environments.<sup>74</sup>

### 'Life Got in the Way'

For five years the Association was very active organising talks, speakers, a newsletter, brochures, board room lunches, social activities and participation in Architecture Week. However, by 1987 concerns were being expressed about declining membership and the possibility of less formal and less regular meetings.<sup>75</sup> There was a feeling among more recent graduates that the Association was not relevant to them.<sup>76</sup> Justine Clarke has identified this as one of the myths of Architecture "... younger women see it all as a thing of the past – they have done well so far and see no reason why that won't continue. The battles have already been fought, and they will reap the rewards."<sup>77</sup> The Association seemed to run out steam by 1989-90; as Catherine Baudet said, "...life got in the way." It stopped meeting formally and the bank account was eventually closed with the remaining funds donated to a woman's shelter.<sup>78</sup>

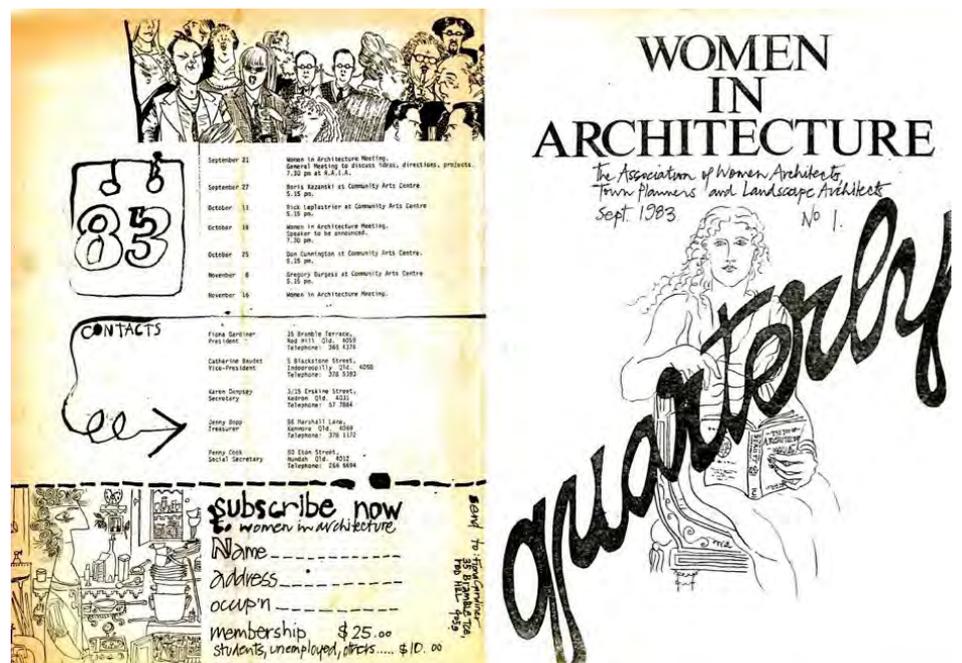


Figure 5: Women in Architecture: Newsletter September 1983.  
Source: Women in Architecture Records, UQFL649.

79. Paula Whitman, *Going Places: the career Progression of Women in the Architectural Profession* (Brisbane: Queensland University of Technology), 2005, 6.

80. Paula Whitman, *Going Places*, 31.

Fifteen years later, in 2005, Paula Whitman, a lecturer in architecture at Queensland University of Technology, produced a report titled 'Going Places: The Career Progression of Women in the Architectural Profession'. It painted a bleak picture, stating that despite "...an increasing proportion of female students studying architecture over recent decades, there continues to be a lack of women in senior roles within architectural practice."<sup>79</sup> In 2004, 2175 architects were registered in Queensland but only 253, 11.6% were women.<sup>80</sup> Many of the issues identified by the Association and its activities to overcome barriers in architectural practice foreshadow Paula's 12 findings and 10 recommendations. These were, in particular, the need for equal

81. Paula Whitman, *Going Places*, 6.

82. "Equity and Diversity in the Australian Architecture Profession: Women, Work and Leadership", (Australian Research Council Linkage Grant, 2011-2014), accessed 20 July 2021, <https://archiparlour.org/research/>.

83. Gillian Matthewson, "Dimensions of Gender: Women's Careers in the Australian Architecture Profession," (PhD University of Queensland, 2015) <https://espace.library.uq.edu.au/view/UQ:373190>.

opportunity policies and flexible working arrangements, support for women to re-enter the profession, recognition of non-linear and interrupted career paths, equal opportunity registration procedures, membership of the RIAA and mentoring of women in practice.<sup>81</sup> The research project 'Equity and Diversity in the Australian Architecture Profession: Women, Work and Leadership'(2011-2014),<sup>82</sup> built on Paula Whitman's report, interrogating the patterns of women's participation, progression and representation in the architectural profession, paying particular attention to women's under-representation in senior management. The quantitative and qualitative research undertaken for this project highlights the gender inequities that are part of the structure of the contemporary architecture profession<sup>83</sup> and remain very similar to those tackled by women architects in the 1980s.

## Postscript

84. Harriet Edquist, "Architecture and Design".

85. "Susan Savage," QUT Staff Profiles accessed 20 July 2021, <https://staff.qut.edu.au/staff/s.savage>.

86. "Patrice Derrington," Columbia GSAPP, accessed 20 July 2021, <https://www.arch.columbia.edu/faculty/188-patrice-derrington>.

87. "Elizabeth Watson Brown Design Speaks", accessed 20 July 2021, <https://designspeaks.com.au/speakers/elizabeth-watson-brown>.

88. "Catherine Baudet awarded the inaugural Paula Whitman Leadership in Gender Equity Prize," accessed 20 July 2021, <https://architectureau.com/articles/catherine-baudet-awarded-inaugural-paula-whitman-prize/>.

89. "Fiona Gardiner," accessed 20 July 2021, <https://honours.pmc.gov.au/honours/awards/2003662>.

Although 'life got in the way' for the 1980s Women in Architecture Association in Queensland, many of its members went on to have long and notable careers. The convenor of the 1984 exhibition, Professor Brit Andresen, is a distinguished academic and design architect, her achievements being recognised in 2002 when she became the first woman to be awarded the RIAA's Gold Medal.<sup>84</sup> Professor Susan Savage and Dr Jean Sim had successful careers as academics at Queensland University of Technology, and Susan Savage was Chairperson of the Board of Architects of Queensland for 15 years.<sup>85</sup> Professor Patrice Derrington is an academic and highly respected real estate expert based in New York.<sup>86</sup> Catherine Baudet, Penny Campbell, Elizabeth Watson-Brown and Ruth Woods have all been principals in their own architectural practices. Elizabeth later merged her practice with a large national firm where she became a design director.<sup>87</sup> Catherine Baudet was awarded the inaugural Paula Whitman Leadership in Gender Equity Prize in 2017.<sup>88</sup> Fiona Gardiner and Ruth Woods specialised in heritage conservation and Fiona Gardiner was awarded the Public Service Medal for her contribution to the conservation and protection of Queensland's heritage.<sup>89</sup>

# Queer Terrain: Architecture of Queer Ecology

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## Keywords

Queer theory  
Ecology  
Queer space  
Assemblage  
Body  
Architecture

## Terminology

Authors quoted or discussed in this text may have varied definitions but more commonly describe queer in reference to people of gender and sexual diversity, including but not limited to Lesbian, Gay, Bisexual, Transgender, intersex. I use this term similarly, although my preferred terminology of 'queer' refers to a state of being and action that encompasses an approach to broadly resisting instituted violence to people and the environment.

## Abstract

This paper seeks to ally the interdisciplinary frameworks offered by 'Queer Ecology' with an architectural inquiry to expand both fields. Queer theory alone offers scant discussions of material and architectural practices, while environmental discourse in architecture fails to address its role in ecological and social-political violence.

A clothing-optional / cruising beach in rural Victoria, Sandy Beach also known as Somers Beach, exemplifies how the queer body's navigation of space responds to complex ecological, urban, and social conditions. A queering of architectural definitions allows this site to be researched as a historically significant urban/architectural site of social and environmental value.

It is suggested that the subtle yet complex practices of site transformations enacted through occupation are an architecture of environmental connective possibility. 'Queered' corporeality orientates the body and material practices towards assemblages where boundaries between humans and nature are transgressed, ultimately constituting a 'queer ecological architecture'

## Introduction

1. Kellogg Brown, 'Western Port Ramsar Wetland: Ecological Character Description,' n.d., 189.

2. Beat, is an Australian term used to mean public places of sex.

Some seventy kilometres southeast from Naarm (Melbourne), in the lands of the Boonwurrung nation, is Western Port Bay, a Ramsar (International significant wetland) area.<sup>1</sup> Somers Beach is a thin stretch of picturesque coastline strewn with seaweed and driftwood. Pods of dolphins are occasionally seen in the clear water. Travelling along the coast a reasonable distance away from the closest settlement, an ominous sign warns of 'live firing' and the prohibition of trespassing on Navy grounds. During the warmer months of the year, a cove or two beyond the warning sign, one may find naked bodies along the beach and perhaps a few more hidden amongst the forested dunes of the nearby beat.<sup>2</sup>

3. Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, Mass: Harvard University Press, 1993).

This paper explores strategies and approaches for alternative modes of architectural analysis through a queer ecological reading of Somers Beach. This framework allows for a broader approach to architectural analysis through its inclusion of queer, social, geographical, ecological, and post-colonial studies. The queer practices that take place within Somers Beach demonstrate how queer orientation of bodies extend the limits of corporeality to include the surroundings, a construction of the psyche that loosens the dichotomous boundary of the human and nature to encompass both natural and human-altered terrains.<sup>3</sup> This paper will argue that the resultant queer occupation demonstrates an architectural practice of environmental connective possibility.

4. Sandilands, Gordon Brent Ingram et al., 'Undercurrents: Queer Nature,' *North York*, May 1994.

Queer ecology was first coined by Catriona Sandilands in the 1994 journal *Undercurrents* title called *Queer Nature*. Sandilands applies a queer theoretical approach to environmental politics with the intent to queer the "politics of nature [to] no longer be an articulation of [the] white, male, heterosexual ..." and subvert a heteronormative narrative of the queer as being "unnatural".<sup>4</sup> Queer ecology highlights essential connections between material, cultural and environmental issues. At the time, the term gained little traction, but now a growing body of publications combine the respective concerns of queer ecology with many other fields reflecting the growing concerns for socio and environmental catastrophe. Despite this rise in publication relating to queer ecology, there remains an omission of any queer ecological publications combined with an architectural inquiry.

5. Sandilands, Gordon Brent Ingram et al., 'Undercurrents: Queer Nature,' *North York*, May 1994, page 8.

This paper is not alone in combining the concerns of 'queer ecology' with other socio-spatialised inquiries, Gordon Brent Ingram's literary contribution to the field of queer ecology also began with a contribution to the 1994 *Undercurrents* issue. Ingram's concerns focused on the loss of specific queer landscapes of Los Angeles and the denial of safe access to them. Ingram made a call to "contextualise queerness" He saw "a difficulty of the Lesbian and Gay community to take leadership roles on environmental issues until there is a better awareness of the spatial context in that community."<sup>5</sup>

20 years later, the conversation surrounding the contextualising of queerness and the role of queers to take leadership roles in ecological discourse has vastly altered. Geographer, Mathew Gandy, offers a thorough examination of the topic of queer geology via the study of Abney Park, London, an unkept cemetery which is also a popular

6. Cruising is the U.S. term for the seeking of sex often in public locations. Cottaging is a British term but usually involves toilets.

7. Matthew Gandy, 'Queer Ecology: Nature, Sexuality, and Heterotopic Alliances,' *Environment and Planning D: Society and Space* 30, no. 4 (August 2012): 727–47, <https://doi.org/10.1068/d10511>.

8. Timothy Morton, 'Guest Column: Queer Ecology,' *PMLA/Publications of the Modern Language Association of America* 125, no. 2 (March 2010): 273–82, page 6.

cruising site.<sup>6</sup> Forming an alliance between 'queer ecology' and urban ecology Gandy suggests that a queered spatial theory "hold(s) a wider implication for the material characterises of urban spaces."<sup>7</sup> Gandy dismisses the 'political limitations' associated with public sex failing to acknowledge how 'the intricate terrain' of such beats is formed and constitutes the material characteristic of the site at the sub-urban level. That is to say, Gandy while looking at the urban condition of the park misses a discussion surrounding any agency the users have in actively maintaining the park's heterotopic quality. This paper posits that such an 'intricate terrain' is a communal practice of queer ecological architecture.

Architectural training informs an analysis that acknowledges the importance of the urban context and works at the scales that relate to the intimate occupation of space. It is also a discipline that has yet to fully acknowledge its devastating impact on the earth's surface. To happen upon the labyrinth of desire lines (the informal paths made in the earth by bodies), to encounter curled bodies under trees or within sandy burrows with little delineation between an architecture for the human or fauna is to find a rare archaeology of queer practice oriented towards nature. Tim Morton might describe such scenes as a "queer ecological alliance of nonlocalizable, open-ended concatenation of interrelations that blur and confound boundaries at practically any level: between species, between the living and the non-living, between organism and environment."<sup>8</sup>

## History

9. Boon Wurrung: The Filling of the Bay – The Time of Chaos - Nyernila', Culture Victoria, accessed 6 October 2021, <http://www.cvvic.gov.au/stories/aboriginal-culture/nyernila/boon-wurrung-the-filling-of-the-bay-the-time-of-chaos/>.

10. Agriculture Victoria Victorian Resources Online, '7.1 Central Sunklands', text, Victoria, accessed 19 July 2021, [http://vro.agriculture.vic.gov.au/dpi/vro/vrosite.nsf/pages/landform\\_geomorphological\\_framework\\_7.1](http://vro.agriculture.vic.gov.au/dpi/vro/vrosite.nsf/pages/landform_geomorphological_framework_7.1).

11. Richard (Richard M.) Cotter, 'No Place for a Colony : Sullivan Bay, Sorrento and the Collins Settlement' (Melbourne : Essien, 2001).

12. 'Settlement at Western Port | Ergo', accessed 6 October 2021, <http://ergo.slvvic.gov.au/explore-history/colonial-melbourne/convicts/settlement-western-port>.

It is crucial to acknowledge the relevant environmental social and geological conditions that have contributed to the current condition of the researched area. The Bunjil Dreaming Story tells of the area's fluid nature, with the Boon Wurrung people recounting the creation of Port Phillip bay only 1000 years ago.<sup>9</sup> The area, now known as Western Port, is a depression between two faults. Rising waters from the end of the last ice age flooded the sunklands and thus transformed much of the surroundings into marshlands.<sup>10</sup> Within this low-lying zone of the Koo-wee Rup Depression, Somers Beach offers a rather unique stretch of sandy terrain.

European colonisation movements were heavily influenced by these geological patterns, as access to major rivers and firmer grounds were essential for larger settlements and Western farming practices. The British made several attempts to set up colonies closer to current day Somers. In 1802, the British invaded Boon Wurrung land to establish a convict settlement and later abandoned it due to a lack of fresh water and suitable soils.<sup>11</sup> Several years later, in fear of a French invasion, a British fort was created on Phillip Island and abandoned in 1826 for another failed attempt to settle the mainland. William Hovell reported the Westernport area being entirely unsuitable for settlement.<sup>12</sup> It was not until 1835 that permanent occupation in Boon Wurrung / Wurundjeri land took hold in Melbourne, some seventy kilometres from these areas. Topographical features and the high value of recently discovered gold deposits resulted in a rush of colonisation further west, making Western Port somewhat peripheral to European settlements, yet this did not prevent huge amounts of damage in the draining of marshland up until

13. Parks Victoria, Victoria, and Department of Sustainability and Environment, *Western Port Ramsar Site: Strategic Management Plan*. (East Melbourne, Vic.: Dept. of Sustainability and Environment, 2003).

14. Alan Gregory, 'Cultural Advice', in *Australian Dictionary of Biography* (Canberra: National Centre of Biography, Australian National University), accessed 19 July 2021, <https://adb.anu.edu.au/biography/somers-arthur-herbert-tennyson-8578>.

15. 'LORD SOMERS GREETES THE SOMERS LADS', *Australasian* (Melbourne, Vic. : 1864 - 1946), 1937.

the 1970's. In 2003, the entire bay area was recognised by the United Nations Educational, Scientific and Cultural Organisation's (UNESCO's) *Man and the Biosphere (MAB)* Program.<sup>13</sup>

The Somers township and beach are named after Lord Arthur Herbert Tennyson Somers, a former Governor of Victoria. Described as an "all-around athlete", in 1931 Somers set up the Lord Somers' Camp and later became the chief commissioner of the scouts.<sup>14</sup> Historic photos of Lord Somers visiting the camp in 1933 showed festive scenes of young men and boys cross-dressing in a sea-themed women's attire, described as being 'dressed for battle'.<sup>15</sup> Lord Somers Camp still operates all-male programs today, with 100 or so 'groupers' committing to team-building exercises and notably strict rules. Mr Hammond, a volunteer and former attendee, remarked in *The Age* that "bikini-clad girls at the beach occasionally posed a distraction" and that "section 92" of camp rules banned talking to girls and included the punishment of being branded by paint for being caught.



IN BATTLE ARRAY.—The Powerhouse Group in "fighting kit" for the purpose of receiving new entrants. Copyright: National Library Australia

16. corporateName=Royal Australian Navy, 'HMAS Cerberus', accessed 19 July 2021, <https://www.navy.gov.au/establishments/hmas-cerberus>.

17. Victoria and Land Department of Environment Water and Planning, *Western Port Ramsar Site Management Plan*, 2017, <http://hla.gov.au/lnla.obj-528336422>.

18. Kristen Davis, 'Bondi's Underbelly: The "Gay Gang Murders"', 2007, 7.

In 1911, land surrounding Hann's inlet, which forms the isthmus of Somers Beach, was purchased for the fledgeling Royal Australian Navy. The Navy training facility HMAS Cerberus operates to this day and boasts on its official website that "The beach and bushlands around the bay provide beautiful surrounds for walks and expeditions ... canoeing and kayaking are fun ways to spend the weekend."<sup>16</sup> The 1517-hectare facility has multiple conservation overlays protecting the sensitive surroundings from further naval or developmental expansion. The Navy base legislatively shelters important remnant ecosystems sharing it with some of the 330 native species, 89 of which are threatened.<sup>17</sup> The specific area along Somers and Sandy Beach where the cruising takes place is protected by the Navy and sometimes referred to as Navy Beach, anecdotally the base supplying the cruising beach with recruits seeking other 'fun ways to spend the weekend.'<sup>18</sup>



Sandy Beach, Image courtesy of geostudies

## Queer History

19. 'Anger Swells over Bid to Gay-Proof Beach,' accessed 19 July 2021, <https://www.theage.com.au/national/victoria/anger-swells-over-bid-to-gay-proof-beach-20110604-1fmdh.html>.

20. 'Five Way Summer Shape Up', Klick!, October 1979, Archives of Sexuality and Gender.

Queer histories are often personal and drawn largely from anecdotal experiences with material evidence of queer histories sadly often destroyed or unarchived by mainstream institutions. Commonly archived material regarding beats/cruising grounds or ephemeral queer places sadly takes the form of police arrests or raids and homophobic 'community concerns' in local papers.<sup>19</sup> Perhaps the beach's 'unofficial' nude status on property managed by the Armed Forces contributing to minimal material, homophobic or otherwise that relates to this site.

Notwithstanding the continued illegality of public sex and nudity, there are some published historical insights of the Somers area as having a nude or gay beach. The earliest mention found in the gay press is in 1979, one year before the State of Victoria legalised gay activity and well before police brutality ceased. *Klick Magazine* featured an article about getting fit for summer mentioning 'Somers' as being a place you would be 'stripped down' and need looking your best.<sup>20</sup> The article is vague about what happened at Somers, but a sexual/exhibitionist undertone

is present yet subtle enough not to draw too much attention from the authorities that would often stake out such spaces to arrest or harass.

21. Stephen Mattsson, 'What a Beach', *Campaign Australia*, November 1987, no. 143 edition, Archives of Sexuality and Gender.

22. 'Somers Nude Beach - Sandy Point, Miramar', Somers Gay Mornington Peninsula Cruising Areas, accessed 19 July 2021, <http://www.cruisinggays.com/mornington-peninsula/areas/56001-somers-nude-beach-sandy-point/>.

23. 'Timeline: 22 Years between First and Last Australian States Decriminalising Male Homosexuality - ABC News (Australian Broadcasting Corporation)', accessed 19 July 2021, <https://www.abc.net.au/news/2015-08-24/timeline:-australian-states-decriminalise-male-homosexuality/6719702?nw=0>.

24. Gott, Robert, 'The Summer I Saw Norman Yemm Naked', accessed 19 July 2021, <https://www.smh.com.au/national/the-summer-i-saw-norman-yemm-naked-20160106-gm0fw7.html>.

25. Bill Parsons, 'Erotica Australian Style', *Outrage: A Magazine for Lesbians and Gay Men*, October 1990.

26. Morris, Meagan. 'On the Beach,' in L. Grossberg, C. Nelson and P. Triechler (eds) *Cultural Studies*, pp. 450–78. New York: Routledge Lawrence Grossberg, *Cultural Studies* (Hoboken: Hoboken : Taylor & Francis Ltd, 1992).

27. Alex McKinnon, 'Even without Private Clubs, the "egalitarian" Australian Beach Is a National Myth,' *The Guardian*, 12 October 2020, sec. Opinion, <https://www.theguardian.com/commentisfree/2020/oct/12/even-without-private-clubs-the-egalitarian-australian-beach-is-a-national-myth>.

28. Michele Lobo, 'Affective Energies: Sensory Bodies on the Beach in Darwin, Australia,' *Emotion, Space and Society* 12 (August 2014): 101–9, <https://doi.org/10.1016/j.emospa.2013.12.012>.

In 1987 *Campaigns Australia* published a list of now mostly extinct Melbourne 'gay beaches'. It mentions, for "those more adventurous in spirit and mobility Somers Beach has a gay section just past the Commonwealth land".<sup>21</sup> Important in this reference is that both distance and jurisdiction are mentioned - urban factors that are important to the site's queer usage. There is also a short mention in the gay press from the '90s reporting that the Commonwealth (Federal) 'Police [were] moving people on', but not making arrests at Somers; this is seen as preferable to potential harassment by State Police. The Cruising Gays website adds to that perception stating that "[the beach] is still Commonwealth land and therefore out of (the) jurisdiction of local police if they bothered to walk there."<sup>22</sup>

Given its unofficial nature, it is not known when Somers Beach became widely known for being a beat or a nude beach. Liberation movements began in the early 1970s, and male homosexuality only became legalised in Victoria in the 1980s, with harassment by police continuing well after then.<sup>23</sup> However, there is evidence that nudists had frequented the site prior to this period. In the *Sydney Morning Herald*, Columnist Robert Gott mentioned that when he was brought to Somers (Beach) by a nudist friend, commented on encountering actor Norman Yemm naked, as "a fine figure of a man". Yemm was the first Australian actor to appear nude on television in 1973.<sup>24</sup> It was the 70's after all, and Australia was not immune to liberation trends from other parts of the world that advocated for relaxed attitudes to sexual freedoms and greater environmental awareness, a political linking of the queer and ecological.

In *Outrage Magazine*, publisher and pornographer Bill Parsons reminisced on how prior to the '70s, pornography had not been legal in Australia. However, he recalled how imported adult content presented as 'nature' magazines were more likely to bypass the 'draconian censorship of the time. It is not mentioned why the censors deemed nudity in nature more palatable than in the bedroom, but Parsons used this oversight, and the market's familiarity with imported nature porn, to produce similar local content and mentioned Somers beach as a location where he would bring both male and female models to photograph in all sorts of 'naked abandon'.<sup>25</sup> Somers beach had become a haven against mainstream eco and erotophobias, the political counter

## Beaches

Meagan Morris discusses the beach as a problematic site where myths of national culture are written,<sup>26,27</sup> Australian-ness is performed at the Beach,<sup>28</sup> "The beach was and remains a heteronormative white masculine space entailing performances of sexuality, wealth, voyeurism, class, and possession."<sup>29</sup> coming at the expense of the non-normative, non-white body which is excessively 'othered' on the beach. The Cronulla and the Reclaim the Beach (Cite) riots are obvious and extreme examples of this in action, a colonial violence targeting brown bodies. Non - white bodies seek the "Shady groves in the bush (as) places

30. Michele Lobo, 'Affective Energies: Sensory Bodies on the Beach in Darwin, Australia,' *Emotion, Space and Society* 12 (August 2014): 101–9.

31. Davis, 'Bondi's Underbelly: The "Gay Gang Murders."'

of voluntary withdrawal from the disapproving white gaze and the whiteness of public spaces."<sup>30</sup>

When discussing beach violence directed to towards 'the other' the 'Gay Gang Murders' of course come to mind, with dozens if not hundreds of murders of queer carried out at Sydney beachside locations with police complicity later exposed.<sup>31</sup> Resultantly the queer body becomes highly attuned to social urban conditions, a knowledge gained from a lifetime of navigating environments with an acute awareness of the potential hostility present in both public and private spaces. On the beach social policing, violent or otherwise, gets compounded to a small strip of sand. Just as the displacement of the queer and LGBTQI from the most accessible parts of the beach leads to the deliberate occupying of other parts, sometimes the rocky parts or less desirable areas that are farther away.

### Queer Orientations and Cruising heterotopias

32. Sara Ahmed, 'Queer Phenomenology: Orientations, Objects, Others' (Durham: Duke University Press, 2008), /z-wcorg/, <https://doi.org/10.1215/9780822388074>.

This withdrawal of the queer from the urban areas of the beach and the occupying of Somers Beach by queers is how, as Sarah Ahmed would describe, "queer orientation" builds space. In *Queer Phenomenology (2008)*, Ahmed discusses in highly spatialised terms how a collective "turning away" from places and "turning towards" other places build queer spaces.<sup>32</sup> Gayle Salamon's *Assuming A Body (2010)* also disuses materiality this time via the trans body and how the psyche can redefine and extend one's own corporeal limits. (Cite) The combination of Ahmed's and Salamon's work describes how the psyche is responsible for the body's pliability and responsible for the contribution of what objects and materials build queer spaces. Within the sand dunes of Somers and along the beach frontage is such an example of a communal building of queer space, evidenced by how bodies inherit, use and modify it.

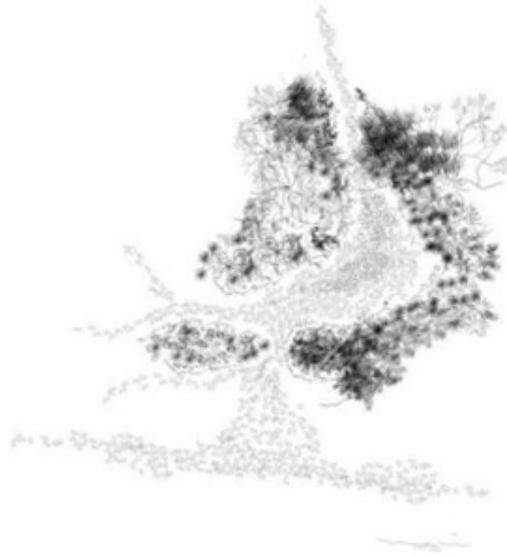
33. Michel Foucault, 'Of Other Spaces, Heterotopias', *Architecture, Mouvement, Continuité* 5 (1984): 46–49.

The conception of communal queer space parallels concepts discussed in a 1967 lecture by Michel Foucault regarding 'heterotopias', published in *Architecture, Mouvement, Continuité* leading many to link the material and spatial language used by Foucault to emerging discussions on queer space.<sup>33</sup> As discussed queer occupation does have a material condition, one that is formed and curated to assist the site's heterotopic qualities. Queer occupation has a material condition that is neither discursive nor theoretical with respect to the building of queer space. Queer occupation is a material transformation of a site by a queer body.

It is the careful and recurring navigation of the beach and the surrounding dunes that create the topographical modifications integral to the maintenance of this as a queer site. Footprints become signifiers leading to the naturally forming sea wall which is breached by a soft siege ramp of sand formed by the recurring use of humans and animals. The locations of otherwise discreet thresholds into this other space are only half a meter or so wide and lead to pathways that connect a handful of clearances behind the sandy ridge. The area behind the ridge is made of mostly low-lying grasses and shrubs with small circular clearances formed by bodies pressing into the terrain. The clearances are often large enough for two or three beach towels arranged side by side. The

34. Aaron Betsky, *Queer Space: Architecture and Same-Sex Desire*, 1st edition (New York: William Morrow, 1997).

chosen location of the clearances are such that when laying down users become enveloped in the topography, an embrasure of dune ridges, coastal grasses and shrubs that “provide(ing) multiple barriers to intervention and observation” so desired for discretion.<sup>34</sup> The natural protection from the elements allows people to spend longer periods at the beach in relative comfort, and from these areas, one can also survey those who seek intimacy by venturing into the labyrinth of the dark woods just beyond.



Map of beach dunes, Image by Luca Lana

35. Michel Foucault, 'Of Other Spaces, Heterotopias', *Architecture, Mouvement, Continuité* 5 (1984): 46–49.

Non-verbal communication amongst cruisers where an exchange of a glance or nod becomes a “certain permission(.) and ... certain gesture(.)”<sup>35</sup> to move inland, towards the denser vegetation of trees that have formed light topsoil. A changed atmosphere gives rise to other senses, here the sounds of waves soften, absorbed by distance and foliage, and soil. Darker, cooler, damper conditions permeate below the canopy of small trees, twisted tree trunks, shrubs, and grasses, bends and forks in the path, an undulating topography signposting the routes to follow. It is an ecological equivalent of a mirror maze, the body and context become inseparable. One follows another’s body deeper into an intricate architecture of trunks and shrubs that form vaulted arches, coinvent branches become armature to hold, the grasping hand of users long gone still worn into the surface of the bark.



Map of bushlands, Image by Luca Lana

36. Dirk van den Heuvel and Robert Gorny, 'Trans-Bodies/Queering Spaces', *Footprint* 11, no. 2# 21 (2017).

The definition of architecture needs then to be queered so as then the description of the cruising grounds offered, which details a considered system of material manipulation through occupation can be read as type of collective and anonymously constructed architecture. "Queer theory unsettles architecture as an embodiment of essentialist categories."<sup>36</sup> It works to undermine dialectic architectural categorisations that marginalise particular peoples and forms of matter, critically reconsidering what constitutes architecture itself. This operation does more than just re-categorise queer sites as being worthy of architectural enquiry. It allows for, in a post-colonial manner, queer sites and practices as offering an alternate form of occupation that undoes or acknowledges where architecture is complicit in violence towards people and the environment.

### Queer Ecological Architecture

37. Judith Butler, *Gender Trouble: Feminism and the Subversion of Identity* (Routledge, 2006).

38. Catriona Sandilands, 'Queer Ecology', in *Keywords for Environmental Studies* (New York University Press, 2016., n.d.), <https://keywords.nyupress.org/environmental-studies/essay/queer-ecology/>.

Western discourse positions the human and the nonhuman in a dichotomy between nature and culture. Nature is seen as the feminine other, something to be objectified, commanded by men for exploitation.<sup>37</sup> This dialectic results in patriarchal violence directed to the 'other' of the environment and gender nonconforming. Queer ecology undermines false heteronormative arguments levelled at queers for being "unnatural" (just as feminist eco criticisms do for gender biases). Nature is anything but heterosexual, and queer ecological discussions wrestle nature away from the heteronormative domain.<sup>38</sup>

39. Robin Evans, 'Translations from Drawing to Building', *AA Files*, no. 12 (1986): 3–18.

Victorian era reforms of architecture "limited indiscriminate use of undifferentiated rooms." Sex was to take place entirely within the domestic realm of the married (heterosexual) couples' private bedroom.<sup>39</sup> The linkage of morality with dirtiness has ever since influenced an expectation that architecture excludes dirt and confine within, sex. The cruising grounds of Somers beach, host sexual practises immersed in nature's dirt unmediated by walls and doors. A transgression of typical social-spatial conditions reinforced by traditional architecture.

40. Stacy Alaimo, *Bodily Natures* (Indiana University Press, 2010).

41. Tema Milstein and Elizabeth Dickinson, 'Gynocentric Greenwashing: The Discursive Gendering of Nature: Gynocentric Greenwashing,' *Communication, Culture & Critique* 5, no. 4 (December 2012): 510–32, <https://doi.org/10.1111/j.1753-9137.2012.01144.x>.

42. Anna Lowenhaupt Tsing, *Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins.*, 2017.

43. Arsenale See on Google Maps, 'Biennale Architettura 2021 | David Gissen, Jennifer Stager and Mantha Zarmakoupi', La Biennale di Venezia, 15 April 2020, <https://www.labiennale.org/en/architecture/2021/stations/david-gissen-jennifer-stager-and-mantha-zarmakoupi>.

44. David Gissen, *Subnature: Architecture's Other Environments* (Princeton Architectural Press, 2012).

45. Graham Willet, Wayne Murdho, and Daniel Marshall, *Secret Histories of Queer Melbourne* (Australian Lesbian Queer Archives, 2017).

When recounting a historic nude protest on melting polar ice caps, Stacy Alaimo writes how nakedness in this instance had helped “cast off the boundaries of the human, allowing us to imagine corporeality not as a ground of static substance but as a place of possible connections...”<sup>40</sup> Being naked or erotic within nature is the queer ecological act that critique types of occupation that come at the expense of the planet. Stacy Alaimo, Tema Milstein and Elizabeth Dickinson describe elements of the cruising practices described above, as an “immersed multisensory perceiving to relate to/within nature.”<sup>41</sup> A Queer immersion in nature can redescribe and alter the material conditions typically associated with human occupation as it can invite discussions on cohabitation. Anna Tsing and Donnah Harroway describe ruinous worlds in which the human and otherwise are learning to co-inhabit.<sup>42</sup> This vestige landscape, home to migrant birds, rare flora, and a range of imported species including the queers all share the precarity of making homes during the Anthropocene.

Architectural researcher David Gissen does not explicitly mention queerness in his publications. Nonetheless, his advocacy for ‘crip rights’, an investigation into historical, social struggles such as the Paris Commune places his work within an intersectional queer field.<sup>43</sup> In *Subnature: Architecture's Other Environments*, Gissen critiques modern architecture’s exclusion of “other environments” and discusses ‘modern’ architecture’s obsession with expelling a range of material and atmospheric conditions such as the damp and the dirty. The revival of classic Roman grottos in the 19th century is an example where dark and dank conditions were intentionally produced to form a subversive architectural type designed for ‘salacious’ use.<sup>44</sup> Many such grottos and the dark meandering paths surrounding them became cruising grounds, in many respects their intended usage.<sup>45</sup> The queer sexual practices that took place here do so wholly immersed within this highly ‘othered’ atmosphere of a constructed nature; one that mimics the spatial and material patterns of cruising seen within less urban spaces such as Somers.

## Conclusions

The exclusion of minority groups and Indigenous peoples from architectural conversations has for so long rejected the significant contributions to design discourse. Given urban and architectural practices involvement in current environmental crises perhaps the inclusion of the queer and ecological can contribute alternate perspectives. Early queer movements were allied with environmental ones, intentional communities, protests, festivals, the aesthetic production of that era. One can ask whether present in the patterning of this cruising ground is a contemporary aesthetic of queer ecological design.

Borrowing interdisciplinary methods from spatialised vocations, such as urbanism, assists in the better understanding of queer places. In addition, architectural methodologies of site analysis, mapping and an expanded application of architectural terminology allow for a more nuanced appraisal of the material spatial practices found within queer places. The illumination of communal yet anonymous designing affords a greater agency to those involved in the production.

The Somers beach cruising grounds was born from the illegality of queer desire and an intentional turn towards being immersed within nature. This site has been active for a half-century and (prior to covid-19 restrictions) still endures yet like so many queer spaces it is precarious potentially lost to rising seas, or the desire to remain indoors. The resulting structures described are made up of no more than the earth and or branches. The architecture described here may not resemble others typically discussed, perhaps because such an architecture is not involved in the ownership of land, nor has it necessitated vast amounts of material displacement and the associated ecological destruction.

# Ultra Graphic: Australian Advertising Infrastructure from Morris Columns to Media Facades

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## Keywords

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Signage  
Visual pollution  
Billboards  
Infrastructure

## Abstract

This paper examines the development of infrastructures for outdoor advertising and debates over visual 'oversaturation' in the built environment. It begins with the boom in posters that came in the 19th century with a plethora of new manufactured goods and the attempts by civic officials to create structures that would extend cities' available surface area for the placement of ads. It then charts the rise of building-top 'sky signs,' articulated billboards, kiosks, and digital media facades while detailing the policy initiatives meant to regulate these ad surfaces. This work builds on ongoing research into the development of signage technologies in Sydney and Melbourne, the measurement and regulation of 'visual pollution,' and the promotion of entertainment and nightlife in precincts defined by neon and historic signage.

This project responds to the increasing ambiguity between traditional advertising substrates and building exteriors. It charts the development of display technologies in relation to changing architectural practices and urban landscapes. Signage innovation in Australia has been driven by increasingly sophisticated construction practices and by the changing nature of cities; shifting markedly with increased automobility, migration and cultural change, and mobile phone use. The means by which urban reformers and architectural critics have sought to define, measure, and control new ad technologies—sometimes deemed 'visual pollution'— offers a prehistory to contemporary debates over 'smart city' street furniture, and a synecdoche to narratives of degradation and ugliness in the post-war built environment.

These four thematically linked episodes show how Australian civic officials and built environment activists have responded to visual clutter, and the fuzzy line between advertisers, architects, and builders erecting increasingly dynamic infrastructures for ad delivery. This progression shows the fluctuating place of advertisement in the built environment, ending with the emergence of today's programmable façades and urban screens.

1. Quoted in Australian Convention of Advertising Men & Queensland Institute of Advertising Men. 1918. *Proceedings and resolutions of the first Australian Convention of Advertising Men held at Brisbane, 2-6 September 1918*: 15-16. <http://nla.gov.au/nla.obj-2819331233>.

2. *Proceedings*, 50-51.

3. *Proceedings*, 107.

When Hamilton John Goold-Adams, the Governor of Queensland, opened the first Australian Convention of Advertising Men, held in Brisbane in 1918, he admitted that he was just learning about the "importance of advertising at the present day," nonetheless, he was impressed by the contribution of the advertising industry to the war effort and in "building up industry" and "increasing prosperity." After these complimentary remarks he ended his speech with an admonishment, the organisers noting that "all he asked was that in advertising the beauty of the cities... they did not disfigure their hoardings or their buildings" and did not advertise "to people who did not wish to be advertised, and making known all their little failings, as was sometimes done in America."<sup>1</sup> With these words of warning the governor departed, leaving the 50 delegates to map the future of Australian advertising. Their vocation, they lamented, was woefully behind the United States, where "advertising... is the big cog in the business machine... a great big, live, pulsating business machine, with many cogs, wheels, shafts, pulleys, belts, dynamos and the like."<sup>2</sup> What was needed was "a suitable designation for men qualified in the advertising profession" perhaps, suggested one delegate, "advertext" which "carried with it a suggestion of building up like the word architect." This name was struck down, and the group failed to agree on a coinable term for their profession settling only on "ad men" which, according to Frank Bignold of Sydney, was "good enough for their glorious Allies over in the land of Stars and Stripes" and, therefore, good enough for those "under the Southern Cross."

The back-and-forth at the convention illuminates both the insecurity of a new industry and its position in relation to the perceived dynamism of US ad culture, where ads fit into a complete, and highly commercialised, system for producing the built environment. The mustering of public opinion during the First World War through patriotic posters (often offered pro bono) had helped establish advertising as a profession, but the prestige boost was fleeting. The remarks of Queensland's governor helped reinforce the idea that advertisements could contribute to urban space by taking a step back, introducing fears of oversaturation. Moreover, advertising was seen by its early practitioners as distinctly non-architectural and aspirations towards the later were thought to be "high-falutin."<sup>3</sup>



Figure 1: A hoarding at the intersection of Wexford and Campbell Streets in Sydney's Surry Hills, 1906 (Demolition Books, City of Sydney Archive)

4. Henry Sampson, *A History of Advertising from Earliest Times* (London: Chatto and Windus, 1874), 23, accessible on the Internet Archive and Project Gutenberg.

The idea that the city could become oversaturated with ads was not new. In early Victorian London the unregulated poster-sticking trade became a hot button issue when venerable buildings were covered by the 'disfigurative work' of paste bucket crews.<sup>4</sup> The failure of civic officials to control the city's surfaces was seen as indicative of greater lawlessness and decay in a society unspooled by industrialisation, displacement, and growing urban poverty. The poster-pasting free-for-all only began to shift in the 1870s with the establishment of privately managed hoardings (Fig. 01), an innovation that quickly made its way to Australia. The creation of these structures (however rudimentary) shifted the concept of advertising. Bills were no longer an appliqué to be stuck here and there, but a contributing force in the creation of space. Hoardings legitimised their presence on walls and shifted the perception of ads, taking them from 'blight' to 'burgeoning industry' as property owners looked to hoardings as a new way to monetise their land.

### For the Love of Litfaß

The trade of the 'ad man' was relatively new in early 20th century Australia, as were the substrates that carried ads. Hireable ad spaces on buildings' sides were much in demand as an unending stream of newly produced industrial products entered the market. Yet, the square-metres of the city surfaces on which hoardings could be placed were limited. The solution was to create more ad surfaces at street level.

5. Yet, in the urban imaginary their internal square footage did hide secrets. Famously, in *The Third Man*, Harry Lime escapes into the Viennese sewers through an ad column.

The advertising pillar (called "Morris columns" in the UK and France, and "Litfaß columns" in German-speaking countries) was phenomenally successful in extending the ad-ready space in European capitals. Initially debuting in Paris, the innovation was brought to Berlin by printer and entrepreneur Ernst Litfaß, who received a concession from the Prussian government in 1854 to install multi-functional *litfaßsäule*. These early models were meant to be multifunctional pieces of street furniture where the poster-wrapped column would conceal a bubbler, tiny newsstand, or discreet urinal. In the end, very few of the Berlin ad-displays had second uses.<sup>5</sup>

6. New South Wales, *Proceedings of the Legislative Assembly*, 1890: 7-30.

Ad columns did not arrive on Australian shores until relatively late in the 19th century. Promoted by the Postal Pillar & General Advertising Co, their arrival in Sydney was met with some consternation. Initially, the City Council objected to the pillars as "unsightly mediums" for (what was assumed to be crass) advertising. They only withdrew their objections with the stipulation that all advertisements would be personally approved by the mayor's office.<sup>6</sup> In a first for the city, the ads would subsidise beneficial infrastructure, in this case "200 combined postal, electric signal alarm, and telephone pillars," and this seems to have tipped the balance, outweighing the deleterious effects of advertising on the passing crowds.

Despite the perceived public gain from the pillars, just a handful dotted the streets of 1890s Sydney. The Postal Pillar Company, who managed them, wrote the Mayor's Office for approval every time they sought to switch out adverts (Fig. 02) and their presence irked some local councils who had them removed. Nonetheless, they set a precedent for the creation of new ad-bearing structures and the funding of footpath

improvement through concessions. The pillars were often illuminated, and backlit ads were one of the main draws for higher-end firms seeking to promote their products. However their scale, well suited to the pedestrianism of 19th century, was too diminutive for the coming age of the streetcar and automobile. By the time the advertising men were assembling in Brisbane in 1918, bulb-lit sky signs were rising above major intersections, and, within a decade, they would be joined by neon: the red globes "of light, the liquor green/the pulsing arrows and the running fire"<sup>7</sup> of new nightlife districts.

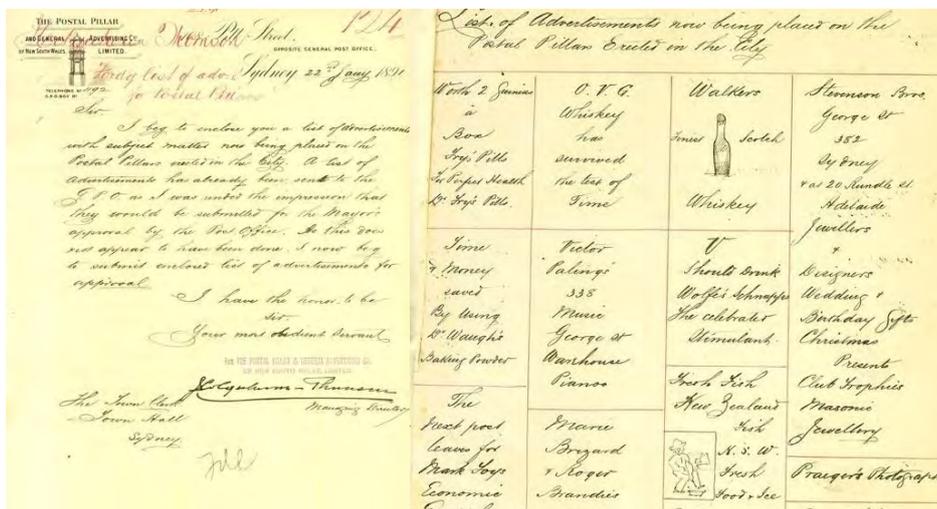


Figure 2: A letter and sketch (detail) of the layout for posters to appear on an advertising pillar opposite the Sydney General Post Office, submitted for approval to the Sydney Mayor's Office in January of 1891 (City of Sydney Archive)

### The Sky Signs are Here

While advertisers never claimed to be architects, many early 20th century architects and builders were, in fact, advertisers. The two professions freely mixed at the under-examined periphery: in industrial buildings and in vice districts. A late Victorian building that stood in front of the Cameron & Sutherland machinery yard in Sydney (Fig. 03) was typical of this hybridity, it had a street-wall-cum-billboard that was nearly double the height of the two-storey building behind it, anticipating the typographic style and visual heft of the sky signs that would come to dominate arterial roads in both nightlife precincts and light manufacturing areas. While rooftop-mounted signage was by no means loved, it was not seen as a blemish on otherwise 'pure' buildings. Rather, it put forward the notion that a simple industrial structure could serve as a giant logotype, not a pejorative in the rough-and-tumble commercial world of late-Victorian Australian cities, but an asset and testament to business acumen. The building-as-logotype shift did make many classically trained architects recoil in disgust, but modernists, like the Weimar architect Hugo Häring, welcomed the acceleration of ad culture as a sign that the end was near for the historicist facades they loathed. Häring noted, with more than a little approval, that, by the 1930s, commercial buildings were "merely scaffolding for advertising signs, lettering, and luminous panels."<sup>8</sup>



Figure 3: An early example of an industrial building as logotype, 65-67 Pyrmont Bridge Road photographed shortly before its demolition in 1919. (Demolition Books, City of Sydney Archive)

9. "Too Many Bans and Restrictions," *Border Morning Mail* (Albury, NSW), 8 September 1949: 14.

10. The Outdoor Advertising Association of Australia, Inc. *Outdoor Advertising*. Melbourne, 1949: 13.

11. Slessor, "My Kings Cross," 60.

In the 1930s and 1940s the allusion to "scaffolding" was quite literal as "sky signs" were erected across many capital cities. These consisted of hollow letters bolted on a rooftop metal superstructure or, sometimes, dropped down over facades and even windows. They gained great popularity in urban centres even as they were banned in smaller towns (a move that put elected officials in conflict with entrepreneurs seeking to promote their products, sometimes on existing infrastructure "erected at great cost").<sup>9</sup> Sky signs, sometimes called 'skeleton letter signs' in the ad trade, became new landmarks. These signs were often fitted with neon, including three- and four-movement flashing designs. They changed the look and tempo of the skyline; working, as one trade publication put it, "all day every day...all the year, registering your product and your services in the consumers' minds."<sup>10</sup> Their visibility played into wayfinding, helping to both situate and overwhelm city dwellers (depending on their density). Sky signs addressed commuters emerging from train stations and positioned themselves on rooftops adjacent to new motorways, effectively hedging their bets on transportation forms (Fig. 04). While seen initially as indicative of coming urban dynamism, they were quickly recast as proof of commercial culture's excesses. Yet, they had their defenders, most notably the poet Kenneth Slessor who ended every stanza of his 1944 poem "William Street" (the epicentre of Australian outdoor advertising) with "You find this ugly, I find it lovely"—a rejoinder to the critique Robin Boyd would level 15 years later.<sup>11</sup>

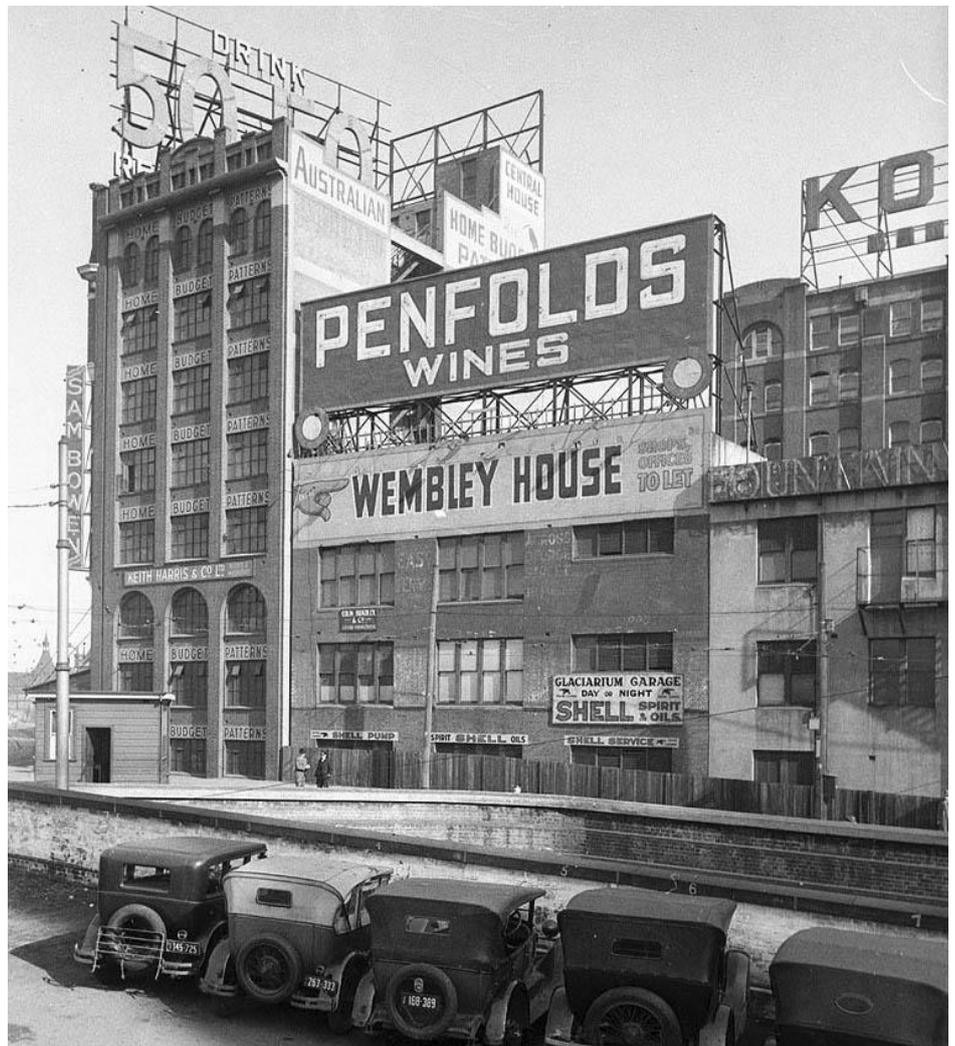


Figure 4: Sky signs on Little Regent Street, Sydney, 1934. (City of Sydney Archive)

## Rage Against the Billboard

12. Donald Gazzard, ed., *Australian Outrage: The Decay of a Visual Environment* (Sydney: Ure Smith, 1966).

13. Mathew Aitchison, "Ugliness and Outrage The Australian Townscape" in *Proceedings of the Society of Architectural Historians, Australia and New Zealand: 30, Open*, edited by Alexandra Brown and Andrew Leach (Gold Coast, Qld: SAHANZ, 2013), vol. 1, p 407-417.

14. Robin Boyd, *The Australian Ugliness* (Melbourne: Cheshire, 1960). 38-39.

The expansion of car culture in the post-war era helped to further muddy the waters between advertisers and architects. Kiosks, extra-large billboard 'spectaculars,' polyurethane 'big things,' and a variety of street furniture appeared by new suburban roadways. Critics like Robin Boyd and Donald Gazzard attacked the "decay of the visual environment" and the "disfigured landscape" of "hoardings and roadside advertisements."<sup>12</sup> Inspired by the UK Townscape movement<sup>13</sup> and progressive planners from the US, they lined up behind an idea of urban 'legibility' in the face of visual overstimulation and blight (two, sometimes contradictory, concepts that Boyd successfully united under the term ugliness). To Boyd, writing in *The Australian Ugliness*, visually-intruding objects combined to form an "ill-considered and uncoordinated assortment of posts, hydrants, bins... neons, placards, stickers, posters, slogans— all bundled together like an incompetently-rolled swag with loops and tangles of overhead wires."<sup>14</sup> The messiness of new roadside developments was not a temporary snag on the path to modern cities, but part and parcel of a degraded visual sphere. The critique of sloppy and 'chaotic' urban spaces speaks to a new holistic approach to visual perception and place. While ad structures of the past, like sky signs, maintained the figure-ground relationship of building and surrounds,

the maximalist roadside advertising of the 1960s broke it open, blurring graphics with landscape.

15. Gazzard "Australian Outrage," 29, 15.

Both Boyd and Gazzard specifically drew from an environmental understanding of the city to frame signage as both naturally occurring and as an element that must be held in check, lest it threaten native biodiversity. Creating a balanced ecosystem was key and this meant "conservation of our natural resources" that takes into account "our general environmental needs: recreational, scientific and visual." Custodianship of the environment (including the built environment) meant preservation to preserve "our visual inheritance" and to mitigate what is seen as a worsening "visual confusion."<sup>15</sup> Ad structures would be singled out for regulation and periodic culling as billboards popped up and hoardings climbed walls and building sides. The visual environment needed to be balanced, which meant removing the advantage that advertisers had gained.

16. "Outdoor Advertising: Business Men's Address," *Daily News* (Perth, WA), 17 July 1930, 8.

As early as the 1930s, there had already been, what a Western Australian ad man called, "misunderstandings between outdoor advertisers and town planners" that he hoped would not "turn into antagonism."<sup>16</sup> By 1964, when Gazzard's photos from "Australian Outrage" were shown in Sydney, the 'misunderstanding' had morphed into "an exhibition of spontaneous protest... attacking the casual way in which the appearance and quality of our surroundings are being debased." The book—with 'Outrage' rendered in blood-red sans serif across the entire top half of the cover—would come out two years later and would help to extend the conversation to those outside of the circle of architects and urban designers who had come to the initial exhibition.

17. Gazzard "Australian Outrage," 12, 16, 122-28.

18. Gazzard "Australian Outrage," vi, 15.

Gazzard's issue with billboards was, in many ways, tied up with the new roadways they lined. The relationship between road projects and billboards, he fumed, was "parasitic" with ads "living off a public investment—the road—without rendering a valid public service in return." Despite this apparent antipathy, only ten of the book's 160 plates explicitly show ad-based 'blight', far more space is given over to cataloguing aboveground wires and poles, "the acne of the urban complexion", outmoded street furniture, and glaring environmental degradation in the form of unregulated dumping.<sup>17</sup> Just a few paragraphs into his critique of outdoor advertising and Gazzard seems to run out of steam, moderating his position, and allowing that "advertising can add vitality to certain areas" and should not be banned outright.<sup>18</sup> It's clear that the outrage that he brings forth is almost entirely reserved for roadside billboards and exurban signage. This is in contrast to Boyd's more idiosyncratic formulation of 'ugliness' that relies on certain taste cultural markers; his critique of the scale, colour, and ubiquity of new signage gives one the impression that it is not just the advertisements but the perception of who was putting it up—the new rich and the 'newly arrived'—that is at issue.

The 1960s debates on 'ugliness' and 'outrage' helped to create a bifurcated framework for the evaluation of outdoor advertising that exists to this day: on one hand there is roadside 'clutter' that is deemed both garish and potentially-dangerous to passing motorists, and, on the other, there are spaces where high density advertising might help contribute to sense of vibrancy and life. The former is seen to be in need

of regulation (by Departments of Roads, planning authorities, councils, and others); while the later intersects more with architects, developers, and heritage specialists and, in some cases, is seen as a positive feature of cities that needs to be incubated.

### How We Learned to Stop Worrying and Love the Signs

The commercial detritus that 1960s critics, like Boyd, lamented—milk bar placards, big thing roadside sculptures, and exposed-channel neon letters—was both replaced by larger, sleeker signs in further-flung suburbs and reined in by anti-billboard ordinances. Ironically, it was the typographic assemblage of inner-suburb, mid-century signage that's become a marker of a certain kind of cool, excavated by a new generation of 'urbanists'. These 'scholars of the everyday' revolted against the perceived elitism embodied in Boyd's Euro-inflected modernism and learned to love the buzzing neon of old highways and chrome lettering. With copies of *Learning From Las Vegas* in hand they went hunting for first-generation roadside signage (already being replaced by newer modes of display) and, slowly, they infiltrated heritage alliances and planning ministries, directing funds (although never huge sums) towards the conservation of 'vernacular' advertising. In an increasingly televisual age, old signs spoke to a notion of 'urban authenticity' that was rapidly vanishing.

19. Sally Stewart, "High achiever who never said never," *Sydney Morning Herald*, 26 September 2008, <https://www.smh.com.au/national/high-achiever-who-never-said-never-20080925-4o4t.html>.

20. Richard Tipping, *Signs of Australia* (Melbourne: Penguin Books, 1982), 7.

In Melbourne, the search for the vernacular is most clearly seen in the embrace of the Nylex Plastics sign. Erected in 1962, it was a latecomer to the sky sign era, its neon letters are topped with a new technology: a digital clock face that hangs over the Yarra River, serving as an informal entryway into the city's CBD. Its unlikely survival in a deindustrialising city turned it from an eyesore (nicknamed "Derham's Folly" after the moulded plastics baron who put it up)<sup>19</sup> to an icon. It is the star of Paul Kelly's 1987 music video "Leaps and Bounds," immortalized in the lyrics as "way up on high/The clock on the silo" that looks across the cityscape, embodying the unpolished chic for which Melbourne is known. In his 1982 book *Signs of Australia*, the artist and writer Richard Tipping notes that cities are now defined by the "visual and verbal traffic jam" of "roadsigns, billboards, street and place names, shopfronts, notices, graffiti, and the night's neon labels." This mix is not off-putting, but intoxicating, searching out the signs is, for Tipping, "addictive."<sup>20</sup>

21. John Masanauskas, "Iconic View Saved," *Herald Sun* (Melbourne), 03 July 2016.

While "visual pollution" along roadways was still very much an issue in the 1980s and 90s, a new crop of anti-billboard activists distinguished between highway 'litter-on-a-stick' and heritage sky signs, marquees, and hand-painted ads. Neon was earmarked for preservation efforts starting in the 1970s when cheaply made plastic signs packed with fluorescent tubing began to quickly replace it. Faced with the prospect of classic neon going dark, preservationists rallied to save what was left of it. The removal of Melbourne's Skipping Girl Vinegar Sign in the late 1960s caused an outcry, and it was reinstated in 1970. In 2007, it was placed on the National Trust's heritage list, and, in 2016, the organisation successfully lobbied to have the podium of an adjacent development pushed back to preserve the view of skipping "Little Audrey" for people headed out of the city along Victoria Street.<sup>21</sup>

More recently, it was announced that the Nylex sign and some of the silos below it will be retained and renewed, as the anchor for a new mixed-use “lifestyle destination” called the Malt District. These changes signal not just an appreciation for old signage but the widespread realisation of the cultural capital, and potential for monetisation, contained in these structures.



Figure 5: An image of a revitalised Kings Cross with the Coca-Cola sign at its centre (Committee for Sydney).

22. Emily Blatchford, “The Famous Kings Cross Coke Sign Has Been All Chopped Up,” *HuffPost Australia*, 30 August 2016, [https://www.huffingtonpost.com.au/2016/08/29/the-famous-kings-cross-coke-sign-has-been-all-chopped-up\\_a\\_21461649/](https://www.huffingtonpost.com.au/2016/08/29/the-famous-kings-cross-coke-sign-has-been-all-chopped-up_a_21461649/).

23. “A Vision for Kings Cross,” Committee for Sydney, 23 April 2021, <https://sydney.org.au/publications/a-vision-for-kings-cross/>.

The neon nightscape of Kings Cross much admired by Slessor in the 1940s has mostly been demolished, but what little remains has, along with a subsequent generation of 1960s neon, been preserved and celebrated. Much of this has happened within the context of neon as a stand-in for nightlife and vibrancy, where ‘scene setting’ lighting, inspired by Cyberpunk films like *Bladerunner*, helps fuel consumptive activities and “naughty but nice” placemaking. The Coca-Cola billboard, plopped down at the intersection of William Street and Darlinghurst Road in 1974 to replace an older generation of neon, has itself been replaced by a newer LED version (its original two- to five-metre-tall letters were chopped up and auctioned off on eBay for charity).<sup>22</sup> A recent study by the Committee for Sydney envisions the sign as the backdrop for a revitalised entertainment and theatre precinct.<sup>23</sup> This hub would anchor a proposed “neon grid” of nightlife venues around Sydney (Fig. 05). This, along with the recent appointment of a 24-hour Economy Commissioner, or ‘Night Tsar’, looks to Kings Cross as a model for new nightlife, and highlights the allure of commercial façades as a springboard for economic development in what is hoped will be a post-Covid bounce back for the hospitality sector.

### Architecture as Signage

In recent years, there has been an effort on the part of both architectural historians and media theorists to untangle the interwoven histories of advertising and architecture. In her critical reading of postmodern architecture, *Rethinking the French City: Architecture, Dwelling, and Display after 1968*, Monique Yaari asserts that the last 50 years have seen a shift towards architecture as signage, this came to the fore in postmodernism but extends into the screen-laden buildings and

24. Monique Yaari, *Rethinking the French City: Architecture, Dwelling, and Display after 1968* (Amsterdam: Rodopi, 2008), 372.

25. Craig Buckley, "Face and Screen: Toward a Genealogy of the Media Façade," *Screen Genealogies: From Optical Device to Environmental Medium*, (Amsterdam: Amsterdam University Press, 2019) 74.

'monumental media' (Fig. 06) of the present day.<sup>24</sup> New buildings are increasingly pushed to have built-in display technologies to advertise their owners and tenants, offset operational cost with third party ads (in lifts, for example), and to allow for public-facing messaging (seemingly more important than ever with the Covid pandemic). As Craig Buckley observes in *Screen Genealogies: From Optical Device to Environmental Medium*, "a building's ability to display and control moving images, graphics, patterns, and text has become a requirement as important as its material, shape, weatherproofing, or security."<sup>25</sup> He goes on to note that the rise of the digital building-wrap is not evidence that architecture has been 'devoured by media' or advertising, but a recognition of the façade's complex role as a medium.



Figure 6: The first iteration of Melbourne's Federation Square Big Screen in 2008, ten years later it would be extended as a "media façade." (Creative Commons, Flickr user msnaut).

The recognition of building envelopes as advertising substrates has been a long time coming, anticipated, tacitly at least, by advertisers themselves who scrambled to secure space on façades and hoardings (structures that served as a façade adjuncts, often masking empty lots and industrial uses); eventually building-up street walls that served as proto billboards. Within the field of architecture, the recognition of advertising came first in the form of disgust and then winking admiration, especially for 'auteur' artist-architects like James Wines, of SITE, whose Best Products stores in the US became a cult hit in design circles. While Wines updated the folly for the suburban big box store, buildings in the urban core took on the sign technologies of the Las Vegas strip, often as part of a process of 'festivalisation' written about by critical geographers like Neil Smith and David Harvey.

26. Quoted in David Harvey, "From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism," *Geografiska Annaler. Series B, Human Geography* 71, no. 1 (1989): 13.

The creation of marketplaces and going-out districts was seen as an "Aladdin's lamp for cities fallen on hard times."<sup>26</sup> Signage, particularly historicised neon and globe lighting, became a way to 'activate' space, especially in cities shifting away from industrial production to service entertainment economies. The overstimulation fretted about so much in mid-century texts critiques was seen as a positive: visual stimulation could ramp up the whole metabolism of a city, creating 'destinations' and adding 'energy' to shopping precincts. In the push and pull between advertising structure and architecture the scale has jumped from walls, to street furniture, to facades, to megastructures. While advertisers dared not play architect, architects have no scruples about moonlighting as advertisers.

# ULTRA

## **Positions and Polarities Beyond Crisis**

### **SESSION 4: *Local and Regional Modernisms***

# Alan Gilbert and Sarah Lo in Reform Era China and Hong Kong: A NSW Architect in Asia

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## Keywords

Reform era China  
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International hotels  
NSW architects

## Abstract

This paper is based on archival research done for a larger project looking at the impact of emergent transnational networks in Asia on the work of New South Wales architects. During the period of the Cultural Revolution in China (1966-1976), the neighbouring territories of Macau and Hong Kong served as centres of resistance, where an expatriate population interested in traditional Asian arts and culture would find growing support and patronage amongst the elite intellectual class. This brought influential international actors in the fields of journalism, filmmaking, art and architecture to the region, including a number of Australian architects.

This paper traces the history of one such Australian émigré, Alan Gilbert, who arrived in Macau in 1963 just before the Cultural Revolution and continued to work as a professional filmmaker and photojournalist documenting the revolution. In 1967 he joined the influential design practice of Dale and Patricia Keller (DKA) in Hong Kong, where he met his future wife Sarah Lo. By the mid 1970s both Alan Gilbert and Sarah Lo had left to start their own design practice under Alan Gilbert and Associates (AGA) and Innerspace Design. The paper particularly explores their engagement with 'reform-era' China in the late 1970s and early 1980s when they secured one of the first and largest commissions awarded to a foreign design firm by the Chinese government to redesign a series of nine state-run hotels, two of which, the Minzu and Xiyuan Hotels in Beijing, are discussed here.

In January 1980, Hong Kong newspapers announced that a local firm had been awarded the contract to 'modernise' several Chinese state-run hotels to the highest international standards of design. This was one of the first and largest commissions awarded to a foreign design firm by the Chinese government as part of proposed work on a series of nine state-run hotels. Remarkably, not only was this Chinese contract awarded to foreigners, but to a company of two designers – Alan Gilbert and Sarah Lo – that was only five years old, established in 1975. Exploring the reasons behind this bold and unusual decision allows us a window into a story not only of China's architecture of reopening, but of transnational exchange of ideas and people into and around Asia, the burgeoning luxury hotel design market based in Hong Kong from the 1960s, and Hong Kong as a drawcard site for a mobile, internationally networked creative elite emerging from Australia.

THURSDAY, JANUARY 17, 1980

SOUTH CHINA MORNING POST

## Local firm wins \$250m Peking hotels deal

By DAVE HADFIELD

The expertise of a Hongkong firm is set to change the face of hotels in Peking.

China, often criticised for not having hotels up to the highest international standard, has embarked on a programme which will involve modernising two hotels, and building two new ones, in Peking.

The contract for revamping the 670-room Minzho Hotel, and designing the interior of the new 700-room Xiyuen Hotel, has gone to the Hongkong design firm, Alan Gilbert and Associates.

The total value of the work at the two hotels will be around \$250 million, with a consortium of Hongkong firms getting the biggest slice.

For Alan Gilbert, it's the most exciting contract to come his way since the start of his practice in 1973.

"When the hotels are finished, they will be the best in Peking," he said.

"The Peking Hotel is the best at the moment, but these will be better."

The company's terms of reference for the Minzho Hotel — built in 1959, "but it looks 40 years older," he says — includes redesigning everything, right down to the box of matches in the hotel room.

In October, Mr Gilbert and his staff built a detail-perfect mock-up of their designs in Peking.

They set up a bedroom, a bathroom and a stretch of corridor, all of which impressed the Chinese very favourably.

"The only criticism they had was that the table was three inches too big," Mr Gilbert said.

Working with the Chinese has been an unusual experience.

"There would usually be between 50 and 100 of them at the meetings that we held with them.

"I think the record was 128."

Mr Gilbert believes that influential people in China have become aware of the need to improve their hotels.

"Twenty of their top men came to Hongkong last year and saw all the major hotels.

"That made an impression on them."

The Chinese had to bring in outside expertise, Mr Gilbert says "because they're out of touch with what's been happening in hotel design over the last 15 years."

What he has come up with for Peking is a blend of European, traditional Chinese, and modern elements.

The mood in China is more receptive to using the styles of the past than it was a few years ago, says Mr Gilbert, who experienced the upheavals of the cultural revolution at first hand, as a freelance photographer and film cameraman in China.

His designs also include bold splashes of colour based on the predominant art of modern day China — socialist realism.

"You can regard it as a sort of pop art," he says.

The Chinese are opening their doors to all sorts of unlikely allies in their drive to improve the standard of their hotels.

Staff at the new hotels will be trained by the Hyatt International group, which will send its experts to Peking in a programme lasting several years.

It is also probable that much of the material for the interior decoration of the hotels will come from abroad.

The plans have been made in such a way as to allow China to produce everything that is needed, but it is unlikely that it will choose to do so.

"Most of their factories have their work schedules full up for years ahead, mainly for the export trade, which

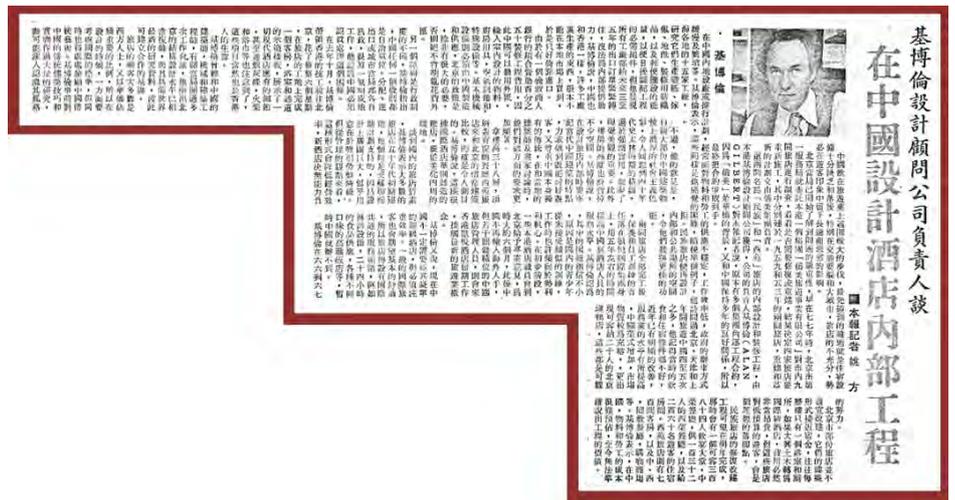


Mr Gilbert

has priority over domestic requirements."

That should mean plenty of orders for Hongkong, especially for the numerous wooden and metal bits and pieces that will refurbish the Peking hotels.

Mr Gilbert's company has two other major projects in hand at the moment: the interior design of the Regent Hotel in Bali, and the residents' club for the Discovery Bay complex on Lantau Island.



Newspaper reports from Chinese-newspapers announcing the award of a China hotel design contract to Alan Gilbert and wife Sarah Lo (Source: Newspaper clippings, Alan Gilbert archive)

1. Dave Hadfield, "Local firm wins \$250m Peking hotels deal," *South China Morning Post*, January 17, 1980.

2. Noel Parrott, "Couple wins top China hotel design contract," 1980. (Newspaper clipping Alan Gilbert Archives).

3. See Cole Roskam "Envisioning Reform: The International Hotel in Postrevolutionary China, 1974-1990." *Grey Room* 58, (2015); and forthcoming *Designing Reform: Architecture in the People's Republic of China, 1970-1992* (Yale University Press, 2021).

The initial project, as outlined in the news article "Local firm wins \$250m Peking hotels deal," was to renovate and extend two Beijing hotels – the 670 room Minzu Hotel, and the 700 room Xiyuan Hotel.<sup>1</sup> This was a major commission in a time of rapid ideological change in Deng Xiaoping's Reform Era China. China's 'economic reform and opening up' had only been fully initiated a year earlier when in December 1979 Deng announced the 'Open Door Policy'. In this process of opening up the country to foreign business and investment, the design of international luxury hotels would play an important role. Accordingly, as noted in another news article by Noel Parrott, this was "work that virtually every top designer throughout the world would dearly love to have."<sup>2</sup>

As recent publications have highlighted, international luxury hotels in Reform Era China are an essential microcosm to understand the contradictions that arose from the process of economic liberalisation.<sup>3</sup> Cole Roskam further identifies this burgeoning typology of the international hotel in cities such as Beijing as a space of 'political quarantine', an in-between space, highly controlled, functioning somewhat as a stage set for early, tentative East-West business encounters. As a central part of the new 'Open Door Policy' that would allow for foreign business and investment to enter China, the international luxury hotel thus acted as a symbolic gateway and was closely watched over by Deng Xiaoping's Chinese Communist Party (CCP) and the First Services Bureau (FSB). But in addition to recognising the role played by architecture in the Chinese quest for economic liberalisation, the current paper also brings forward the question of how such an important project came to be acquired by an Australian architect, Alan Gilbert, and his Hong Kong raised business partner and wife, Sarah Lo.

This paper is part of a larger study that aims to investigate the participation of Australian architects, particularly from New South Wales, in the transnational networks of art and design professionals that emerged in Asia in the mid-late twentieth century. The broader project will outline an intellectual history based on personal archives to offer greater recognition of the contribution of these NSW architects

4. Ellen Badone. "Crossing Boundaries: Exploring the Borderlands of Ethnography, Tourism, and Pilgrimage." In *Intersecting Journeys: the anthropology of pilgrimage and tourism*, ed. Ellen Badone and Sharon R. Roseman (Urbana Ill.: University of Illinois Press, 2004).

to the ongoing cultural relationship between Australia and Asia. The current paper engages the personal archives of Alan Gilbert and Sarah Lo to introduce them as an illustration of this broader process. In addition, to explore the specific agency of Alan Gilbert, this paper will employ anthropologist Ellen Badone's discussion on modes of regional engagement ranging from tourism and ethnography to pilgrimage.<sup>4</sup> It will argue that what began as a pilgrimage soon shifted towards ethnography (or 'ethno-technological research' as will be later described) and eventually resulted in an established design research method.

### **Australians and Asia in the Post-war Decades**

5. Dan Halvorson. "From Cold War Solidarity to Transactional Engagement: Reinterpreting Australia's Relations with East Asia, 1950–1974." *Journal of Cold War Studies* 18, no. 2 (2016), 136.

By the 1950s, the memories of World War II and the Japanese threat to Australian sovereignty had begun to fade, giving rise to new anxieties triggered by geopolitical shifts taking place throughout Asia. Following the Chinese Communist Revolution of 1949 and the launch of the Korean War in 1950, it was often considered only a matter of time before other Asian countries would begin to fall like dominoes, ultimately bringing communism to Australia's doorstep.<sup>5</sup> Fears over communism's creep produced political and cultural narratives designed to increase the conceptual distance between Australians and Asia. New Cold War-era strategic security alliances, in particular the 1951 ANZUS treaty, aimed to redefine a Pacific power structure capable of curtailing any aggression from the Asian front. This effectively positioned Asia as a potentially hostile neighbour in need of containment through so-called Western democratic values.

6. Hannah Lewi and Philip Goad, *Australia Modern: Architecture, Landscape & Design 1925-1975* (Thames and Hudson, 2019).

The fear of Asia, and a growing alliance with America, further registered in the changing domains of art and architecture, with an appreciation for the doctrines of universal modernism permeating the Sydney architectural community.<sup>6</sup> Modernism in 1950s Sydney, as practiced by leading architects of the time Sydney Ancher and Harry Seidler, tended to deny cultural specificity and difference in favour of universality. However, a few Sydney born architects bucked the trend of American or European influences, choosing instead to travel to nearby Asia for inspiration and study.

7. Agnieszka Sobocinska, *Visiting the Neighbours: Australians in Asia* (Sydney: New South Publishing, 2014).

In her book *Visiting the Neighbours: Australians in Asia*, author Agnieszka Sobocinska characterises the travels of Australians to Asia in various ways – as imperialists, fortune hunters, humanitarians, warriors, seekers, adventurers and tourists.<sup>7</sup> On the other hand, instead of defining the nature of travel through the characteristic of the traveller, anthropologist Ellen Badone focuses on the place of departure and the place of arrival. She notes that each mode of travel into an unfamiliar culture is marked by a pattern of movement into spaces that have been noted as significant for having something to offer the traveller – knowledge, transformation, or recreation,<sup>8</sup> and that the traveller can switch between these modes as each offers possibilities for self-transformation. Seen from this perspective of self-transformation, the movement of Australian architects into and throughout Asia can be considered as much a result of the perceived lack at the point of departure as the allure and possibilities of the destination.

8. Badone, "Crossing boundaries," 182.

9. Alison Broinowski, "Australia, Asia and the arts," *Review – Asian Studies Association of Australia*. No. 1 (1988), 19-21.

10. Alison Broinowski, *The Yellow Lady: Australian Impressions of Asia*, 2nd ed., (Melbourne: Oxford University Press, 1996), 7.

11. Peter Scriver, "Edge of Empire or edge of Asia?: 'Placing' Australia in the expanding mid-twentieth century discourse on modern Architecture" in *Proceedings of the 26th Annual Conference of the Society of Architectural Historians, Australia and New Zealand (SAHANZ)*, held in Auckland New Zealand, 2-5 July 2009, 15.

12. Felix Wemheuer, *A Social History of Maoist China: Conflict and Change, 1949-1976* (Cambridge University Press, 2019).

Australian former diplomat and academic of Asian Studies, Alison Broinowski, describes the growing tendency for artists and intellectuals to venture to Asia in the post WWII era as driven by the desire to leave the parochialism and conservatism of Australian culture at the time.<sup>9</sup> Broinowski's narrative of Australians in Asia emphasises a cultural shift from historical to geographic references – the desire to cast off the historic shackles of the British empire and recognise instead the physical realities of Australia's place in the world under the broader understanding of Australasia.<sup>10</sup> From an architectural disciplinary perspective, Peter Scriver emphasises this geographic push towards a notion of Australasia in his 2009 paper '*Edge of empire or edge of Asia?*' noting that early proponents of architectural regionalism such as Milo Dunphy and William Hardy Wilson were arguing for geography as a shared ground of understanding where significant cultural differences between Asia and Australia still existed.<sup>11</sup>

In Asia, the desire for independence from colonialism was complicated by the struggle between communism and capitalism—an ideological polarization that tore communities and countries apart. Following the early 1960s divergence between the Soviet Union and China, this conflict of political ideologies became entangled with ethnic rivalries and led to a wider backlash against the Chinese communities in the region. For instance, in Indonesia, a campaign against suspected communist sympathizers and ethnic Chinese residents killed an estimated 1-2 million people between 1965 and 1966.

In 1966, Chairman Mao Zedong launched the Cultural Revolution (1966-1976) in an effort to concentrate power and initiate a more radical break from China's imperial-era traditions.<sup>12</sup> This idea of 'reformation' directly blamed old cultural values and customs, public intellectuals, and elite educational institutions as obstacles to the growth and progress of communism in China. Countless ancient buildings, artefacts, antiques, books, and paintings were destroyed. For those in neighbouring regions that stood in opposition, interest in preserving traditional values enshrined in Asian arts and culture increased. The colonial outposts of Macau and Hong Kong emerged as centres of such interest, where the expatriate population found growing support from the elite intellectual class. The mass mobilization in China, along with the escalating Vietnam War (1955-1975), also brought other influential international figures in the fields of journalism, filmmaking, art, and architecture, to the region. This movement of transnational actors in and out of Asia produced numerous interpersonal and institutional networks that redefined Asia's relationship with other parts of the world.

It is against this setting of cultural and political flux that Australian architects like Alan Gilbert arrived in Asia. For Gilbert, what was first intended as a four-year study and work tour, became a decades-long entanglement with a transnational network of art and architecture professionals based out of Hong Kong.

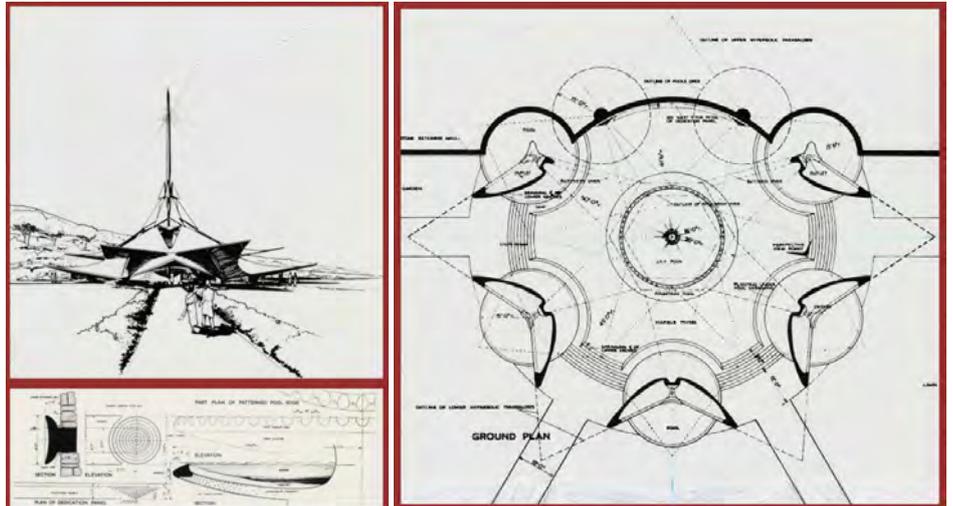
### **Alan Gilbert and Sarah Lo in Hong Kong**

Alan Gilbert first left Australia in 1963 when he was headed to Ceylon to spend time with another expatriate Sydney architect and a dear friend,

13. Alan Gilbert, 'An Australian Business in Asia', *Specifier*, 68.

14. Architectural Drawing for Competition Entry, "Monument for 2500 years of Buddha's Paramnirvana in Delhi," Alan Gilbert Archives, Sydney.

Adrian Snodgrass. Reflecting on his experiences later in life Gilbert described his sentiment towards Asia at that time as 'rapture'.<sup>13</sup> This rapture, he explained, developed in Sydney in the 1950s through his architectural studies at Sydney Technical College where he met Adrian Snodgrass and Bert Read, and through this developing friendship group was exposed to the wonders of perennial philosophy. In 1956 he had also participated in an international architectural competition to design a monument in Delhi, India, to commemorate the 2500th anniversary of Gautama Buddha's *Paramnirvana*.<sup>14</sup>



Designs for a monument to commemorate the 2500th anniversary of Gautama Buddha's Paramnirvana, Alan Gilbert, 1956. Source: Alan Gilbert archive.

15. Drawings, Illustrations and Photographs of project, "Hospital for Drug Addicts, Taipa Island, Macau," Alan Gilbert Archives, Sydney.

But Gilbert never made it to Ceylon, and having stopped in Hong Kong on his way decided to stay there for a while. Open to doing small jobs to supplement his income, he was soon offered an architectural commission for a hospital for drug addicts on Taipa Island, Macau, which was commissioned by Bill McCoy, UN Commissioner for Refugees (Australian) for the colonial Portuguese government, and completed in 1964.<sup>15</sup> The time he spent on Taipa island, Macau, is credited by Gilbert as having sparked his interest in photodocumentary and cultural research. After the hospital project, he took a temporary hiatus from architectural design and worked as a professional filmmaker and photojournalist with Austrian-Canadian photographer, Harry Redl. Between 1965 and 1967 he made five trips to China, and was one the first foreigners to document the Chinese Cultural Revolution in 1966 – his photograph 'Red Guards in Canton' appearing on the cover of Life magazine, 20 January 1967, under the headline 'China – Crisis in Mao's purge'.



Alan Gilbert's photographs capturing local life in Macau (c. 1964) and his photo 'Red guards in Canton' on LIFE magazine cover, 20 January 1967. (Source: Alan Gilbert archives)

16. Peter Scriver and Amit Srivastava, "Cultivating Bali Style: A Story of Asian Becoming in the Late Twentieth Century." In *Southeast Asia's Modern Architecture: Questions of Translation, Epistemology and Power*, ed. Chang, Jiat-hwee, and Imran bin Tajudeen (Singapore: NUS Press, 2019), 100.

Soon after, in 1967 Gilbert joined the design practice of Dale and Patricia Keller in Hong Kong. The Kellers were American designers who had travelled to Japan and eventually arrived in Hong Kong in 1961 to work on the new Hong Kong Hilton. With the emergent luxury hotel market in Asia and the subsequent establishment of new Asian-owned brands like Peninsula, Marco Polo, Furama and Shangri-La, they decided to establish their firm Dale Keller and Associates (DKA) in Hong Kong. Supported by a growing team of expatriate designers like Alan Gilbert (and Adrian Snodgrass), DKA developed a practice of collecting and cataloguing local artefacts and cultural imagery as a means to develop a thematic concept for the interior, which was successfully applied right across Asia.<sup>16</sup>

17. Kirin Raja, "Designing Pleasure Palaces," *Eve's Weekly*, Nov. 30,-Dec 6, 1985, 48.

18. Scriver and Srivastava, "Cultivating Bali Style," 101.

Having been promoted to Chief Designer in 1970, Gilbert started working on major international projects that were defined by his particular approach to the design process. In 1971, he took on the design for the Taj Mahal hotel in Bombay (now Mumbai) and in 1973 he was involved with the Bali Hyatt project in Indonesia. With these projects he started experimenting with a mode of design research that involved investigating traditional arts and crafts of the region and using these motifs as references in development of the design. For instance, at the Taj Coromandel Hotel in Madras, India (1974) Gilbert took the form of a traditional Indian lamp seen at the Delhi Museum and converted it into a sculptural chandelier.<sup>17</sup> As Scriver and Srivastava note, this process allowed the designer to counter the "modernist certainties of the contemporary international-style architectural exteriors typical of such hotels," and allow for the "textures and tectonic riches of local and regional building culture" to enter the building "in an environmentally benign yet experientially immersive manner."<sup>18</sup>



Traditional oil lamp as reference for the design of a chandelier element at the Taj Coromandel Hotel, Madras, India, 1974. (Source: Alan Gilbert Archive)

19. Badone, "Crossing boundaries," 182.

Here we can already witness a transition emerging in Gilbert's evolving relationship with Asia. To understand this, we return to Badone's discussion of the notions of pilgrimage, tourism and ethnography. For Badone, the boundaries between these (often loaded) definitions are usually blurred.<sup>19</sup> Accordingly for Gilbert his initial fascination with perennial philosophy and a desire for raptured pilgrimage to Ceylon, is replaced by the touristic gaze as he travels through Hong Kong, Macau and China as a photojournalist. This touristic self-awareness further transitions into a design-based ethnography (or ethno-technology as will be discussed later) where he takes on a more creative role, working with transformed cultural references of cities in which he was located. As Badone notes, travel to unfamiliar cultures is often driven by a desire for self-transcendence, and both pilgrims and ethnographers go through processes of self-transformation.

20. Personal Documents, Sarah Lo Archives, Melbourne.

Meanwhile, Sarah Lo, who was born in Canton, China and raised in Hong Kong, had travelled to the United Kingdom to complete her high school in Bournemouth and study interior design at the Southern Polytechnic in London. After having worked with Henry Serventi in London between 1969 and 1970, she returned to Hong Kong to join Dale Keller and Associates in 1970.<sup>20</sup> Gilbert and Lo worked together at DKA for the next few years before Sarah left to establish her own practice, Innerspace Design Ltd, in 1973. In 1975, Alan Gilbert left DKA, joined Sarah to form a partnership, and the resulting practice was rebranded as Alan Gilbert and Associates (AGA).

### Designing Hotels in Reform Era China

In 1980, when Alan Gilbert and Sarah Lo were awarded the hotel contract for China, their practice was only five years old. But the reason for their selection had as much to do with their experience in design of hotels as their approach to design as part of cultural research. As the news article identified, one of the "secrets" to their success was that they "discover traditional elements of life - through native crafts, designs,

21. Parrott, "Couple wins top China hotel design contract."

materials, fabrics - and incorporate them into their own plan."<sup>21</sup> What the article failed to highlight is the work that Gilbert and Lo had already done in China to establish this process of "authoritative design research."

22. Film Recordings, "China Trip 1972," Alan Gilbert Archives, Sydney.

Following on from his travels in China as a photojournalist between 1965 and 1967, Gilbert had also travelled to China with Dale and Patricia Keller in 1972 to visit numerous sites and assess the quality and production capabilities of the factories in the region.<sup>22</sup> Over several subsequent trips Alan Gilbert surveyed more than sixteen factories in greater Beijing and Guangzhou looking at all aspects of production for carpets, wall coverings, textiles, light fittings, and furniture, and prepared a recommendation report for the Government. Accordingly in 1978, the newly established Alan Gilbert and Associates (AGA) was invited by the First Services Bureau (FSB) of the City of Beijing to advise on the future development of nine existing hotels in the city.

23. Roskam "Envisioning Reform," 85-86.

24. Roskam "Envisioning Reform," 99.

25. Roskam "Envisioning Reform," 100-101.

As a central part of the new 'Open Door Policy' that would allow for foreign business and investment to enter China, the international luxury hotel acted as a symbolic gateway and was closely watched over by Deng Xiaoping's CCP and the FSB. As Roskam notes, the hotels offered the CCP a way to "convey a highly visible sense of progress and improvement without actually lessening the party's overall position of power."<sup>23</sup> But this was not an easy choice and the CCP and the FSB could not simply account for this through absorbing western architectural and design standards. Here Gilbert and Lo's unique approach that not only brought international design standards into China but also proposed to engage and develop local industry offered a good alternative. According to Roskam, the concern was that "one foreign substance could not be absorbed without the other, necessitating the search for some new architectural language that could better compartmentalize these value conflicts."<sup>24</sup> Gilbert and Lo's alternative typifies a design method described by Roskam as "negotiat[ing] between two vastly different political economic systems while camouflaging the cynical intertwining of capitalist and communist sensibilities taking place within the building."<sup>25</sup>

26. Alan Gilbert, "International Hotel Interior Design." *Asian Architect and Builder – Supplement*. November 1979, 24.

27. "Interior Design for Beijing Hotels," *Ta Kung Pa*, 1980, 2.

The first projects involved the design of two Beijing hotels – the 670 room Minzu Hotel, and the 700 room Xiyuan Hotel. Though much of the renovation and upgrade work on these hotels concerned introducing climatic control to the standards required for international business guests, great care was taken in the refurbishment of guest rooms and public spaces to interweave local design elements with international influences. AGA surveyed sixteen factories in Beijing, Tientsin and Shanghai, in an attempt to obtain local production of the required textiles, furniture and fittings (local work schedules prohibited complete use of local manufacture and many components had to be imported). Gilbert defined his aesthetic goal on the project as an interpretation of Chinese motifs without descending into 'Chinoiserie'<sup>26</sup> – though he simultaneously claimed to want to 'avoid westernisation'.<sup>27</sup> In the Minzu Hotel, where a complete prototype room was constructed for the benefit of local construction staff to observe, local timbers and traditional Chinese textile patterns were used.



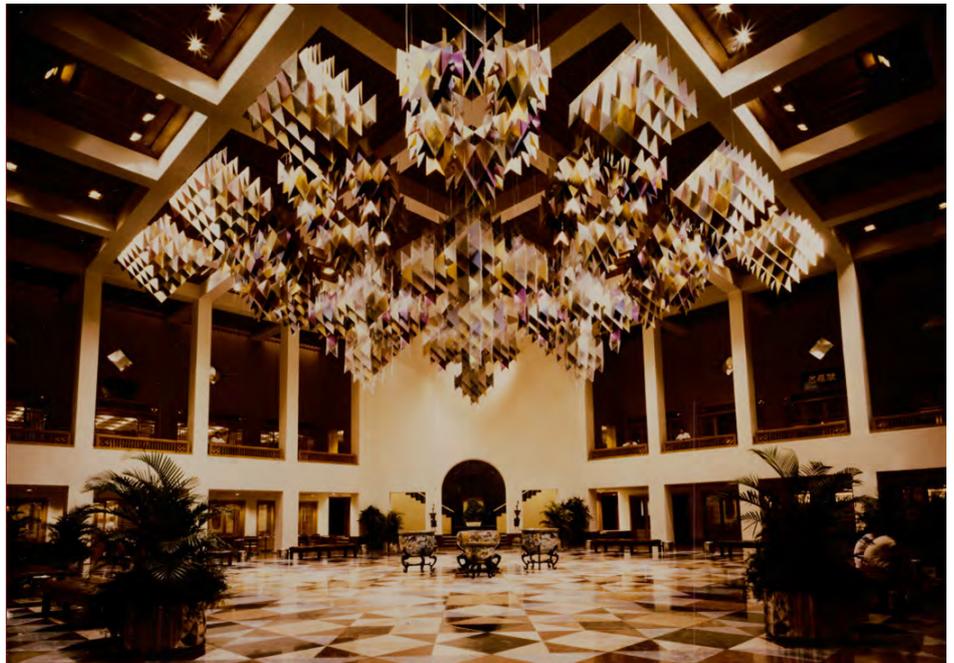
Minzu hotel design for cocktail lounge (L) and Xiyuan hotel colour board (R)  
Prospectus for Alan Gilbert and Associates, c. 1988 (Source: Alan Gilbert Archive)

28. "Beijing's Xiyuan Hotel: First class all the way." *Building Journal Hong Kong*, December 1984, 67.

29. "Beijing's Xiyuan Hotel: First class all the way," 67.

30. "Alan Gilbert, 'A hotel designer's experience in China'." *Building Journal Hong Kong*, February 1983, 35.

This integration of traditional and modern elements is best illustrated through the foyer of the Xiyuan Hotel, for which Gilbert commissioned Sydney-based sculptor Michel Santry to install a dominating ceiling sculpture consisting of square aluminium tubes clustered in tetrahedral groups, anodised in various shimmering hues.<sup>28</sup> This glittering, reflective structure, similar to that commissioned from Santry by the Arts Centre Melbourne for the foyer of its concert hall in 1981 ('Arcturus'), mirrored a geometrically patterned floor, consisting of Chinese marble arranged according to the "Five Colour Map Theory," a Chinese mathematical theory showing that using a maximum of five colours, each tile can be placed so that no adjacent tiles are the same colour.<sup>29</sup> Elements of Chinese 'geomancy', a philosophy of relating a building to the natural and supernatural world, were incorporated at the suggestion of the First Services Bureau and other local contributing professionals. Gilbert describes the unique working environment on the project, where decisions were made democratically at meetings of up to between 43 and 151, including hotel staff – succinct comments were offered by Gilbert's driver.<sup>30</sup>



Lobby, Xiyuan Hotel, Beijing, completed 1984, interiors by AGA with sculpture by Michel Santry (Source: Alan Gilbert archive)

31. Alan Gilbert, "A Hotel designer's experience in China," 42.

Gilbert credits the receptiveness of the First Services Bureau staff to events on his research trip of 1979, where he was shown murals recently installed in meeting rooms and public areas of the new Beijing International Airport. The dialogue over these murals had led Gilbert and First Services Bureau staff to openly discuss the purely aesthetic aspects of the hotel fit-out project, clearing the path for the inclusion of the Santry work in the Xiyuan foyer.<sup>31</sup>



Sarah Lo, Alan Gilbert, Chris Carlisle and Peter Muller, c. 1970s.  
(Source: Alan Gilbert archive)

The work that Gilbert and Lo went on to complete on the two hotels in Beijing aimed to create a sense of opulence, cultural specificity and international comfort required to achieve the complex aims of reform era China – that of the aesthetics of progress and economic openness to the west, without rescinding control. But the ethnographic research and design method modelled by AGA in the production of the Minzu and Xiyuan hotel interiors emerged from the unique experiences of being an expatriate and a part of the emerging transnational network of intellectuals and designers in Asia.

This ethnographic approach to design was clearly defined through the 1978 establishment of a unique consultancy – Regional Design and Research (RDR) – which included Adrian Snodgrass (research), Peter Muller (architecture) Alan Gilbert (interior design), and Chris Carlisle (management). Building on each individual's deep travels and studies across Asia, the group was established to offer services based around the "ethno-technological" survey of design as a cultural practice and product. In addition to research-based architectural and interior design work, RDR also produced reports on indigenous building techniques and crafts, to explore how such technology could be sustained and

32. Adrian Snodgrass worked for Dale and Patricia Keller of Hong Kong preparing Government reports on the arts and handcrafts of Ceylon and Bali, as well as researching the remote cultures of Indonesia, alongside his wife Judith, for a documentary by photographer and filmmaker Brian Brake.

managed.<sup>32</sup> Participating in the emerging intra-Asian flow of capital, ideas and cultural references, RDR offered a new approach to regional integration fuelled by the fluid notions of pilgrimage, self-understanding and knowledge production. In setting up RDR, those involved were shifting their focus away from Asia as a site of pilgrimage, integrating themselves within the regional culture as cultural experts and advisors, and creating a framework for cross-cultural exchange.

## Conclusion

As part of a broader research project focused on the history of architects from New South Wales travelling to Asia in the mid-20th century, this case study of Alan Gilbert has opened the doors for further investigation of Asia's influence on the personal networks and architectural discourse of this period. Research on this paper has also provided an opportunity to access, catalogue and analyse the private archives of both Alan Gilbert and Sarah Lo, as well as others in their network. But more specifically the narrative constructed above has established a framework that will continue to define the larger study.

By tracing the story of Alan Gilbert's travels, where disillusionment with the stultifying post-WWII architectural atmosphere of Sydney met the 'rapture' of an awakening awareness of nearby Asia, to the establishment of AGA in Hong Kong in 1975 and the transnational RDR Group in 1978 applying an ethnographic approach to design, we have created a new framework to understand the multifaceted nature of the journeys taken by these Australian architects. Here Badone's description of pilgrimage, tourism and ethnography, and the blurred boundaries between these categories will continue to be a useful tool to better understand the implications of these experiences for the individuals and their intellectual networks, in Asia and back home in Australia. Further work will explore the desire of 'self-transcendence' described by Badone and how this was achieved through these architects' studies, work and travel throughout Asia and the development of personal and intellectual networks. In addition, building on Roskam's work on the specific anxieties and desires of Reform Era China's hotel projects through the two specific examples, we are able to better situate and understand the potentials of the ethnographic design method formulated and refined by Gilbert and Lo through their intraregional interiors work throughout Asia from the 1960s to 1980s.

Further research in this area will help intersect the story of Alan Gilbert with Australian architects like Adrian Snodgrass, Bert Read, Peter Muller and others who also travelled to Asia at the same time and were part of a broader network of individuals from NSW. The intellectual history that will emerge will not only help us understand Australia's ongoing cultural relationship with Asia, but also provide a framework to understand the evolution of Australia's own material culture. Here we believe that the 'ethno-technological' method of design research proposed by RDR and close analysis of the role and modes of travel will prove to be valuable anchors for our understanding of these particular histories and their enduring legacy.

# Foreign Aid and Modern Architecture in Indonesia: Intersecting Cold War Relations and Funding for the Fourth Asian Games, 1962

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## Keywords

Modern Architecture  
Asian Games IV  
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Foreign Aid

## Abstract

Between 1950 and 1965, foreign aid played a crucial role within the Indonesian economy. With the Cold War as a backdrop, this aid came from both Western and Eastern blocs with the intention of drawing Indonesia into their spheres of influence. The aid also played a crucial role in the development of architecture in the archipelago. A major endeavour within this period was the construction of buildings and venues for the Fourth Asian Games to be held in Jakarta in 1962 which involved a new stadium, an international-standard hotel and a large by-pass road around part of the city. Financial and technical aid from the Soviet Union, Japan and the United States was obtained to realise these projects. All the while, the Asian Games, along with the modern structures constructed for the event, provided Indonesia an opportunity to advance its own agenda, which was to construct a sense of self-confidence and national pride and to situate itself as a leader among decolonised nations. Nevertheless, foreign financial and technical aid played an important role in the realisation of these projects. The availability of foreign aid was intrinsically tied to President Ahmad Sukarno's ability to play the interests of all sides.

This paper examines plans and preparations for the Fourth Asian Games as a case of engagement between the two Cold War blocs with Indonesia in the middle. By focusing on the key building projects for the Games, the paper reveals the role of foreign aid in the development of architecture in Indonesia during a critical period in its post-war and post-independence formation. This development took place through the interaction of different interests—those of the Western Bloc, the Eastern Bloc, and Indonesia—in the midst of the Cold War and decolonisation period. A glimpse into the interaction may suggest a case of competition. However, examination of the three projects indicates that it was a case of multipolar collaboration instead.

## Introduction

1. Victor Cha, "The Asian Games and Diplomacy in Asia: Korea –China –Russia," *International Journal of the History of Sport* 30, no. 10 (2013): 1176-1187.

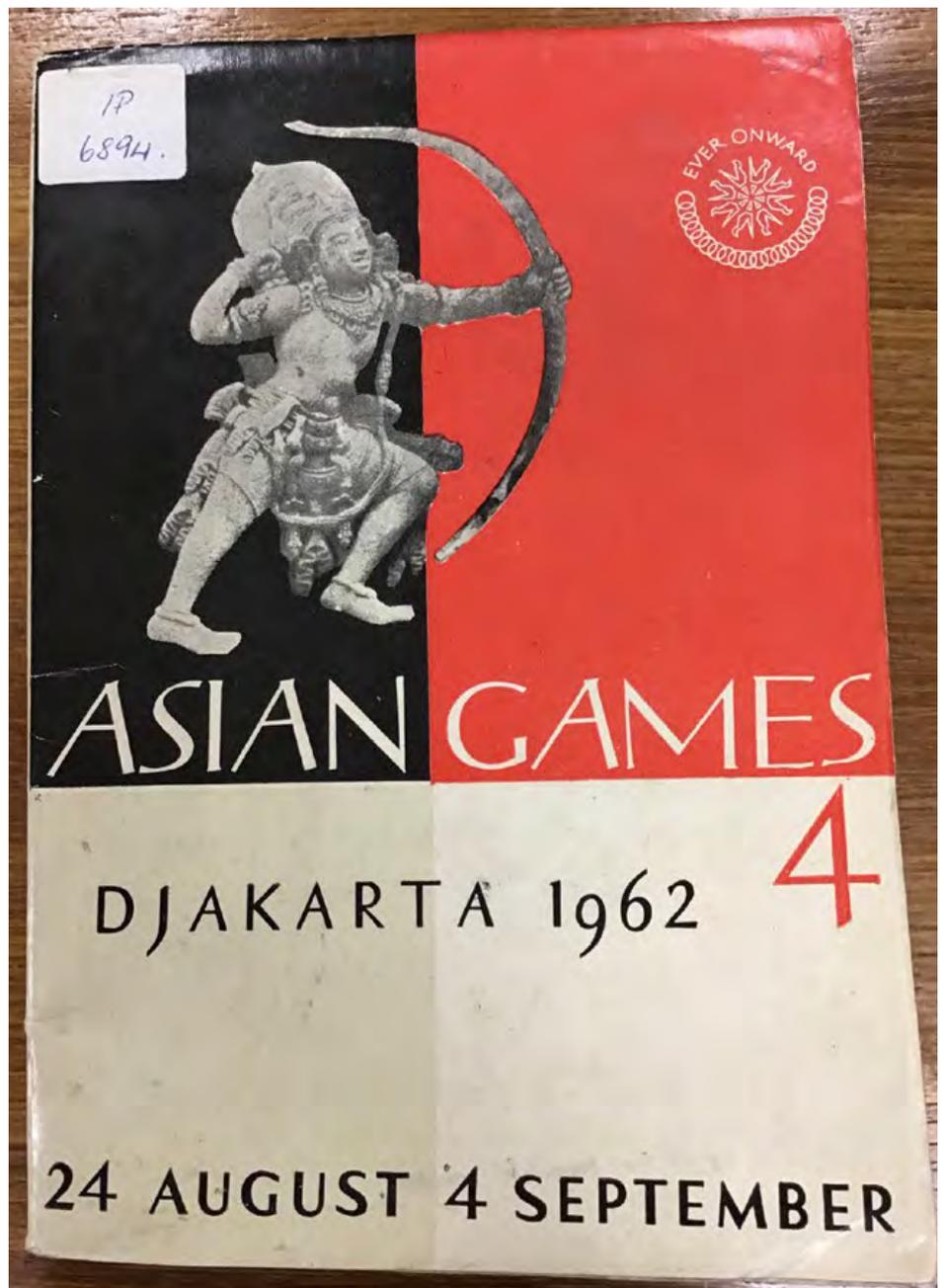
2. Robin Hartanto, "The Shapes of Sport Diplomacy: Gelora Bung Karno, Jakarta, and the Fourth Asian Games," *Modern Living in Southeast Asia*, the 4th mASEANa Conference, Jakarta, January 18-20, 2018, 26.

3. G.W. Holliday, foreword for *Asian Games 4, Djakarta 1962: a Souvenir Booklet* (Djakarta: Shell, 1962), 10.

The setting of this paper is Jakarta, where the Asian Games IV was held in August 1962. The Games, which had previously been hosted in New Delhi (1951), Manila (1954), and Tokyo (1958), was more than a sporting event. Victor Cha, a historian, notes that the Asian Games provided a symbolic value which, to Asian countries, acted as a tool necessary for diplomacy.<sup>1</sup> The diplomatic opportunity for Indonesia however was marred by controversy, as Israeli and Taiwanese contingents were excluded due to pressure from Beijing and Arab countries. Beijing considered Taiwan as a breakaway territory, while Arab countries did not recognise the sovereignty of Israel.

The opening ceremony of the Fourth Asian Games was held at the main stadium at the newly-built Sports Venue. With its contemporary design and monumental scale, the Sport Venue itself expressed in concrete form the desire to project an international image for Indonesia as a nation growing in strength and confidence.<sup>2</sup>

The Sports Venue was built in the midst of the Cold War with financial and technical aid from the Soviet Union. However, this does not mean that Indonesia was on the same side as the Soviet Union. This is evident in the official booklet issued for the Games, which contained programmes, a map of the Sport Venue and tourist information on Jakarta and Bali. The booklet was published by the Anglo-Dutch oil company, Shell. In his foreword, Chairman of the Board of Shell Indonesia, G. W. Holliday, wrote that the company he represented was "an ardent believer in international understanding and cooperation" and hoped that the booklet would "help to acquaint the visitors with the country."<sup>3</sup>



The official booklet for the Asian Games IV, 1962.  
Source: National Library of Australia

The Sports Venue was not the only structure erected for the Games. Other projects were the Athletes' Village, The Press House, Hotel Indonesia, the broadening of Thamrin-Sudirman Streets and the construction of the Djakarta Bypass Road. This paper focuses on three of these projects—the Sports Venue, Hotel Indonesia and the Djakarta Bypass Road—as these projects were made possible by foreign financial and technical aid.

While the Sports Venue was built with Soviet aid, Hotel Indonesia was built with Japanese aid and the Djakarta Bypass Road was constructed with the help of American aid. This latter project was important not only to regulate traffic during the Asian Games but also to implement a 1957 plan for Jakarta's eastward expansion.

This paper examines the role of foreign aid in the development of modern architecture in post-independence Indonesia by focusing on the three construction projects related to the Asian Games. It reveals how the encounter between the interests of Indonesia and countries within the Eastern Bloc and Western Bloc helped develop the architecture of the young nation. It proposes that this encounter can be considered as one of multipolar collaboration.

## Foreign Aid for Indonesia

4. Thee Kian Wee, *Indonesia's Economy since Independence* (Singapore: Institute of Southeast Asian Studies, 2012), 38-62.

5. By 1951 the Indonesian economy was still dominated by several Dutch companies. Through the policy, the Indonesian government wanted to put the economy under Indonesian control. See Thee Kian Wee, "Sumitro Djohadikusumo," in *Recollections: The Indonesian Economy, 1950s – 1990s*, ed. Thee Kian Wee (Singapore and Canberra: Institute of Southeast Asian Studies and Research School of Pacific and Asian Studies, 2003), 59.

6. Ministry of Economic Affairs, *Urgency Industrialization Program* (Jakarta, Ministry of Economic Affairs, March 1951), 19. See also John O. Sutter, "Indonesianisasi: Politics in a Changing Economy, 1940-1955," Vol. III, Data Paper no. 36-III (Ithaca: Southeast Asia Program, Department of Far Eastern Studies, Cornell University, April 1959), 773.

7. Ministry of Economic Affairs, *Urgency Industrialization Program*, 20. See also John O. Sutter, "Indonesianisasi: Politics in a Changing Economy, 1940-1955," 776.

8. Archive of the Republic of Indonesia, Dewan Asian Games Indonesia, Biro III Lapangan/Bangunan, Laporan ke-12, (Jakarta: July 6, 1960), Sekretariat Negara 1945 – 1973, Archive no. 1715.

Indonesia proclaimed its independence in 1945, while the transfer of sovereignty took place in December 1949. Although some nationalist leaders saw capitalism as closely related to colonialism, Indonesia did not adopt a socialist economic system. Thee Kian Wee, a historian of economics, discusses two different views on economics in post-independence Indonesia: some wanted to have the country's entire economic activity within Indonesian hands, while others tolerated the presence of some foreign ownership.<sup>4</sup> However, neither of the two sides had problems with private enterprises, which were present in Indonesia. The more important issue for both sides was the dire economic condition of the country. This prompted the government to formulate an economic policy in 1951, the main intention of which was the 'Indonesianisation' of the economic sector, as Indonesia's economy was still dominated by foreign interests. Nonetheless, the policy was not completely against foreign involvement in the economy, as foreign investment was also sought.<sup>5</sup> Industrialisation was a prominent part of the policy which identified certain industries considered to be strategically important to the Indonesian state and which therefore needed to be placed under State ownership and management.<sup>6</sup>

Industries considered as strategic included cement production which involved the creation of a new cement plant in Gresik, East Java.<sup>7</sup> Evidence suggests that the Gresik cement plant had an important role in the supply of cement for the construction of a number of important buildings commissioned by Sukarno's government. A progress report on the construction of the Sports Venue by the Board of Asian Games Indonesia tells of the use of cement from the Gresik plant (supplemented with Soviet cement) for the project.<sup>8</sup> Cement from Gresik may also have been used for Hotel Indonesia and the Jakarta Bypass Road.

Economic conditions in Indonesia meant that there was not enough money and expertise to establish the industries planned within the 1951 economic policy. Foreign aid was necessary. While Indonesia was looking for foreign aid to assist its economic recovery, it found itself in the middle of the Cold War. By hosting the Afro-Asian Conference in Bandung in 1955, Indonesia established its position as neutral country. This position was reinforced in 1961 as Indonesia became a co-founder of the Non-Aligned Movement, along with Yugoslavia, India, Egypt and Ghana. The involvement of Indonesia in the Afro-Asian Conference and the establishment of Non-Aligned Movement reinforced its position of neutrality.

9. Regarding Soviet interest on Indonesia during the Cold War, see Larisa M. Efimova, "Stalin and the Revival of the Communist Party of Indonesia," *Cold War History* 5, no. 1 (2005): 107-120, <https://doi.org/10.1080/1468274042000283162>. As for the United States' interest on Indonesia, see "Foreign Aid Program: Compilation of Studies and Surveys," presented by Senator Theodore Francis Green, *The Special Committee to Study the Foreign Aid Program* (Washington, United States Senate, July 1957), 1461-1464. This report started with the premise that economic aid was intended to keep away countries from Soviet sphere of influence, *ibid.*, 6-8.

10. Taomo Zhou, *Migration in the Time of Revolution: China, Indonesia, and the Cold War*, (Ithaca: Cornell University Press, 2019), 146.

11. For Indian case, see David C. Engerman, *The Price of Aid: The Economic Cold War in India*, (Cambridge, Massachusetts: Harvard University Press, 2018), 1-11. On Ethiopian case, see Ayala Levin, "Haile Selassie's Imperial Modernity," *Journal of the Society of Architectural Historians* 75, no. 4, (Dec. 2016), 447-468.

12. Donald Hindley, "Foreign Aid to Indonesia and Its Political Implications," *Pacific Affairs* 36, no. 2 (1963), 109.

13. "Tiga Persetujuan Bersama RI-URSS Ditandatangani di Bogor, Kredit Baru 250,000,000 Dollar," *Harian Rakjat*, February 29, 1960, 1.

14. See Law Number 35, Year 1954 on *Endorsement of the Additional Agreement between the Republic of Indonesia and Export-Import Bank of Washington* (Jakarta, Republic of Indonesia, December 3, 1954). See also "New Growth at Gresik Cement Plant," *The Em-Kayan: Magazine of M-K* (Boise: Morrison-Knudsen Company, Inc., December 1961), 6.

15. The site clearance for the Sports Venue involved moving local inhabitants to another part of southern Jakarta. The activity of moving the locals was reported in "Bantuan Angkatan Darat dalam Rangka Pembangunan Proyek Asian Games IV yang merupakan Proyek Nasional yang Sangat Vital," *Madjalah Sedjarah Militer Angkatan Darat SA-12* (Bandung: Pusat Sedjarah Militer Angkatan Darat, 1962), 7-8.

16. Ragna Boden, "Cold War Economics: Soviet Aid to Indonesia," *Journal of Cold War Studies* 10, no. 3 (2008), 115. See also Łukasz Stanek, *Architecture in Global Socialism: Eastern Europe, West Africa, and the Middle East in the Cold War* (Princeton: Princeton University Press, 2020), 8-11.

17. Donald Hindley, "Foreign Aid to Indonesia and Its Political Implications," 111.

Nevertheless, Indonesia was a contested country. Both Moscow and Washington wanted to pull Indonesia into their sphere of influence.<sup>9</sup> Foreign aid given to Indonesia was considered a means to build relations and exercise this influence. In this situation, as historian Taomo Zhou has noted, Indonesia chose to mimic Yugoslavia: by playing the competition between the two blocs in order to gain the most for its own interests.<sup>10</sup> India and Ethiopia also did the same.<sup>11</sup>

Between 1950 and 1961, Indonesia received USD 544.9 million in aid from the United States.<sup>12</sup> In 1960 the Soviet Union made available USD 250 million of aid to Indonesia.<sup>13</sup> When it came to the industrialisation effort, the Gresik cement plant was realised due to the availability of American financial and technical aid.<sup>14</sup>

Indonesia did not only use foreign aid for industrialisation purposes. It was also deployed for the architectural and infrastructural development. While Indonesia asked Moscow to help realise the Sport Venue, it also requested Tokyo to help build Hotel Indonesia and Washington for the construction of the Djakarta Bypass Road. This would suggest Indonesia played the competition between the Western Bloc and the Eastern Blocs. Without dismissing the existence of competition, limiting the study to only a matter of competition would prevent a more comprehensive understanding of the role of foreign aid in the development of modern architecture in post-war Indonesia. Foreign aid can also be considered as a conduit for collaboration.

## The Sports Venue

When Jakarta was chosen in May 1958 to host the Asian Games in 1962 existing sporting facilities within the city were deemed to be below Olympic standard. A new sports venue was needed. It was decided to construct this venue within the Senayan District in southern Jakarta. The district was chosen as it still had a sufficient area for such a complex, and it was close to the southern end of Sudirman Street, a part of the Thamrin-Sudirman axis which formed Jakarta's main thoroughfare.<sup>15</sup> Due to the lack of financial resources and expertise, Indonesia needed foreign assistance in its endeavour to build a modern sports venue, which would not only consist of a large stadium but also other buildings and facilities.

Planning for the Sports Venue coincided with Moscow's attempt to replace the United States as Indonesia's main foreign donor by offering aid to Indonesia to the amount of USD 250 million. Moscow wanted the aid to be used for more practical purposes, such as building infrastructure and new industries. However, Sukarno managed to persuade Nikita Khrushchev to provide financial and technical aid for the construction of the Sports Venue in spite of Khrushchev's initial reluctance.<sup>16</sup> After Khrushchev agreed to this, Moscow provided financial aid of USD 12.5 million plus technical aid for the Sport Venue.<sup>17</sup>

Soviet technical aid came in the form of the involvement of Technoexport, a team of Soviet architects and engineers. On 12 October 1959, two Soviet experts arrived in Jakarta to assist with the planning of the Sport Venue. They were R. I. Semerdjiev, who became

18. "Bantuan Angkatan Darat dalam Rangka Pembangunan Proyek Asian Games IV yang merupakan Proyek Nasional yang Sangat Vital," 9.

19. "Bantuan Angkatan Darat dalam Rangka Pembangunan Proyek Asian Games IV yang merupakan Proyek Nasional yang Sangat Vital," 46-52.

20. A newspaper report mentioned the names of engineers who were pivotal in completing the Sports Venue's main stadium. They were Soviet engineers, Tyattenko, Karanian, Spirin and Cholodiev, as well as Indonesian engineers, Wartaman, Dendeng, Muljadi, Suhartojo, Wonargo, Suroso and others. See "Introducing the Sports Venue," *Harian Rakjat*, Saturday, August 25, 1962, 2.

21. Archive of the Republic of Indonesia, Komando Urusan Pembangunan Asian Games, Surat tentang Pengiriman Prof. Ir. Rooseno ke Moskow, (Djakarta, February 1, 1961), Sekretariat Negara, 1945 – 1973, Archive no. 1867.

the project's chief architect, and L. A. Moromtsev, a senior engineer.<sup>18</sup> Semerdjiev and Moromtsev worked on the Sports Venue with other Soviet experts connected to Technoexport. Not only did the Soviets provide money and expertise for the construction of the Sports Venue, they also sent steel, glass and electrical pipes, as well as welding equipment.<sup>19</sup> The Soviet Union also sent cement to augment supply from the Gresik plant. In addition to Soviet experts, some Indonesians with expertise were also involved in the project.<sup>20</sup> One of these was the technical advisor to the Board of Asian Games Indonesia, Rooseno Surjodihadikusumo.<sup>21</sup>



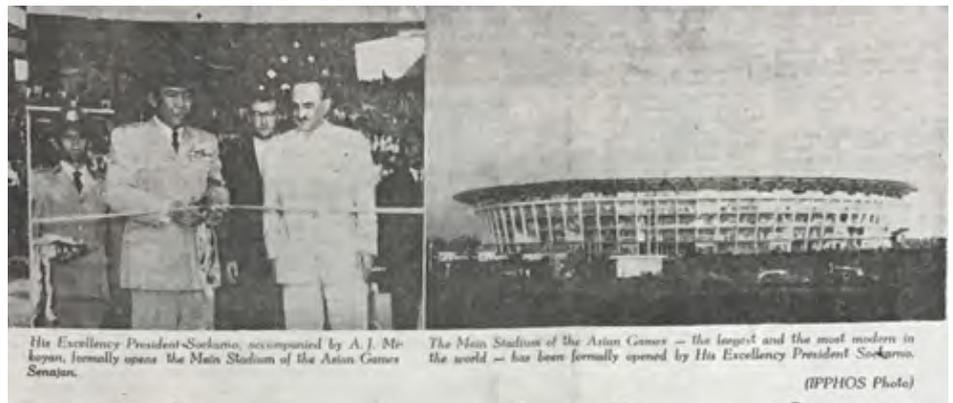
Sukarno (pointing his finger), Semerdjiev (in dark suit) and the model of the Sports Venue (left), and the Sports Venue's main stadium under construction (right).  
Source: *Asian Games 4, Djakarta 1962: a Souvenir Booklet* (Djakarta: Shell, 1962), 12-13.

22. *IVth Asian Games Bulletin: Progress Report Covering Plans and Preparations for the IVth Asian Games* (Djakarta: The Organizing Committee IVth Asian Games, 1960), 3-4.

Construction of the Sports Venue took place between 1960 and 1962 and consisted of several of buildings that would house different sporting events. The main building was the Main Stadium with an all-covered seating capacity for up to 100,000 people. Other buildings included the Sports Hall (where badminton and basketball matches would be held) with a 10,000 seating capacity, the Swimming Stadium, also with a 10,000 seating capacity, Tennis Stadium with a 5,000 seating capacity, Athletics and Hockey Stadium with a 20,000 seating capacity, an open air Volleyball Court, and a shooting range. Events, such as sailing, would also be held at other venues.<sup>22</sup>

23. Ahmad Sukarno, "Speech at the Presidential Palace on September 2, 1966," (Djakarta: Secretariat of State, Republic of Indonesia, 1966), 16.

Buildings at the Sports Venue were made of concrete. The roofs of the Main Stadium and the Sports Hall were of steel construction and their foundations and walls were concrete. Concrete and steel, materials associated with modern architecture, were preferred by Sukarno. In one of his speeches pertaining to another monumental building (the Istiqlal Mosque), Sukarno mentioned concrete and steel as materials that could represent the desired free and modern Indonesian image.<sup>23</sup>



Photographs of the inauguration of the Sports Venue's main stadium by Sukarno and Soviet Deputy Premier, Anastas Mikoyan.

Source: *The Indonesian Herald*, July 23, 1962, 1.

## Hotel Indonesia

24. *Japan Report* 7, no. 5 (New York: Japan Information Center, Consulate General of Japan, March 25, 1961), 5.

25. Masashi Nishihara, *The Japanese and Sukarno's Indonesia: Tokyo-Jakarta Relations, 1951-1966* (Kyoto: The Center for Southeast Asian Studies, Kyoto University, 1976), 87.

26. Masashi Nishihara, *The Japanese and Sukarno's Indonesia: Tokyo-Jakarta Relations, 1951-1966*, 104.

27. *Japan Report* 7, No. 5, 5.

28. Hilton Hotel in Istanbul was designed by Skidmore, Owings and Merrill (SOM) and financed by the Economic Cooperation Administration (ECA) which administered the Marshall Plan. See Annabel Jane Wharton, *Building the Cold War: Hilton International Hotels and Modern Architecture* (Chicago: University of Chicago Press, 2001), 29-34, 37.

29. Archive of the Republic of Indonesia, Bank Industri Negara, Development Loan Fund Application: Revised Proposal for Hotel Indonesia Djakarta Projects (Djakarta, June 19, 1959), Sekretariat Negara KPM, 1950 - 1959 Vol. II, Archive no. 1450.

As Indonesia lacked the financial resources to fund the construction of a large international standard hotel, capital for the hotel's construction came in the form of a Japanese loan of USD 8 million.<sup>24</sup> This loan was attached to the war reparation payment from Japan to Indonesia.<sup>25</sup> An Indonesian state-owned construction company, the PN. Pembangunan Perumahan (PN. PP), acted as the main contractor for the project. The Japanese loan seems to have a condition attached to it: that Japanese companies be involved in the construction of the hotel. These companies were Kinoshita, Taisei Construction and Tonichi.<sup>26</sup> Their involvement was to provide expertise. Taisei also provided building materials and equipment unavailable in Indonesia at that time.<sup>27</sup> A New York-based, Danish-American architect couple, Abel and Wendy Sorensen, were commissioned to design the hotel and Julius Berger, a West German engineer, worked on the structural, electrical and mechanical engineering. Berger had previously been involved in the Hilton Hotel project in Istanbul.<sup>28</sup> An Indonesian expert on concrete, Rooseno Surjodihadikusumo, was also hired as a consultant for the project.<sup>29</sup>



Hotel Indonesia in 1962, when it was almost completed. Source: Archive of the Republic of Indonesia, Department of Information, Archive no. 62-3508.

30. "President Inspects Progress of Hotel Indonesia," *The Indonesian Herald*, February 16, 1962, 1.

31. "Personnel of Hotel Indonesia," *The Indonesian Herald*, December 16, 1961, 2.

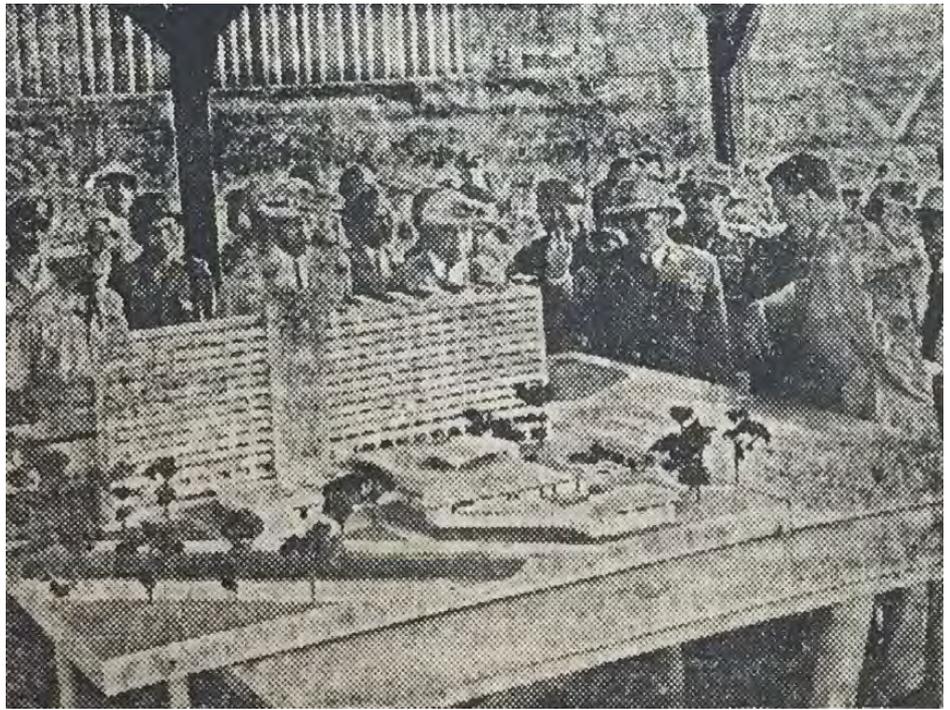
32. "President Sukarno to Inaugurate Hotel Indonesia August 5," *The Indonesian Herald*, June 9, 1962, 1.

Hotel Indonesia was intended to portray independent Indonesia's modern and optimistic image. Its role in image projection was so important that President Sukarno himself inspected the construction progress of the hotel, and took special notice of the hotel's restaurant hall and the interior of its rooms.<sup>30</sup> Not only were its modernist architectural features to project an image of optimism, the hotel was also to provide international standard services. In order to ensure such standards were achieved, hotel staff were sent to Hong Kong and the United States for training.<sup>31</sup> Furthermore, Hotel Indonesia was administered by an American manager affiliated with the Intercontinental Hotel Corporation (a sister company of the Pan American Airways company) who had previously handled Hotel Nacional in Havana.<sup>32</sup>

33. The original phrase is "*Het is het grootste en modernste hotel van Zuid-Oost-Azië.*" Photo caption, *Leeuwarder Courant* (September 16, 1962), 17.

34. "Indonesia Woos the Tourists," *The Canberra Times*, August 20, 1962, 12.

A Dutch newspaper described the 14-storey Hotel Indonesia as "the largest and the most modern hotel in South East Asia."<sup>33</sup> An Australian newspaper reported that the hotel featured a hall, named the Ramayana Hall—after the ancient Ramayana epic—with its hyperbolic concrete roof. In addition to its 420 air-conditioned rooms, the hotel boasted five restaurants, a club, a shopping arcade and swimming pool.<sup>34</sup>



Sukarno (in pith hat) inspecting a maquette of Hotel Indonesia with Abel Sorensen (standing on the right). Source: *Times of Indonesia* (August 27, 1960), 1.

## The Bypass Road

35. *Third Progress Report* (Djakarta: The Organizing Committee for the IVth Asian Games, April 1962), 7.

36. *Third Progress Report to the Members of the Council of the Asian Games Federation by the Organizing Committee for the IVth Asian Games Djakarta 1962* (Djakarta: The Organizing Committee IVth Asian Games, 1962), 7.

37. Kenneth Watts, "Urban Planning and Development, 1948 – 1989: a Personal Memoir," *Habitat International* 16, no. 2 (1992), 13-35.

38. Kenneth Watts, "The Planning of Greater Djakarta: a Case Study of Regional Planning," *Ekistics* 10, no. 62 (December 1960), 402. See also, Robert W. Oliver, "Greater Djakarta, the Capital City of Indonesia," Economic Staff Working Paper No. 105, the International Bank for Reconstruction and Development, International Development Association (April 21, 1971), 25-26.

39. Kemas Ridwan Kurniawan, Christopher Silver, M. Nanda Widyarta and Elita Nuraeny. "Pulo Mas: Jakarta's Failed Housing Experiment for the Masses," *Planning Perspectives* 36, no.2 (2021), 285-308.

40. "Rapid Work Opens Djakarta Bypass," *The Em-Kayan: Magazine of M-K* (Boise: Morrison-Knudsen Company, Inc., September 1962), 6-8.

41. "Rapid Work Opens Djakarta Bypass," 6.

42. On the role of Morrison-Knudsen International in international projects financed by Washington during the Cold War era, see James David Durand, *Building the Modern World: Morrison-Knudsen Construction Company*, MA thesis submitted to Boise State University (December 2013).

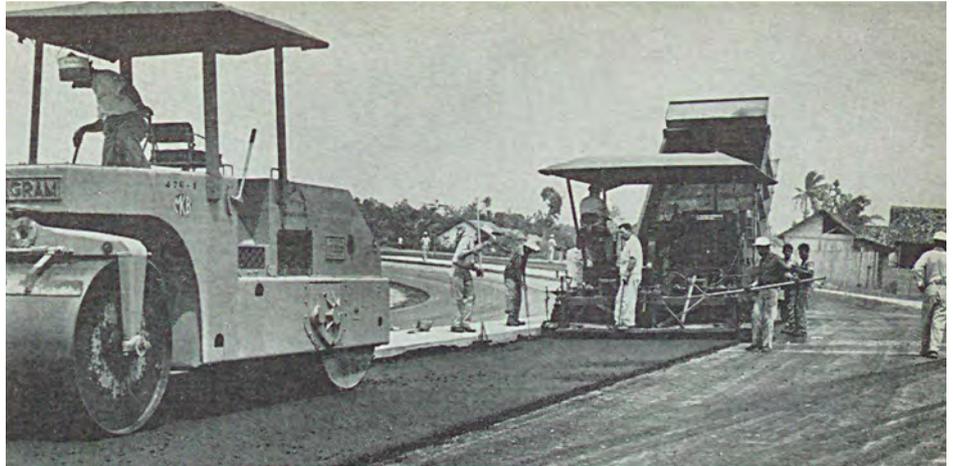
Another project pertaining to the Fourth Asian Games was the 7.9 kilometre-long Djakarta Bypass Road.<sup>35</sup> This was not an architectural project, rather a major piece of city infrastructure. The aim was to enable alternative traffic access to and from the Tanjung Priok Seaport. This would serve to divert trucks from the main roads of Jakarta and therefore ease traffic while preventing congestion during the Asian Games.<sup>36</sup>

The Djakarta Outline Plan had been issued in 1957 and was part of a United Nations-backed project to develop a city plan for Jakarta involving the British city planner Kenneth Watts who had been involved in the Master Plan for Singapore from 1952 to 1955.<sup>37</sup> The 1957 plan prescribed an eastward expansion for Jakarta through the construction of new roads.<sup>38</sup> The Djakarta Bypass Road would act as a trigger for this expansion as the road would provide traffic access east of the city. The construction of the road would also support the United Nations-sponsored and Danish-planned housing area at Pulo Mas. This project was intended to supply housing for Jakarta's middle-lower class who needed better dwellings.<sup>39</sup> Although the Djakarta Bypass Road also pertained to the Djakarta Outline Plan, it was instigated in the early 1960s due to the Asian Games.

The bypass road was a big project made possible by American financial aid provided by the United States Agency for International Development (USAID).<sup>40</sup> In addition, two American companies were also involved in its construction: the Morrison-Knudsen International and Bechtel International.<sup>41</sup> Morrison-Knudsen International was a company involved in various American-assisted construction projects globally during the Cold War.<sup>42</sup> More than USD 3 million worth of construction materials and

43. "Rapid Work Opens Djakarta Bypass," 9. See also "Bypass Cuts Djakarta Traffic Clog," *The Em-Kayan: Magazine of M-K* (Boise: Morrison-Knudsen Company, Inc., October 1963), 9.

equipment were brought in from the United States, while around 2,200 Indonesian workers toiled 24 hours a day and seven days a week under the supervision of the Americans.<sup>43</sup>



Construction of the Djakarta Bypass Road. Source: *The Em-Kayan: Magazine of "M.K."* (Boise: Morrison-Knudsen Company, Inc., October 1963) 9.



A small part of the Djakarta Bypass Road. Source: *The Em-Kayan: Magazine of "M.K."* (Boise: Morrison-Knudsen Company, Inc., October 1963) 8.

## Conclusion

44. "Minister Prijono on Hotel Indonesia and Asian Games Complex," *The Indonesian Herald*, July 20, 1962, 1.

Commenting on the buildings conceived for the Asian Games IV, particularly Hotel Indonesia and the Sports Venue, the Minister of Basic Education and Culture, Dr. Prijono (who went by one name) said "[i]t is hoped that our modern culture in the widest sense of term would also have the postulates of a modern culture as defined by Sigmund Freud, namely orderliness, cleanliness and beauty."<sup>44</sup> Prijono, like Sukarno, saw the modern structures of the Asian Games as a means to modernise the Indonesian society.

The three construction projects studied here can be seen as examples of how the Eastern Bloc and the Western Bloc competed to win influence over Indonesia. However, while such competition should not be dismissed, the projects suggest a multipolar collaborative effort

45. The British planner, Kenneth Watts, mentioned the roles of Indonesian planning experts working with him when conceiving plan for Jakarta. He mentioned by names Danunagoro (Jakarta's Director of Public Works), Handinoto (an expert on housing), and Soefaat. See "Urban Planning and Development, 1948 – 1989: a Personal Memoir," 16-17.

instead of a competition. In fact, the involvements of both the Eastern Bloc and the Western Bloc in the preparation of the Games meant that Indonesia did not have to take side. At a glance, the Sports Venue seems to be a solely Soviet endeavour. However, its construction utilised cement supplied by an Indonesian plant which had been established by American financial and technical aid. Financed with a Japanese loan, Hotel Indonesia involved not only Japanese companies but also New York-based architects and West German and American engineering consultants. The Djakarta Bypass Road was made possible by American financial and technical aid with the involvement of two American companies. Nevertheless, the road was not merely an American project. Before Jakarta was even selected to host the Asian Games, the road had been conceived by a British planner who worked under a contract with the United Nations, which provided aid to Indonesia for the planning of the city.<sup>45</sup> While foreign involvement was prominent in all three projects, Indonesians were also involved. Indonesian experts contributed to the Sports Venue and Hotel Indonesia projects. The structural engineer, Roosseno Surjodihadikusumo—a friend of Sukarno since their college years in 1920s—was present in both the Sports Venue and Hotel Indonesia projects. An Indonesian construction company was also involved in the construction of the hotel.

This collaboration involved not only financial aid and experts. Private and state-owned companies—both foreign and Indonesian—took part. The involvement of foreign entities such as Technoexport and the Morrison-Knudsen International and Bechtel International companies indicates that it was not only technical expertise but also the networks of knowledge and discourse they would have brought to the projects and to Indonesia more generally. More research is necessary to discover more about these networks; what they consisted of and the role they played in supporting the endeavours of Sukarno, his government and local enterprise in building modern Indonesia.

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# Designing Post-colonial Domesticity: Positions and Polarities in the Feminine Reception of New Residential Patterns in Modernising East Pakistan and Bangladesh

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## Keywords

Domesticity  
Privacy  
Open-planning  
Bengali Muslim middle class  
Femininity  
Paul Rudolph

## Abstract

When Paul Rudolph was commissioned to design a new university campus for East Pakistan in the mid-1960s, the project was among the first to introduce the expressionist brutalist lexicon of late-modernism into the changing architectural language of postcolonial South and Southeast Asia. Beyond the formal and tectonic ruptures with established colonial-modern norms that these designs represented, they also introduced equally radical challenges to established patterns of domestic space-use. Principles of open-planning and functional zoning employed by Rudolf in the design of academic staff accommodation, for example, evidently reflected a socially progressive approach – in light of the contemporary civil rights movement back in America – to the accommodation of domestic servants within the household of the modern nuclear family. As subsequent residents would recount, however, these same planning principles could have very different and even opposite implications for the privacy and sense of security of Bangladeshi academics and their families.

The paper explores and interprets the post-occupancy experience of living in such novel 'ultra-modern' patterns of a new domesticity in postcolonial Bangladesh, and their reception and adaptation into the evolving norms of everyday residential development over the decades since. Specifically, it examines the reception of and responses to these radically new residential patterns by female members of the evolving modern Bengali Muslim middle class who were becoming progressively more liberal in their outlook and lifestyles, whilst retaining consciousness and respect for the abiding significance in their personal and family lives of traditional cultural practices and religious affinities. Drawing from the case material and methods of an on-going PhD study, the paper will offer a contrapuntal analysis of architectural and ethnological evidence of how the modern Bengali woman negotiates, adapts to and calibrates these received architectural patterns of domesticity whilst simultaneously crafting a reembraced cultural concept of femininity, in a fluid dialogical process of refashioning both space and self.

## Introduction

1. These were the words that Indian Prime Minister Jawaharlal Nehru famously used to applaud the broader conceptual and cultural impact of Le Corbusier's contemporary work in neighbouring India. Jawaharlal Nehru, "Speech at the Seminar and Exhibition of Architecture," New Delhi (1959), in *Jawaharlal Nehru's Speeches*, vol. iv: 1957–1963 (New Delhi, 1964), p. 176.

2. Upon the recommendations of the Commission of National Education and the Food and Agriculture Commission.

3. "About Vision and Mission," Bangladesh Agricultural University (BAU), last updated 2017, <https://www.bau.edu.bd/pages/view>.

When Paul Rudolph was invited, in 1965, to design a new university campus for the Eastern wing of Pakistan, there is little doubt that this leading and increasingly idiosyncratic American exponent of late-modernist brutalism had a mandate to depart radically from precedent. Consistent with the work of other celebrated international architects engaged in the modernisation and development of the region at that same time, a scheme that "hits you on the head, and makes you think"<sup>1</sup> was clearly anticipated.

In the context of post-colonial nation-building, the new campus for the East Pakistan Agricultural University (established in 1961<sup>2</sup>) was to be a domain of higher education and research in agricultural sciences that would serve the principal aim of developing the self-sufficiency and economic potential of an emerging new sub-tropical country whose primary production was still overwhelmingly agricultural. Embodying the 'green revolution' in agricultural technology, the institution was to make 'change-agents' of the scientists and agro-industrialists that would train there and collaborate, with both local and international partners, in rural development.<sup>3</sup> Although the new residential campus was located in the bucolic fringe of regional Mymensingh over a hundred kilometres north of the capital, Dhaka, it was to be an ultra-modern enclave of innovation. Beyond the formal and tectonic ruptures with established colonial-modern architectural norms that Rudolph's designs posited, they also introduced equally radical challenges to established patterns of domestic space-use. Principles of open-planning and functional zoning, for example, were intended to have profound and emancipatory implications for the Bengali academics and their families who were to live on the campus. But, how were these novel patterns actually received?

The present paper seeks to address this question, and consider some of the broader implications of its findings for the critical interpretation of the longer history of the architectural development of post-colonial South Asia after the crisis of the Partition of the subcontinent along religious lines, and the initial surge of nation-building development. The paper arises from an ongoing PhD study that is identifying and critically examining possible relationships over time between architectural change, cultural change, and an impending environmental crisis associated with unsustainable urbanization in present-day Bangladesh. It seeks to ascertain, thereby, how further change in normative patterns of architectural development could potentially contribute to possible alternatives as well.

4. Many scholars have mapped the evolutions in 20th century domesticity in Muslim societies. Pamela Karimi, for instance, explored domesticity in a different context of modernizing Iran through various themes of foreign influences, consumer culture and gender. See Pamela Z. Karimi, *Domesticity and Consumer Culture in Iran: Interior Revolutions of the Modern Era*. (London: Routledge, 2013) and Ela Kaçel, "Information or Culture: The Intellectual Dissemination of Americanism as Common Sense," *New Perspectives on Turkey* 50, Cambridge University Press: (2014): 171–88.

Methodologically, this larger study centres on architectural plans as a tactical device to drive and focus in-depth semi-structured interviews that may potentially reveal a deeper understanding of how cultural expectations and demands may be challenged or even shaped by architecture over time, and vice versa. Through the lenses of the exceptional versus the normative residential architectures to be considered here, this particular paper examines sub-issues of feminist identity and agency as part of the broader case of cultural change and resistance in the context of modernisation.<sup>4</sup>

## Design

### **Rudolph and the BAU commission**

5. Ela Kaçel was yet another scholar to have discussed postwar modern architecture in the Muslim world, especially through her research on modernization in Turkey during the Cold War as a flow of skills and ideas from the United States. For detail, see Aysem Ela Kacel, *Intellectualism and Consumerism: Ideologies, Practices and Criticisms of Common Sense Modernism in Postwar Turkey*. ProQuest Dissertations Publishing, 2009 and Kaçel, "Information or Culture: The Intellectual Dissemination of Americanism".

6. Nils Gilman, *Mandarins of the Future Modernization Theory in Cold War America* (Baltimore: Johns Hopkins University Press, 2003).

7. Daniel Immerwahr, *Thinking Small: The United States and the Lure of Community Development* (Harvard University Press, 2015).

8. Nils Gilman, *Mandarins of the Future Modernization Theory in Cold War America*; Daniel Immerwahr, *Thinking Small: The United States and the Lure of Community Development*; George Rosen, "Western Economists and Eastern Societies: Agents of Change in South Asia, 1950-1970," (1985); Farhan Karim, "Between Self and Citizenship: Doxiadis Associates in Postcolonial Pakistan, 1958-1968," *International Journal of Islamic Architecture* 5, no. 1 (2016): 135-61; Islam, "Foreign Assistance and Economic Development: The Case of Pakistan." *The Economic Journal* 82, no. 325 (1972): 502-30

9. Nurul Islam, "Foreign Assistance and Economic Development: The Case of Pakistan," *The Economic Journal* 82, no. 325 (1972): 502-30.

10. The commission was purportedly offered personally to Rudolph on the advice of Muzahru Islam, doyen of Bangladeshi architectural modernists of the first post-colonial generation, who had been a student in the Masters program at Yale during Rudolph's tenure as chair of that School (1958-64).

11. "East Pakistan Agricultural University (Now Bangladesh Agricultural University)," *Paul Rudolph Heritage Foundation*, last accessed January 15, 2021, <https://www.paulrudolphheritagefoundation.org/196601-east-pakistan>

12. Roberto De Alba, *Paul Rudolph: The Late Work*. (New York: Princeton Architectural Press, 2002); Dixon and Bell, *Paul Rudolph: Inspiration and Process in Architecture*.

13. "East Pakistan Agricultural University (Now Bangladesh Agricultural University)," *Paul Rudolph Heritage Foundation*.

Rudolph was only one of several prominent international architectural and planning consultants, including Louis Kahn, Richard Neutra, and Constantinos Doxiadis, who were active in Pakistan in the 1960s. By this point in his early mid-career, however, Rudolph was rapidly emerging as one of the most original and radical form-givers among American architects of his generation. In the geopolitical context of the Cold War,<sup>5</sup> this was a moment of particularly dynamic institutional development and capacity building,<sup>6</sup> and the preponderance of American consultants on this particular scene was a function of Pakistan's increasingly close diplomatic and military ties with the United States.<sup>7</sup> This had prompted the Pakistani government to seek the assistance of American agencies such as the Ford Foundation, and the US Agency for International Development (USAID), and the US Technical Assistance and Productivity Program (TAP) to secure external consultants<sup>8</sup> where appropriately skilled local professionals, such as architects, were in short supply.<sup>9</sup> There can be little doubt, however, that Rudolph's specific and distinctive design vision was sought-out especially for the East Pakistan Agricultural University commission.<sup>10</sup>

Designed and built between 1965 and 1975, Rudolph's work on the new campus – which would ultimately be renamed Bangladesh Agricultural University (BAU) by the time it was completed in the aftermath of Bangladesh's war of secession from West Pakistan (1971)<sup>11</sup> – followed immediately upon the master-planning and design of a number of other radically unorthodox academic buildings and campuses that he had only recently completed or was still working on at the time. These included The Yale University Art & Architecture Building (1958-64), the Tuskegee Institute and Chapel (1958-69), and his mega-structural campus scheme for the University of Massachusetts at Dartmouth, commenced in 1963.

Among the first of many commissions from the 1960s onward that would sustain patronage for Rudolph's architecture in Asia long after it had fallen out of fashion in America,<sup>12</sup> the BAU campus reflected the confluence of competing rationalist and expressionist tendencies in the structuring of space and mass that defined his mature work stylistically. The scope of the project was substantial (figs. 1). Along with a new master plan for the expansion of the campus, it comprised of designing an auditorium, laboratories, dormitories and staff quarters, as well as recreation facilities.<sup>13</sup> Rudolph's study models for the architecture of the typical academic buildings (figs. 2 & 3) and drawings for the residential staff quarters (figs. 4 & 5) reflected the architect's openly innovative approach to spatial design and construction, experimenting with different construction materials, methods and structural systems, as well as climate and principles of orientation. Attention to sun angles and the direction of prevailing breezes characterised the overall layout and building designs with an expressive diagonal motif and compositional pattern that reverberated formally in the geometry of expressed structural beams, bearing walls and sun-breakers.

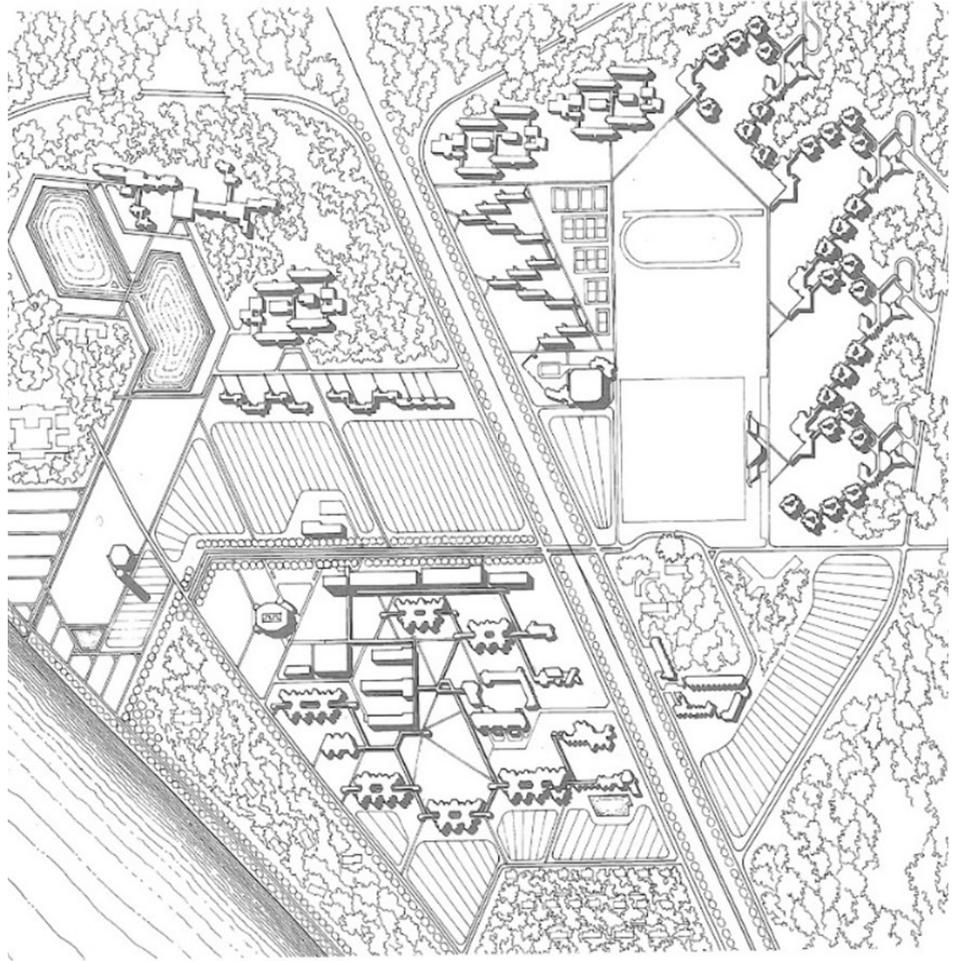


Figure 1: Master plan of Bangladesh Agricultural University (East Pakistan Agricultural University), Mymensingh, Bangladesh. Source: Paul Rudolph & Toshio Nakamura, *Paul Rudolph 1946 – 74*. (Tokyo: A+U Pub. Co., 1977).



Figure 2: Photo of Project Model showing a portion of the master plan. Bangladesh Agricultural University (East Pakistan Agricultural University), Mymensingh, Bangladesh. Courtesy: The Estate of Paul Rudolph, The Paul Rudolph Heritage Foundation, <https://www.paulrudolphheritagefoundation.org/196601-east-pakistan?rq=bangladesh>, collected in December 2020.

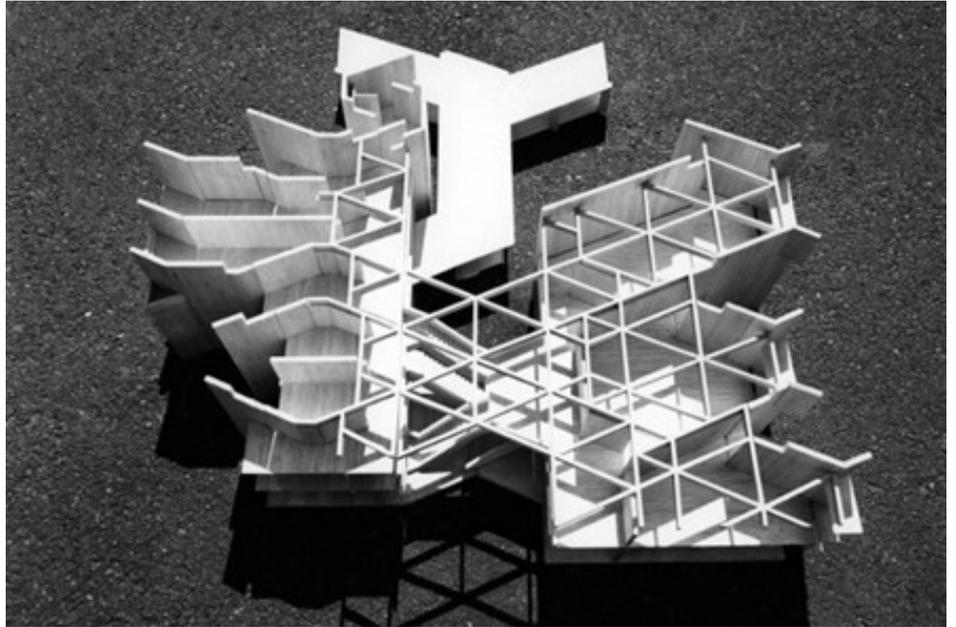


Figure 3: Photo of a study model for a typical academic block of one of the faculties. Bangladesh Agricultural University (East Pakistan Agricultural University), Mymensingh, Bangladesh. Courtesy: The Estate of Paul Rudolph, The Paul Rudolph Heritage Foundation, <https://www.paulrudolphheritagefoundation.org/196601-east-pakistan?rq=bangladesh>, collected in December 2020.

### ***Residential planning at BAU***

Further innovation was attempted in the spatial planning of the Rudolph designed academic staff quarters (figs. 6 & 7). Relative to the established norms of government and institutional accommodation – which had routinely been designed previously by Public Works Department engineers in line with utilitarian schedules of accommodation and aesthetics little changed since the end of colonial rule (figs. 4 & 5) – these were a radical re-think.

Rudolph's transformation of traditionally confined domestic lifestyles into an open plan was a controversial but influential early instance of a new pattern that was to impress itself in principle, if not directly in form, upon the evolving typology of modern Bengali residential architecture over the decades that followed. Whereas, previously, public zones such as the living and dining spaces had effectively been enclosed within walls of 'privacy' in typical residential layouts, the open plan conjoined the individual dining and living rooms into a spatial continuum. At the same time, this central cross-ventilated 'public' zone of the open living-dining area cleaved apart the now distinctly 'private' zone of the bedrooms from the service zone of the kitchen and servant's accommodation.

The porous character of his open planning principle was articulated emphatically in Rudolph's own original perspective projection of the plan for a typical lecturer's flat (fig. 6). Whilst subsequent iterations reproduced and adapted by campus engineers as late as the 1980s modulated the harsher orthogonality of Rudolph's original lines with expressive baffles and inflexions more in keeping stylistically with his academic buildings for the campus (fig. 3 & 7), the essential planning principles remained unchanged.

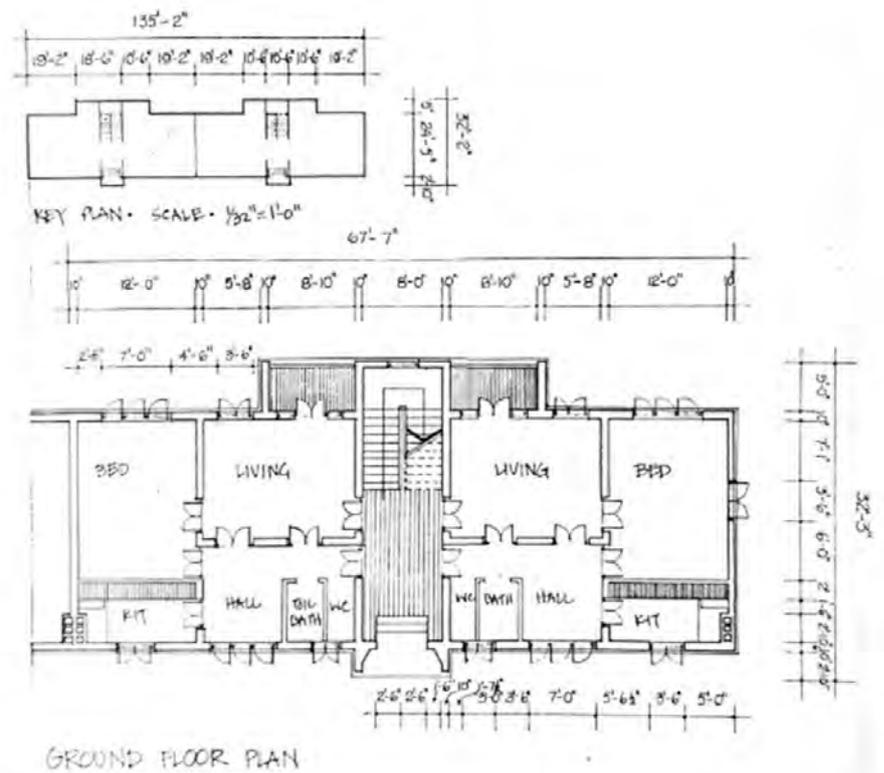


Figure 4: Typical residential accommodation for government service-holders (*Azimpur and Motijheel Colonies*) in the 1950s. Source: drawings collected from the government department of architecture (*sthapotto odhidoptor*) in Dhaka, in December 2018.



Figure 5: 1960s and 1970s Baily Road officers' quarters and *Azimpur* government colonies. Source: Bangladesh Old Photo Archive, <http://m.pwd.gov.bd>, collected in January 2019

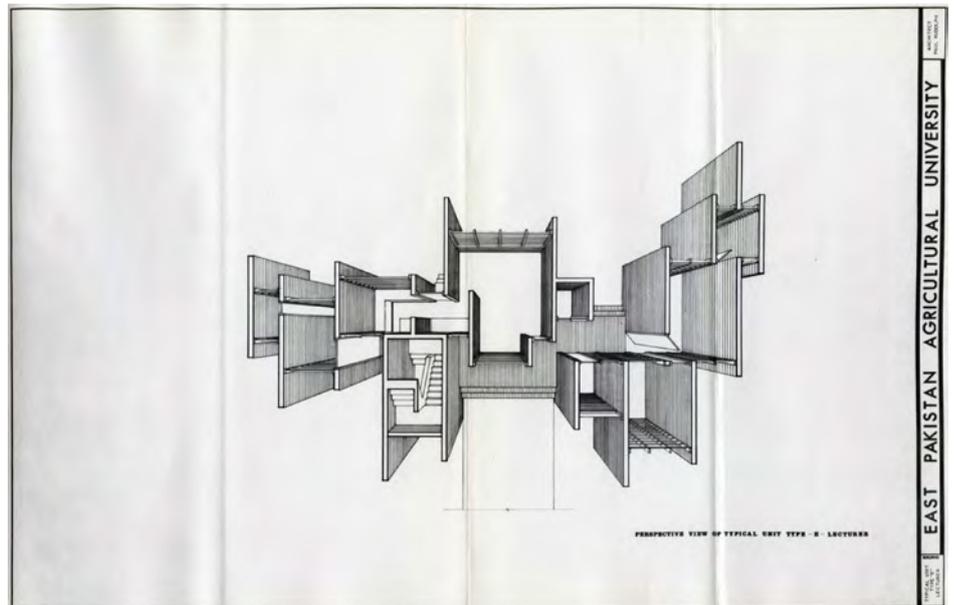


Figure 6: Projected perspective view of the plan of a typical unit (Type E) for Lecturers. Bangladesh Agricultural University (East Pakistan Agricultural University), Mymensingh, Bangladesh. Source: The Estate of Paul Rudolph, The Paul Rudolph Heritage Foundation, <https://www.paulrudolphheritagefoundation.org/196601-east-pakistan?rq=bangladesh>, collected in December 2020.

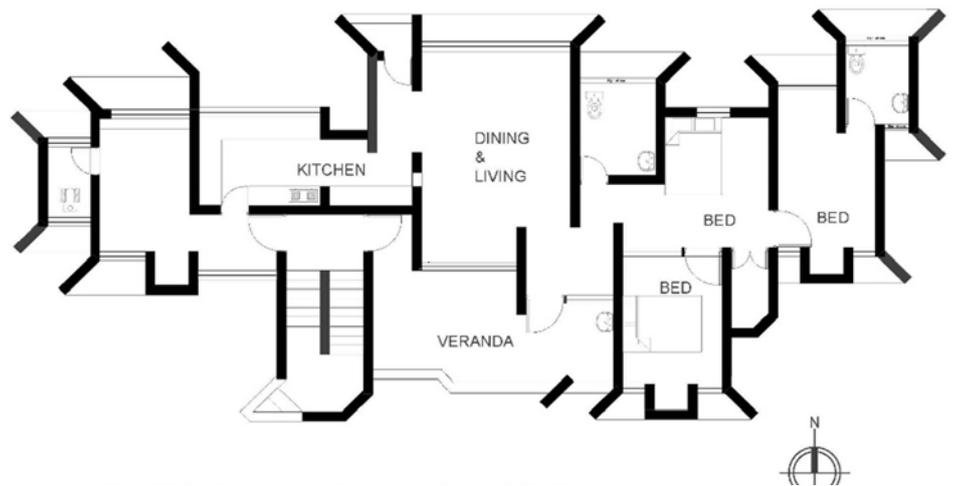


Figure 7: Type-plan for senior lecturers' quarters in a four-storied block of BAU staff flats, constructed ca, 1980s. Plan reconstructed by the first author from on-site sketch in 2019. Dimensions may not be accurate.

## Reception

But, how was this ultra-modern residential planning of the new campus actually received? The following section explores the post-occupancy experience of living in the academic staff quarters designed for the BAU campus; interpreting interview-based findings and associated fieldwork arising from one of the case studies of the aforementioned larger study. It seeks to assess the impact of these ultra-progressive new templates for living on the actual people who resided in such institutional microcosms of the broader nation-scale modernisation project of the 1960s.

In this case a retired professor of BAU and his wife, Ms Afroza Begum,<sup>14</sup> a school teacher born in 1957, were formally interviewed at a time

14. The names of all interlocutors have been changed in the paper.

15. Notably, they also occupied accommodation on the campus designed by Richard Neutra. However, it is beyond the scope of this paper to discuss that experience here.

16. Other residents of the residential campus of BAU included full-time professors (not mentioning names) of the different faculties, such as fisheries and agriculture, who lived in these accommodations with their families. Residences from A to E-Types were covered for interviews during the fieldwork in 2019. The houses ranged from duplexes of a maximum of 335 square metres in Type B and D of single-family residences, flats of 130 square metres (approx.) in Type A to 185 square metres (approx.) in Type D again of multi-storied residences. The case discussed in this paper was referred by the residents as the 'new E-Type' with a flat size of about 150 square metres.

17. Fadwa El Guindi, *By Noon Prayer: The Rhythm of Islam*. (Oxford, UK: Berg, 2008), 147.

18. El Guindi, *By Noon Prayer: The Rhythm of Islam*, 147-150.

19. Elora Halim Chowdhury, "Made in Bangladesh: The Romance of the New Woman," in *Rethinking New Womanhood: Practices of Gender, Class, Culture and Religion in South Asia*, ed. Nazia Hussein (Cham: Springer International Publishing, 2018), 47-70; Nazia Hussein, "Negotiating Middle-class Respectable Femininity: Bangladeshi Women and their Families," *South Asia Multidisciplinary Academic Journal* 16, no. 16 (2017). <https://doi.org/10.4000/samaj.4397>

when they had already moved out of the campus and were living in their own apartment in the capital city. This preliminary talk prompted a subsequent day-long site visit to the campus where the researcher not only visited the different quarters designed by Rudolph in which this family had resided,<sup>15</sup> but also closely observed the state of all the staff quarters and their occupancy on the campus. These observations were further enhanced by the opportunity to discuss the campus living experiences of a number of other residents<sup>16</sup> while visiting their homes with a common acquaintance, a young student of architecture, whose father was a former colleague of these residents. Inside the quarters, the plan of the house was hand-drawn with careful readings of detail, while the residents' perceptions of their post-occupancy experience in such dwelling spaces were recorded. Moreover, Ms Afroza was interviewed at length for a second time after the researcher's field-visit to the BAU campus had enabled them to clarify comprehensively its actual layout, context, and residential designs. As an educated professional and Muslim woman, the interlocutor provided her own substantial account of the benefits and problems that she perceived; views that were reinforced by multiple other cases from the campus visit.

### ***Womanhood and Domesticity: Privacy, Service and Security***

Before we consider Afroza Begum's words directly, we first need to discuss her social status and context more specifically. By the 1970s, an increasing number of women from the emergent Bengali Muslim middle class were attaining higher degrees of education and were also often engaged in professions, while still maintaining their domestic attachments as their primary concern. Of particular significance for these post-colonial feminists was the issue of privacy. As Fadwa El Guindi has argued in her work on Muslim women and the 'rhythm' of everyday life in contemporary Arab societies, privacy was a "symbol of power and autonomy and functioned as a vehicle for resistance."<sup>17</sup> Defined and expressed in residential space, the exclusive private domains of women were synonymous with their freedom and privilege within the domestic realm.<sup>18</sup> Contemporary South Asian feminist scholars describe the "new women" of the post-colonial generation as comparably complex if not contradictory sets of self-constructed identities, with strong anti-colonial stances yet committed at the same time to traditional virtues and domestic ideals.<sup>19</sup> Combining Western and post-colonial feminist ideals in their own sense and practice of a 'new womanhood', Bengali Muslim middle-class women of Afroza Begum's generation were simultaneously eager to experience and experiment with new patterns of residential architecture, yet conscious of how these challenged deep-seated notions of domesticity.

In Afroza Begum's experience, the principle of the 'open plan' in Rudolph's designs for the BAU staff residences marked a profound rupture from the ubiquity of clear architectural boundaries in conventional Bengali residential interiors. The autonomy of women in traditional domestic contexts had been effectively secured by architectural patterns characterised by shielding grids of walls and doors. Notwithstanding the relative privilege of living in such a 'modern' dwelling – as the BAU staff quarters were still considered, even when Afroza lived on the campus in the 1980s – Afroza was gravely

dissatisfied with the lack of privacy that it secured despite its well-defined public and private spaces, and ample service areas.

During the fieldwork at the campus, this discontentment was echoed in the opinions of other interviewees living in the same flats long after Afroza's occupancy. In the light of her feminist ideologies and her simultaneous Islamic religious affinities, Afroza's complaint about accessing the kitchen through what was often a male-dominated gathering of guests in the contiguous living-cum-dining space revealed how this 'open' plan actually hindered 'freedom' of movement. A culturally ingrained sense of privacy appeared to be aligned with her mobility in this case as it was constrained, ironically, in her navigation of the 'free' residential spaces of Rudolph's modern American imagining.

As for the architectural setup (fig 7), a veranda on the south, as a backdrop to the dining-and-living space, also contributed to the form of access into the residence through its entrance door at one end. Interestingly, the veranda also served as a thoroughfare through its entrance door and the stair-lobby to the other side entailing the kitchen and service zone. While this thoroughfare allowed the women to access the kitchen in privacy without crossing the open living-dining area, this design order was only available to the upper floors. On the contrary, leaving the boundaries of the home and crossing the very public stair-lobby did not comply with the Bengali Muslim woman's sense of privacy. The above-discussed problems identified by Afroza primarily existed on the ground floor, as the only entry to the residence straight from the street was through the front veranda with no separate, secondary access for the residents to the kitchen on the other side. This was an even greater problem for a woman who would be more comfortable with her practice of privacy "under veils."

The open-planning of Rudolph's type-quarters also swept away the culturally-rooted norms of servant accommodation in Bengali middle-class households. In the plan in figure 7, a small opening with a concrete-cast tray exists on the wall between the dining-living open space and the kitchen-pantry, similar to the Western concept of a tiny service gateway to pass the meal through the pantry to the dining. This appeared to be a design device that was intended to prevent a servant from trespassing the kitchen boundaries.

20. It is noteworthy that Rudolph grew up in the American South during the 'Jim Crow' era, as the son of a Methodist Preacher. Methodists had long been vocal critics of slavery, but how Rudolph's upbringing and his awareness of the elitist ante-bellum lifestyle (which still relied on African American servants) influenced his own residential designs is uncertain. See: Christopher Domin and Joseph King, *Paul Rudolph: The Florida Houses*. (New York, NY: Princeton Architectural Press, 2002), 26. The long arm of such classist and racialist thinking in modern American domestic architecture has been explored, for example, in Gwendolyn Wright's historical analysis of slave quarters inside the American elite residences of the 19th century. See: Gwendolyn Wright, *Building the Dream: A Social History of Housing in America*, 1st MIT Press paperback ed. (Cambridge, Massachusetts: MIT Press, 1983), 41-47.

A widely shared belief maintained by Afroza and other residents, was that the American architect had designed these residential layouts with the sensibilities of visiting American academics in mind, who, they imagined, would have wanted to ensure that the Bengali servants in their households were relegated to the boundaries of the 'service zone'. This was the zone limited to the pantry and kitchen and the servant's bedroom and toilet beyond. Although the staff quarters at BAU certainly did not represent poor living conditions for the servants, relative to established norms, Rudolph's plans did seem to enable if not enforce clear social segregation – which does invite speculation about the architect's cultural assumptions.<sup>20</sup> On this matter, Afroza commented,

I would want to emphasize how inconveniently far apart the servant's 'quarter' was in the house. With a living-dining space and a rather elaborate kitchen in between, there was no way I

21. Afroza Begum, interviewed by author, Dhaka, April, 2019.

could summon her from the distance of my bedrooms. Moreover, she was always too afraid to stay in a separate compartment on the farthest end of the flat, the plan of which seemed to dictate that the servants were not allowed to cross their 'space'. They would only visit the kitchen, cook for us and serve – meaning, at the end of a day, they would return to their compartment and would have no reason to even stroll into our living room. But, we did not use our domestic spaces in such manners. Culturally, we keep young girls or bua who would travel through all our rooms at any time – dust, clean, and mop – whilst being promptly available upon our calls.<sup>21</sup>

22. Servant quarters used to be constructed along the outer peripheries of a large plot in the architectural patterns of the former colonial bungalows and most other government houses and apartment buildings.

The progressive design of the modern flat that seemingly uplifted the standards of domesticity in the Bengali context was, nevertheless, cause for frustration and ambivalence, as Afroza's comments reveal, as a lived spatial experience. Every Bengali middle-class family is accustomed to having servants closely accommodated in a residential domain within the reach of the housewife's control and attention. With the engagement of mostly teenaged or middle-aged women as maids in a household, it became a cultural practice not only to command constant chores but also to ensure well-monitored safety for either party. To an external observer, the plan provided servants with a decent and spacious room of their own, respecting their privacy (figure 7). This notion of social respect seemed to be even further enhanced by the incorporation of the servant accommodation within the household, not outdoors.<sup>22</sup> But what was even more radical, and disconcerting from the householder's point of view, was how the plan challenged the housewife's sense of security as well as privacy.

Over the course of time, nevertheless, the design of this once shockingly new residential pattern ultimately seems to have struck a balance between the needs of visiting academics, with their international outlook, and its reception by the local Bengali faculty members who lived in it day-to-day. The pattern would continue to be reproduced by campus managers and their draftsmen for years to come as what had evidently become an integral component of the institutional DNA.

### **Translation**

The institutionalisation of Rudolph's residential type plans for BAU was a revealing preview of issues that were to be worked-out in the decades that followed as the evolving architectural norms and patterns of the urbanising Bengali Muslim middle class sought to accommodate changing lifestyles and expectations whilst continuing to re-calibrate both their traditional and their modern cultural identities to their evolving surroundings.

### ***The Post-feminist Pragmatism of the Bengali Muslim Middle Class***

Let us conclude by briefly considering this continuing dialogical process in the case of Shakila Hossain (b. late 1960s), another highly educated Bengali Muslim woman half a generation younger than Afroza, and practicing professionally in the discipline of Architecture itself.<sup>23</sup>

23. Shakila Hossain, interviewed by author, Dhaka, December 2018.

A photograph of Shakila as a young child with her older siblings and mother, smartly clad in a sari, (fig. 8) indicates a multi-generational continuity of identities that were and are simultaneously pious as well as progressively modern. As Shakila related in her interview, her mother was far from conservative, encouraging her children to expand their skills and perspectives through participation in extra-curricular activities, which even included live television performances.



Figure 8: Young Shakila, her mother and siblings. Source: Collected by first author from Shakila's personal album during her interview in December 2018.

24. *Hajj*, being one of the five pillars of Islam, constitutes of seven stages performed over a period of several weeks in a particular month of the Islamic calendar, whereas the *Umrah*, although sharing some common rites, can be completed in a few hours and performed any time of the year.

Shakila subsequently completed her education overseas, with a higher degree in Architecture at the University of Sydney, and today is both a practising architect and a senior academic in a leading Bangladeshi school of architecture. She is also a religiously oriented person who has performed *Hajj* and multiple *Umrah*.<sup>24</sup>



Figure 9: Plan of Shakila's apartment in Banani, Dhaka where she and her family resided from 2003 – present. Plan reconstructed by the first author from a sketch drawn by the interlocutor, Shakila, during her interview in December 2018. Dimensions may not be accurate.

25. Changes in residential typologies and associated living patterns over multiple generations of Shakila's and other interlocutors' experiences, from childhood to present day, were architecturally and ethnographically recorded in the PhD research. Typically, this revealed upward mobility and increasing evidence of the exercise of choice in acquiring higher architectural standards.

Compared and contrasted with the case of Afroza, Shakila represents the liberal Bangladeshi Muslim woman of the early twenty-first century who is relatively more empowered and recognizes her capacity to self-construct her womanhood, simultaneously embracing culture, faith and profession. Shakila retains a heightened degree of agency in the manner she exercises her reason to not only engage, dressed in modest attire, in the public sphere but also to advocate for separateness within the private sphere of domesticity. As a wife and mother of two children, her adherence to the principles of reserve and respect is reflected in the architecture of her own residential interior. The commercially built apartment unit in which Shakila has raised her own family over the past two decades<sup>25</sup> (figure 9) reflects the pragmatic yet discerning design choices that were exercised consciously in selecting and inhabiting this seemingly generic residential layout. Here the modernity of the unit and its occupants is still grounded in the open-plan living and dining zone at its core, but the particular configuration of these spaces allows Shakila to prioritize the privacy of her domestic movements despite the potential presence of guests. The position of the doors to the bedrooms

on the south defines a concise circulatory connection with the kitchen door, offering Shakila the desired privacy in her movements without any physical barrier. In contrast to the most common apartment layouts that builders were producing for upper middle-class residents in the rapidly urbanising Dhaka of the 1990s, in which large rectangular living 'halls' were the dominant feature, visibility is mediated in Shakila's apartment by the geometry of the L-shaped dining and living zone, providing a necessary visual barrier when needed.

Through such close-to-the-grain readings of the architectural history of domesticity in modern Bangladesh, the cases sampled in the present paper reveal the paradox of how modernity according to the universalist assumptions and architectural templates for open planning that were propagated globally in the second half of the twentieth century was not so obviously and unquestioningly embraced as the seemingly generic high-rise apartment development that defines the skyline of Dhaka today appears to confirm. The interplay between the continuity of tradition and the evolution of the feminine modern self presents yet another angle to interpret architectural development historically, and to better understand the impact of 'the new'.

# ULTRA

## **Positions and Polarities Beyond Crisis**

**SESSION 4: *Representation and Tools***

# A Selective Digital History: Limitations within Digitisation Practices and Their Implications

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## Keywords

Digitisation  
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## Abstract

The Greg Burgess Archive (GBA) is perhaps the most complete, and arguably the most valuable architectural practice archive in Australia. However, its physical size presents a problem to both visibility, and longevity, and plans are in place to digitise the collection. While in storage at Avington, Victoria, an archival team – including Burgess himself – have begun repairing the 447 models, scanning the hundreds of tubes of drawings, and extracting data from countless obsolete media. Yet how reasonable is it to assume the efficacy of a program of digitisation? What are the implications for an objective architectural historiography if the process fails? Precipitated by difficulties in accurately digitising Burgess' intricate physical models, this piece explores both questions.

Firstly, the digitisation process for the GBA acts as a case study. Then, the technical limitations encountered are placed within a wider context of archival concerns in today's diverse, digital age. These archival concerns are recognised in the eliding of ephemeral archival material – bodies, experiences, spoken histories – all of which may elude Western archival frameworks. What is illustrated here is that the same underrepresentation may extend into digitised collections, and that what is omitted is precisely the contents of the GBA – intricate, tectonic objects which do not conform to the idiosyncrasies of the technology at hand.

The subsequent discussion then proceeds to advance, and explicate, the notion of the third object. Curation, then, is surrendered to the archival process itself, and the agency to reify our material history is at risk of being left to the machines, and their preference for certain types of ethnocultural artifact. Considering this, alternative strategies are presented for both the GBA and institutions at large, yet archivists and historians must be conscious of these limitations, or risk the failings of traditional, institutional archival systems spreading throughout a growing digital landscape.

## Introduction

In archival practice, what does the digitisation of models and drawings foreclose? How might archivists and curators navigate the territory between archival objectivity, digitisation, and new architectural histories? These broad issues are examined through the Greg Burgess Archive (GBA), which is perhaps the most complete architectural practice archive in Australia. Spanning from 1972 to 2020, and currently in storage at Avington, Victoria, an archival team – including Burgess himself – have begun repairing the 447 models, scanning the hundreds of tubes of drawings, and extracting data from countless obsolete media.

1. A report by John McPhee, in 2015, valued the collection of 447 models at \$5,000,000 AUD.

In the GBA, or in any other archive, what we see, simultaneously, is an expectation of mimetic fidelity, and an archival system prone to breaking. What occurs when, thrown into this, an object set appears entirely averse to proper digitisation? Comprising over 400 hand-made architectural models, alongside countless drawings and photographs, the GBA is a collection uniquely poised to explore and understand this question.<sup>1</sup> The aim here is threefold: to better understand the digitisation of models in the GBA, to understand how this process correlates with contemporary archival and curatorial theory, and lastly, to suggest ways these may be reconciled.

With the above context in mind, this paper proceeds with a discussion of broad methodological framing, as related to archival digitisation, curatorial theory and practice. The origins of mimetic fidelity, and a pursuit of an objective historiography are introduced, and its consequences, intended, or otherwise, are examined in the face of recent trends toward digitisation. Following this, the GBA is presented as a case study to consider the technical limitations encountered in the digitisation of models. The subsequent discussion then proceeds to advance, and explicate, the *Third Object* - the idea that digitised replicas should not be seen as inferior simulacra, but objects of value in their own right, able to convey, and illuminate a broadened history.

The contribution of this paper, then, is presented as a linking together of pragmatic archival digitisation techniques, and a wider theoretical context – a study of both digitisation itself, and also what it might mean.

## Methodological Framing

### *Archival Authority*

2. Gordon Fyfe, "Reproduction, Cultural Capital and Museums: Aspects of the Culture of Copies," *Museum and Society* 2, no. 1 (March 2004): 61.

From antiquity, the museological archive has withstood as an embodiment of three elements: content, context and structure. Over time each element drifts, yet the agency of the archival process remains within the grasp of the archivist themselves, be they ancient Greek *Archon*, or anonymous Instagram admin. An information set is presented by the curator, and a particular narrative reified from within an established, recognised archival system.<sup>2</sup>

3. Fiona Cameron, "Beyond the Cult of the Replicant: Museums and Historical Digital Objects - Traditional Concerns, New Discourses," in *Theorizing Digital Cultural Heritage: A Critical Discourse*, ed. Fiona Cameron and Sarah Kenderdine (Cambridge: MIT Press, 2003): 52.

The basis of museological authority, then, is founded on this system, as, from its historical, object-based lineage, concepts of an objects' comparative aura, authority, and affect all can emerge.<sup>3</sup> What is of

4. Laura Jane Smith, "Heritage, gender and identity" in *The Ashgate Research Companion to Heritage and Identity*, ed. Brian Graham and Peter Howard (London: Ashgate, 2008): 161.

5. Joanne Evans and Jacqueline Z. Wilson, "Inclusive archives and recordkeeping: towards a critical manifesto," *International Journal of Heritage Studies* 24, no. 8 (2018): 857; "Wolf Tales: Capturing the Voices of the Pack," NC State University Libraries, accessed March 2021. <https://d.lib.ncsu.edu/collections/wolftales>.

6. See Dillon Webster, "Queering Heritage: How can Informal Collections be Safeguarded for Enriching Community Heritage?" (Master's Thesis, University of Melbourne, 2020).

7. "Size of the V&A Collections," Victoria & Albert Museum, accessed January 10, 2020, <http://www.vam.ac.uk/content/articles/s/size-of-the-v-and-a-collections/>.

8. David Arnold and Jaime Kaminski, "3D Scanning and Presentation of Ethnographic Collections - Potentials and Challenges," *Journal of Museum Ethnography* 3, no. 27 (2014): 78.

9. Nat Fleischer and Sam Andre, *A Pictorial History of Boxing* (London: Blackwell, 1959): 38-41.

note, then, are points at which this tripartite system breaks – when curatorial agency is removed from the archivist and surrendered to the archival process itself. Such has been the widespread failing of archival institutions in the past, as the less tangible histories of minority cultures and groups each slip through the Westernised framework of the traditional, physical archive.<sup>4</sup>

In response to this, institutions and communities alike have worked to reify their own histories, working both through informal archives, and then towards their integration into an existing institutional practice.<sup>5,6</sup> Amidst this reconciliation, however, there has been a further shift in both archival content and structure – one which questions the legitimacy of the archival process.

## Digitisation Fervour

The advent of the internet and its acceptance as the primary mode of information dissemination, and consumption, has necessitated the digitisation of archival content. This necessity is further heightened by ever growing issues of access – a 2013 audit of the V&A Museum in London, for instance, finding that only 3% of the total collection was accessible by the public at any one time.<sup>7</sup>

Digitisation, as a process, may range from simple metadata collection (object creation date; creator; place of origin, size, etc.), to photography, and finally, in the most relevant case, to a full three-dimensional reconstruction of the object itself. Importantly, it is the latter which is increasingly deemed to be necessary, both by earnest institutions, and an expectant, technologically literate public.<sup>8</sup>

At this point, unfortunately, the system risks breaking down again. Just as the limitations of the analogue archive emerged in the misrepresentation of spoken, minority histories, one must expect the limitations of the digital archive to emerge in the same manner. Curation again risks being subordinate to archival *structure*, as filters inherent within the technological processes begin to dictate what is most effectively archived.

Given the widespread acceptance, and, importantly, *accessibility* of the digital collection, the ramifications of such a gatekeeping role must be understood. Objects, histories, and events fall nominally either inside or outside the scope of any archival construct, and the sociological value imparted by the archival process serves to widen what is often an abstract distinction.

One of the clearest examples of such a process, and its effects, is the obtuse confluence of professional boxing and cinema in the early twentieth century. The development of boxing from the stigmatised, criminal enterprise it had been for centuries, into one of most popular sports in America, was one intimately tied to both its documentation, and its dissemination via Thomas Edison's Kinetoscope.<sup>9</sup> This machine – in essence a large, dark wooden box – lent itself to capturing intermittent periods of movement within a confined space, and as such, professional boxers proved to be the most commercially viable subjects to film.

10. Dan Streible, "Preliminaries: History, Prizefighting, Early Cinema," in *Fight Pictures: A History of Boxing and Early Cinema* (Los Angeles: University of California Press, 2008): 7.

Of all sports, then, boxing benefitted most from this technological development. Patrons of both sexes could enjoy the spectacle of boxing without stepping into the dubious cultural milieu of the ring, as boxing films became one of the most widely disseminated visual media in the early 20th century.<sup>10</sup> Yet that boxing should have held that enviable position was not simply a reflection upon society of the time, but one augmented by the selective filters of the technology at hand.

11. Arnold Kaminski, "3D Scanning," 81-82.

In the context of contemporary, digitised media, this binary framework of technological filters is no less apparent. David Arnold gives a particularly eloquent description of the limitations of digitisation, summarising by stating that there is no technology available which can digitise the complete breadth of ethnocultural objects.<sup>11</sup> Similarly, there is a subset of physical artifacts which *do* lend themselves to digitisation, and as such form the bulk of digitised work.

What remains on the outside of this practice, however, is not the oral histories of the 20th century, but rather precisely the contents of the Greg Burgess Archive (GBA) – intricate, tectonic objects, comprising of small parts and unyielding to current advancements in digitisation technology.

### **An Objective Authority**

In attempting to understand the consequences of the mass digitisation of our cultural histories, we must first understand the mimetic, replicatory context into which digital objects are placed, and, ultimately, misplaced. It is a framework tied to several long-standing, reified concepts: Enlightenment, rationalist tendencies; established heritage discourses; power, politics and economics; media theory; trust. It is, as such, murky. Its most pertinent foundation, however, is the visual materialist epistemology of the collection act itself, in which, as Fiona Cameron notes:

12. Cameron, "Beyond the Cult of the Replicant," 53.

Vision operates as the interpretive frame... as a stable, truthful, and objective marker of culture.<sup>12</sup>

13. Michael Shanks and Timothy Webmoor, "A Political Economy of Visual Media in Archaeology," in *Re-Presenting the Past: Archaeology through Text and Image*, ed. Sheila Bonde and Stephen Houston (Oxford: Oxbow Books, 2013), 85.

Shanks and Webmoor describe this tendency as a framework of *mimetic fidelity*, in which archaeologists and archivists value digital media through its holistic similarity to the artifact it represents – thereby moulding the museological object into a perfect, idealised replica of itself.<sup>13</sup> It is a pursuit of objective authority which Cameron labels "the cult of the replicant," and it forms the unwavering justification of any number of textbooks on proper, high-fidelity digitisation.<sup>14</sup>

14. Cameron, "Beyond the Cult of the Replicant," 49-69.

### **Mimetic Origins**

15. Kevin Garstki, "Virtual Representation: The Production of 3D Digital Artifacts," *Journal of Archaeological Method and Theory* 24, no.3 (September 2017), 728.

Such a lens, however, far outdates the digital revolution itself. In the mid-nineteenth century, the archival system was granted a new mobility. The advent of photography, and the structured presentation of the object-photograph would spawn a "veil of objectivity" – a moralised understanding of scientific visual data as the basis for a rational, objective historiography.<sup>15</sup> The photograph would become the vector for almost all arguments about the nature and significance of art, and reproduce, indirectly, a desire for the objectivity it claimed to project.<sup>16, 17</sup>

16. Pierre Bourdieu, *Photography: A Middle-Brow Art* (Stanford: Stanford University Press, 1996), 73.

17. Peter Walsh, "Rise and Fall of the Post-Photographic Museum: Technology and the Transformation of Art," *Theorising Digital Cultural Heritage*, ed. Fiona Cameron and Sarah Kenderdine (Cambridge: MIT Press, 2003), 30.

In this way, the perceived authority of the medium itself was valued, and upheld, as from it valid conclusions were drawn. Kevin Garstki writes:

18. Garstki, "Virtual Representation," 727.

[The] archaeologist's ladder of inferences is built upon an assumption of accuracy or authenticity of the representational media (reports, maps, photographs, 3D models) from which conclusions are made.<sup>18</sup>

19. Néstor F. Marqués, "Old Photographs for New Geometries: The Recent Evolution of Photogrammetry," Sketchfab Blog: Cultural Heritage, 26 August, 2020, <https://sketchfab.com/blogs/community/old-photographs-for-new-geometries-the-recent-evolution-of-photogrammetry/>.

This photographic hegemony, as Peter Walsh describes it, has spread into contemporary, digital culture. Where once photographs, books and slides presented a tangible framework for analysis, now digitised media objects, on wholly digital platforms, shape our histories. What is important here is that the drive towards objectivity in the presentation of cultural artifacts is similarly pervasive in both digital and analogue media. Indeed, the advent of high-fidelity digital objects has appeared to both exacerbate and validate this focus – proving a mimetic likeness is possible, and in doing so navigating the latent subjective failings of the photograph:<sup>19</sup>

20. Garstki, "Virtual Representation," 728.

Because their visual appearance is so accurate to the original and the ability to manipulate the [digital] model appears to negate the obvious bias of a photograph, it is too easy to lump them into the same conceptual category as physical artifacts excavated from the ground.<sup>20</sup>

21. See Jean Baudrillard, *Simulacra and Simulation*, trans. Sheila Glaser (University of Michigan Press, 1994).

In this way, the pervasive drive towards an idealised replication risks positioning digital objects as simulacra – as objects more real in our virtual worlds than the artifacts they stem from. We are striving for perfection, yet, as in the case of Borges' map, we must ask at what cost?<sup>21</sup>

## GBA Case Study

### Digitisation Methods

| Name, Date                            | Size (mm)   | Material                          | Geometric Description  | Method, File Size     | Image Reference   |
|---------------------------------------|-------------|-----------------------------------|--|-----------------------|---|
| Anderson House, 1988                  | 400 x 600   | Boxboard                          | Flat surface context; intricate, orthogonal structure (2mm wide minimum)   | PG, 1.1GB             |  |
| wwUluru Cultural Centre, Detail, 1995 | 300 x 550   | Boxboard; Balsa                   | Minimal context; multiple, close, recurring small members (3mm), vertical and horizontal.  | LS, 1.34Gb; PG, 5Gb   |  |
| Uluru Cultural Centre, Full, 1995     | 1000 x 1050 | Boxboard; Balsa; Organic Material | Flat, homogenous surface context, with colour; continuous, curved surface model; recurring small members (2mm); organic geometry | LS, 1.54Gb; PG, 5.5Gb |  |
|                                       |             |                                   | Flat model surface; small vertical members.  |                       |  |
|                                       |             |                                   | Minimal Context; combination of flat surfaces and complex geometry; some surface texture but no colour variation.                |                       |  |

Table 1: Archival models and digitisation methods.  
PG = Photogrammetry; LS = Light Scanning.

Ultra: Positions and Polarities Bey.

22. B. Van Genechten, "Emerging Tools for Heritage Recording," in *Heritage in the Digital Era*, ed. Marinos Ioannides et al. (Sussex: Multi-Science Publishing Co Ltd, 2010), 57-68; Elizabeth R. Leggett, *Digitization and Digital Archiving: A Practical Guide for Librarians* (Rowman & Littlefield Publishers, 2014); For a relevant guide to a photogrammetric workflow, see Joshua J. Medina et al., "A rapid and cost-effective pipeline for digitization of museum specimens with 3D photogrammetry," *PLoS One* 15, no.8 (August 2020).

Work at the GBA was undertaken using a range of professional software and hardware. This work proceeded through a process of informed trial and error, and may serve as a proxy for any institution interested in digitising their own collection.

Rather than attempting to construct any sort of historical or architectural thesis through a curated selection of models, however, the scanning material was chosen instead to test the scope and flexibility of the scanning processes. Both flat, single colour planes and complex, tectonic geometry were scanned, and the details of each is outlined above in Table 1.

Two different methods of scanning were used: DSLR photogrammetry (PG) (both hand-held and stationary), and hand-held structured light scanning (LS). In digitising an archival collection, this is perhaps the most pertinent choice for an institution to make, and as such I have included several resources which compare each method, and discuss, in the sections below, some of my most relevant observations.<sup>22</sup>

### *Light Scanning*

Structured-Light Scanning (LS) is a process of measuring physical geometry which is similar to SONAR, in that a signal – here, a pattern of narrow light bands – is sent out and measured upon its return. Software then analyses distortions in the pattern to measure undulations, and distances upon a surface.

The hand-held light scanner used was the Artec Eva, a \$19,800 machine which boasts ease of use and speed as a point of sale.<sup>23</sup> Indeed, as a portable device requiring no further apparatus, this method is certainly easier to use and faster to set up than photogrammetry. However, as each step requires long processing times, it is far less time efficient when dealing with many models. The Uluru Detail model, which was within the median size for the collection, required 50 minutes to scan, process, export and save. Within this time, a streamlined photogrammetry setup could capture 4 or 5 models before processing the data later.

Regarding storage, Light Scanning is the more space efficient method, yet both require a large amount of planning if large collections are to be scanned. For the same Uluru model, the total package size (including scan files and the resulting digital model) was 1.34Gb and 5Gb for LS and PG respectively.

### *Photogrammetry*

Photogrammetry (PG) is the process of extracting physical measurements from visual, photographic data. It has historically been associated with aerial land surveying, and the mapping of two-dimensional distances. In the context of archival digitisation, however, measurements from photographs are inferred in three dimensions, and a resulting geometric map is used to generate a complete, omnidirectional model of a particular object. This process of translation, from paired photographs into an accurate geometric map, is called registration, and requires software to 'match' identical points on an object from multiple photographs.

23. "Artec Eva," Artec 3D, accessed March 24, 2020, <https://www.artec3d.com/portable-3d-scanners/artec-eva>.

24. Peter L. Falkingham, "Small object photogrammetry – How to Take Photos", Dr. Peter L. Falkingham: Paleontologist, January 16, 2019, <https://peterfalkingham.com/2019/01/16/small-object-photogrammetry-how-to-take-photos/>.

Generally, there are two accepted methods for photogrammetry, each with their own uses and drawbacks – see Falkingham, 2019.<sup>24</sup> In this study, I chose primarily to keep the camera still, and rotate the object itself, which was more difficult to set up than simply orbiting the object with a camera, but proved to generate quicker, higher resolution results. The camera used was a Canon EOS Mark II, set on a tripod; images were processed with Agisoft Metashape Professional.

In this setup, if the background is clean and there are no discernable features behind the object, the software assumes the camera has been rotating, not the object itself, and as such positions the cameras in digital space accordingly. Such a background, however, is difficult to accomplish for objects larger than a light box, as, even when using a backdrop, background shadows - even of the object itself - will cause difficulties in registration. Fig.1 illustrates the effects of this, and the effect of lengthy post-processing to mitigate the issue.

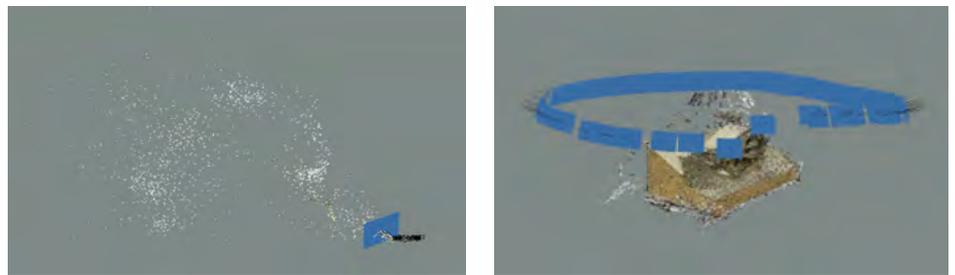


Fig. 1. Effects of poor photograph registration, resulting in failed model generation (left). Post-processing of photographs yields correct registration and model generation (right).

25. "DSLR Photogrammetry Systems," Twindom, accessed March 30, 2020, <https://web.twindom.com/3d-scanning-technologies-dslr-photogrammetry-systems/>.

26. Medina et al., "A Rapid and Cost-Effective Pipeline," 5.

Given the accessibility of photogrammetry as a method of digitisation, these issues are of particular note. An effective, fast, and reliable photogrammetry workflow can quickly become expensive, and bulky, if one is after professional results. Hi-fidelity systems, designed for large objects and involving numerous cameras can easily reach upwards of 50,000 USD, and systems like that used here are typically at least 3000 USD.<sup>25, 26</sup>

## Digitisation Results

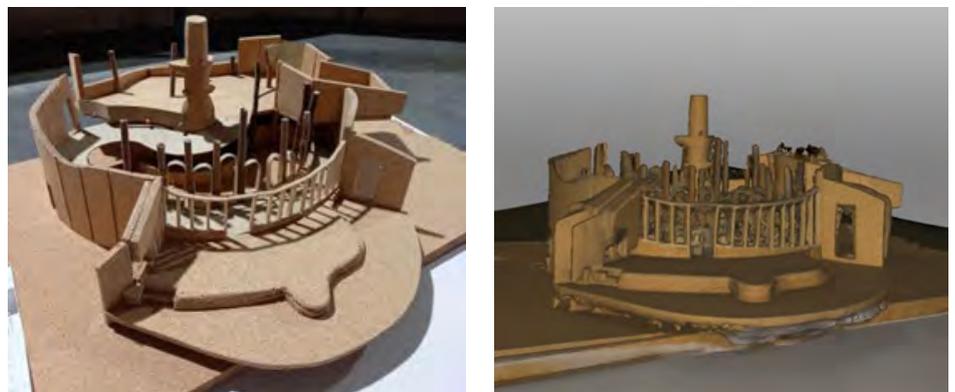


Fig.2: Brambuk Cultural Centre, Interior Detail. Photograph (left), and generated model (right), scanned with the Artec Eva, and processed in Artec Studio.

Within the pervasive mimetic framework of contemporary archival work, successful digitisation is measured primarily on a perceived visual

and spatial likeness.<sup>27</sup> Therefore, visual comparison between source photographs and digital models is used, here, to analyse the efficacy of the work.

Fig.2 shows a model, generated by the Artec Eva, which is indicative of the results at large. Visually, the object is recognisable, and some spatial relationships may be drawn, yet it is almost absurd in its inaccuracy. Orthogonal, tectonic intersections are reduced to estimated, bulbous masses, and detail toward the interior of the model is reduced to noise. More information regarding materiality, construction, and composition can be gathered in the adjacent photograph than in the model itself. Where then, does the value lie in such an object? At this stage, I will suffice to give weight to this question by outlining how such an unsuccessful outcome occurs, and, importantly, how for the GBA it is almost unavoidable.

### *Difficulties In Scanning*

28. 'Stpiercey', "The Hardest Objects to Scan: Paths to Success," *Matter and Form*, Oct 25, 2018, <https://matterandform.net/blog/the-hardest-objects-to-scan-paths-to-success>.

29. 'See Gönen Eren, "3D Scanning of Transparent Objects," (PhD Diss., Université de Bourgogne, 2010), 1. 29.

Due to the way in which light-based 3D scanning works (for both PG and LS), certain object characteristics resist capture, regardless of advancements in technology, or technique.<sup>28</sup> Black, transparent and reflective surfaces, or surfaces with complex geometry and multiple through-holes all elude accurate digitisation based on their innate properties, which violate assumptions made by scanning algorithms.<sup>29</sup> Accepted workarounds to these problems, importantly, involve often irreversible alterations to the physical objects themselves, and as such are problematic when dealing with fragile, historic artifacts.

On the contrary, there are a subset of objects which do lend themselves to scanning. Flatter, solid objects with complex surface textures, such as vases, mimic the aerial photography for which photogrammetry was developed, and allow for accurate registration. The flat, consistent surface of the model shown in fig.3, however, presents issues which cannot be mitigated by technique, or budget.

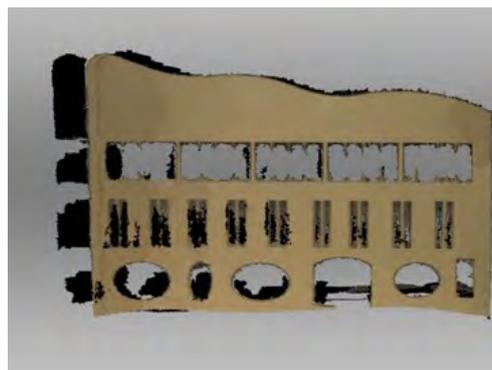


Fig.3. Koorie Heritage Trust Facade Model. Note the dark 'shadow' - this is in fact a series of scans which could not be aligned to the 3D model, due to a lack of texture variation in the object.

What is concerning is that most handmade architectural models are precisely of the type which cannot, at this stage, be reconciled to 3D digitisation. Like those of the GBA, they are constructed out of small, individual members, and in order to show the play of light within a space are constructed in both great geometrical complexity and depth. Fig.4 shows this loss in detail.



Fig.4. Comparison of model detail photograph (left) and LS digital model (right). The intricacies of the roof structure, which are the focal point of the model, are completely lost.

Below is a comparison of photographs taken of the Anderson House model, alongside similar rendered views. It is the most eloquent representation of the findings of this piece. The model is the result of over 100 photographs, taken with a tripod and processed over an hour using professional software. It conveys, however, only a fraction of the information captured by the photograph, and strays far away from the mimetic likeness required by any contemporary, institutional archive.



Fig.5. Comparison of model photograph used for photogrammetry (left) and resulting digital model (right). Note the inability of the software to recreate orthogonal members, or flat, single surfaces.



Fig.6. Comparison of model detail photograph (left) and resulting digital model (right). The detail photograph, despite showing only a set angle, shows far greater information regarding the construction, preservation, and state of the model in question.

### Discussion: A Tripartite Problem

The GBA models, consisting largely of box board and balsa wood, are representative of the work of countless other firms operating at the

same time, both in Australia and overseas. The results described above, therefore, illuminate a generation's worth of architectural artifacts which are completely at odds with current methods of digitisation. This tension, however, goes beyond an issue of technological limitation. As they are irreconcilable to accurate digitisation, they are therefore irreconcilable to the aforementioned institutional, archival system, which grows ever hungrier for high-fidelity digital artifacts.

We are left, then, with an impasse in three parts: simultaneously, an expectation of mimetic fidelity within an archival system prone to breaking; a fledgling technology; and an object set entirely averse to digitisation methods. Naturally, then, the question is how this may be undone. One option, simply, is to wait. In time, perhaps, scanning technology will advance such that the fenestration of the Koorie Heritage Trust model, for instance (fig.3), is rendered accurately and efficiently. This requires, however, a large amount of trust to be placed on the technology itself, and leaves any institution dealing with mounting issues of model storage and maintenance.

The objects themselves, alternatively, cannot be altered - doing so would invalidate the archival process. They may be ignored, however, as those which do not reconcile themselves to digitisation are left out of the digital archives entirely. Indeed, this practice is commonplace, and in some cases, acknowledged. Ben Waters, of Melbourne-based *S-/Projects*, stresses the management of his client's expectations, outlining to them frankly which objects can and cannot be scanned, adding that:

We are quite clear that photogrammetry is a craft, and not a magic tool for digitising anything and everything.<sup>30</sup>

This position is a wise response to an institutional clientele, yet is one which belies a shift in archival agency, and as such a breakdown in the objective archival project. Applying this approach to the GBA – and therefore excluding those models which elude mimetic digitisation – we see curation lie not with the curator, *per se*, but with the filters inherent in the technology at hand. Agency is removed from the archivist, and placed within the idiosyncrasies of software, storage methods, and lighting setups. These visually ephemeral, geometrically dense artifacts are then struck from our growing digital histories, as we subconsciously cultivate a selective digital historiography.

## Expanding The Archival System

31. Andrea Witcomb, "The Materiality of Virtual Technologies: A New Approach to Thinking about the Impact of Multimedia in Museums," in *Theorizing Digital Heritage*, ed. Fiona Cameron and Sarah Kenderdine (Mit Press, 2007), 45.

The last response to this impasse is a change to the digital archival value system itself. I propose that instead of being dismissed against an unrealistic expectation of accuracy, the scanned GBA models are celebrated precisely for their *inaccuracy*. This position is based not only in the expanded accessibility such a system will bring – in terms of practicalities for archival staff, and cheaper workflows – but also one which responds to a growing subjectivity in contemporary digital spaces.<sup>31</sup>

Spurred on by the advent of user-focused social networking, the traditional 'web' has transcribed singular notions of site – appearing less as a hierarchical, structured framework for multimedia browsing,

32. Jack Self, "Another Direction," *Real Review* 10 (Autumn, 2020), 42.

33. Itso Huvila. "Participatory Archive: Towards Decentralized Curation, Radical User Orientation and Broader Contextualisation of Records Management," *Archival Science* 8, no.1 (March 2008), 5.

34. Maurizio Forte and Elena Bonini, "Embodiment and Enaction: A Theoretical Overview for Cybercommunities," in *Heritage in the Digital Era*, ed. Marinos Ioannides et al. (Sussex: Multi-Science Publishing Co Ltd, 2010), 47.

35. Alison De Kruiff, "Constructing the Illusion of Shared Experience in Virtual Heritage," in *Unbounded: On the interior and interiority*, ed. Dolly Daou et al. (Cambridge: 2015), 92.

36. Alison de Kruiff, in conversation with author, February 23, 2021; See also De Kruiff, "Constructing the Illusion," 84-102.

37. De Kruiff, "Constructing the Illusion," 93-95. The reconstruction of the Vitthala Temple, for instance, was shown at twilight, which hid the simplicity of the shadows produced by the renderer. In the inner sanctum of the temple, where there were no available photographs, an area was left empty.

38. *Ibid.*, 88.

and more as a rhizomatic network of individual agency and content curation.<sup>32, 33</sup> This development confers a subjectivity to our digital spaces, in which, as Forte and Bonini note, the cultural value in any digital data is not intrinsic, but rather emergent of the cognitive processes it triggers.<sup>34</sup>

This understanding is the basis of the work of Alison De Kruiff, a researcher in visual heritage at Swinburne University who "recognises the need for virtual heritage audiences to push against the boundaries of technological experiences."<sup>35</sup> De Kruiff speaks of a *Third Environment* – a Hegelian synthesis of the constructed, digital apparatus and the personal experience of the viewer.<sup>36</sup> Here, the object is neither original, nor replica, but an outcome of the technological limitations of the process itself.<sup>37</sup>

It is a framework which embraces difficulties in achieving photorealism, utilising technological inaccuracy to foster user engagement. Importantly, too, De Kruiff's work outlines that visual fidelity is no requisite for shared engagement, nor learning; Instead, it can be problematic:

In virtual heritage, accuracy is inextricably linked with representation of information... However, it is often this photorealism that leads audiences to view a conjecture as fact.<sup>38</sup>

This conjecture, in the case of the GBA collection, is the inescapable inaccuracies of the digitisation process itself. What is required, then, is an explicit reframing of the role of the objects themselves.

## Conclusion

### The Third Object



Fig.7. Reframing and celebrating the Third Object

39. Huvila. "Participatory Archive," 4.

Expanding upon the work of De Kruiff and moving in line with contemporary attitudes towards participatory archives – see Huvila, 2008<sup>39</sup> – the digitised contents of the GBA are repositioned as the *Third Object*. They are presented not as inferior replicas, but as distinct objects with their own experiential value, and place within a museological setting - as idiosyncratic touchpoints for a subjective, interpretive user experience.

40. This image should not be taken as indicative of any specific proposition, but rather as a juxtaposition between the museological environment, and the peculiarity of the GBA objects.

In addition to this role, the *Third Object* is placed on a pedestal – both figuratively, and literally (fig.7)<sup>40</sup> – to question the validity of that which it may be excluded from: the mimetic, technophilic framework of the traditional archive. The *Third Object*, then, becomes a symbol of a post-mimetic landscape, imbuing both a recognition of contemporary otherness, and a break from the static system of 20th century historiographical spaces.<sup>41</sup>

41. Andrea Witcomb, "The Materiality of Virtual Technologies," 45.

That these objects now contain less empirical, geometrical value is a reality which cannot be ignored. However, that this effect should constitute a failure is a fallacy which misinterprets the value of the architectural model, and the role of digitisation. The digital model's value is found less in its surface, or form, as a primary object of objective detail, but rather in its collective place within a rhizomatic network of contemporaneous objects - drawings; experiences; photographs. The architectural model, then, constitutes the perfect *Third Object*, as it may be digitised without being detached from inferred meaning in the same way that a singular, archaeological artifact might be.

The *Third Object* is not an ultimatum, but rather a reframed ontology of the imperfect digital object. It does not deny the place of existing archival paradigms, but rather offers a strategy to reconcile them to the difficulties, and expenses of digitisation – acting as a bridge to recapture a set of objects which would otherwise be lost.

Above all, it is this potential loss that is of greatest concern, as any small selective biases encountered through digitisation risk amplification over time, as collections are accessed increasingly online. Against this, then, the work undertaken at the GBA outlines a prospective path for an institution, who, in making this shift, must at least acknowledge a prejudice against imperfect digital objects, or else risk the canonisation of a selective digital history.

# Pythagorean Palladio: Palladian Proportionality Patterns Decoded?

**Daria Gomez Gane**

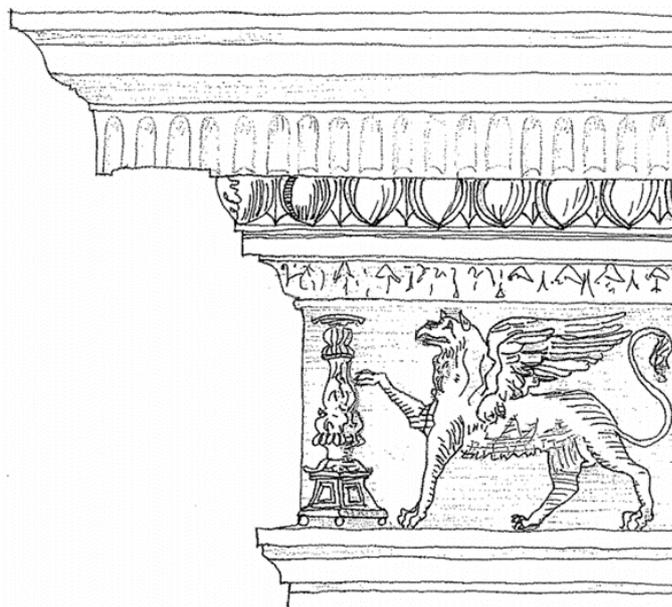
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## Keywords

Palladio  
Rotunda Villa  
Root two rectangle  
Tetraktys  
Pythagorean Lambda  
Renaissance architectural  
theory of proportions  
Palladian "geometric" method  
Palladian "harmonic"  
proportions

## Abstract

There seem to be many understated assumptions in Palladio's Four Books on Architecture. He tells us what to do, but never fully explains in detail how he gets to the recommended methods. For instance he uses drawings that understate the use of the root two rectangle (Figure V) in the first geometric method suggested to calculate the heights of vaults and uses the numbers of the tetraktys – without mentioning it - to "calculate" and provide an example of "harmonic" proportion. Had he only been a little more specific many misconceptions about his work – as being not entirely clear and somehow mysterious- might have never eventuated. In this brief work we show Palladio's use in his designed and built work of one of his favourite proportions, the "proportione diagonea" already mentioned by Serlio, none other than the root two rectangle - the root two being, according to Wittkower, in his 1949 seminal work, the only irrational number of relevance in Renaissance architectural proportionality theory. A brief explanation of how the Tetraktys and Pythagorean Lambda were allegedly used by the stonemason turned architect to "calculate" "arithmetic", "geometric" and "harmonic" means is provided.



## Introduction

Renaissance Italy was a melting pot of ideas and theories, circulated and discussed in elite intellectual circles by a lucky few. Palladio, initially a stonemason, was one of them, based not on his family of origin but on his, most probably always obvious, talent. The noblemen Trissino and Barbaro had been his mentors and the result was the marvel of synthesis and sophistication that we all know as the father of Palladianism. Palladio collaborated on the translated version of Vitruvius' ten books by Barbaro and, in doing so, gained useful and fruitful insights into the classical approach to his subject matter, architecture.

An issue with Palladio's Treatise The Four Books on Architecture has always been the little amount of explanation that he gives about the recommended methods to calculate the heights of rooms, in particular vaulted ones. These are best placed at the lower floors of the building, as being vaulted they would be aesthetically pleasing and better suited in case of fires. Whether this has to do with Palladio's education having been less rich than that of others, for instance Bertotti Scamozzi, as suggested by Ortolani (Ortolani, 2015), or simply due to his assumption that people could understand what he meant just by getting the succinct, in his opinion sufficient, amount of information he provided, is not clear at present to the author.

The fact remains that, by not providing the actual heights of his buildings, Palladio has left readers, for nearly the last five centuries, often confused by his methods to calculate them. They all have fallen into the unified category of "harmonic" proportions, although there are more of them other than the "harmonic proportions" method itself, as we will revise briefly in this work.

The paradigmatic Rotunda Villa by Palladio, a suburban (at the time) Villa, although being residential, resembles somehow, in elevation, the Pantheon in Rome. It is a symmetrical, cubic, villa, with a small dome and hexastyle porticoes on all its (inter-Cardinal) four facades. In some authoritative authors' opinion, like for instance Unwin in "Analysing Architecture" (Unwin, 1967), Palladio's work in the Rotunda "reads" easily in plan – like "ad quincunx" squares- but is difficult to read in elevation. Let us try and prove our eminent predecessors wrong and see how – given the right clues to decode also the proportionality patterns of the elevation of the famous Villa – the overall "reading" becomes easy or, at least, easier.

### **The Rotunda Villa: Built Based on the Palladian First "Geometric" Method?**

In the Palladian masterpiece, the Rotunda (in Vicenza, Italy), is the fact that Palladio's drawing for the first geometric method to determine the heights of vaults – by finding, geometrically/with drawings – in the manner of German Renaissance painter Dürer - the golden mean between width and length of a rectangular room (therefore somehow "squaring" that same room and "finding" a gnomon that can morph into a root two rectangle according to Elam's method of transformation,

i. The fact that the first geometric method gets so often confused for the arithmetic method is an understandable misunderstanding because the architect refers to it as the first method, engendering confusion in the reader - see also page 149 MIT where Palladio, about another building, says "on either side there are two rooms a square and two thirds long **whose height was set according to the first method of establishing vault heights**"[emphasis added]- "first" method that, numbers [of Vicentine feet in plan] at hand: 27,12,18, turns out to be [given  $\sqrt{27 \times 12} = \sqrt{324} = 18$ ] the "first" geometric one?

in some way also similar to some of Serlio's drawings, see Figure S) - contains also a root two rectangle only a coincidence of the geometric construction? If that were to be the case, wouldn't the root two rectangle measurements in the Rotunda central part around the circular hall, identified by March (March, 1998), not be somehow proof that the method chosen for and used, by Palladio, in his Rotunda had been the [first] "geometric" one? The side rooms of the Rotunda have been stated by Mitrovic (1990) to have heights determined with the "arithmetic" method - the same opinion that March had about the Villa, in a note about the central circular hall's height, but is that so? The author has doubts about it.

In Mitrovic's 1990 paper, the unsolved mystery of the Rotunda's proportionality analysis is mentioned when he writes that "we are at the same time so hopelessly unsuccessful in our attempts to explain the Rotunda's proportions on the basis of the theory of harmonic proportions, or in any other way" (my emphasis). According to the Appendix Palladiana in the book "Portrait of a Bridge..." (2019), by the author, the Rotunda Villa - displaying a tri-axial "symmetry"- is spectacularly based in terms of proportionality patterns on root two rectangles used by Palladio assumedly in a "geometric" method fashion (according to the first geometric method he proposes at Chapter XXIII of Book I). The Villa is seen as an attempt of "doubling", or simply building, the cube spatially like Dürer or Barbaro would have done, so built based on the "doron" principle, a la Barbaro, and/or on the Dürer method (ex 'Der Messung...'/'The Painter's manual...', printed in Nuremberg in 1525). See figure D (from figure 44 of book 4 of "The Painter's Manual...", ex March, 1998).

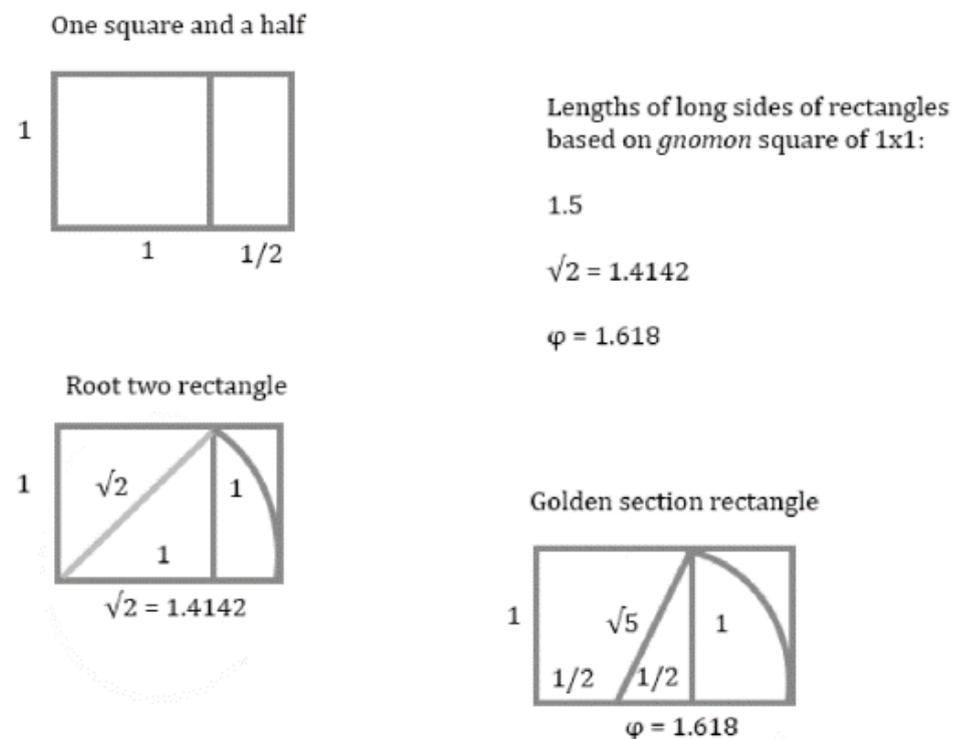


Figure R above: rectangles given by one and a half square, a Root two rectangle and a Golden Section Rectangle

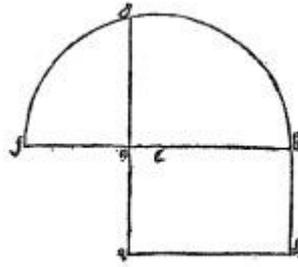


Figure G: First “geometric” method suggested by Palladio to calculate Heights of vaults

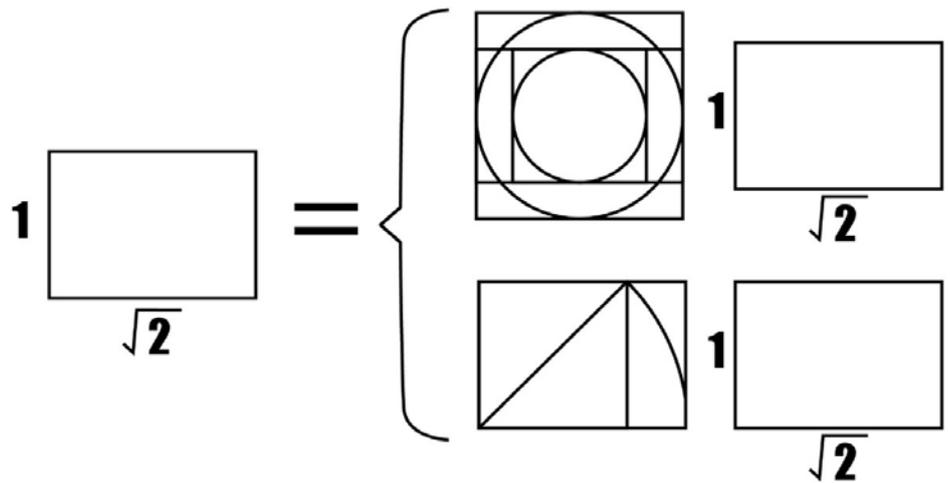


Figure S: geometric construction of Root two rectangle – upper drawing after Elam, 2001 (after Serlio?) and lower drawing after Serlio (in March, 1998), source: “Portrait of a bridge...”, 2019.

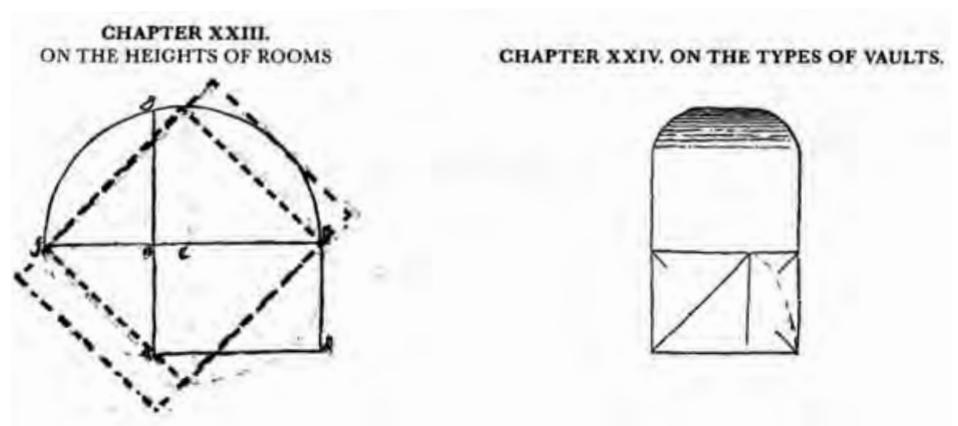
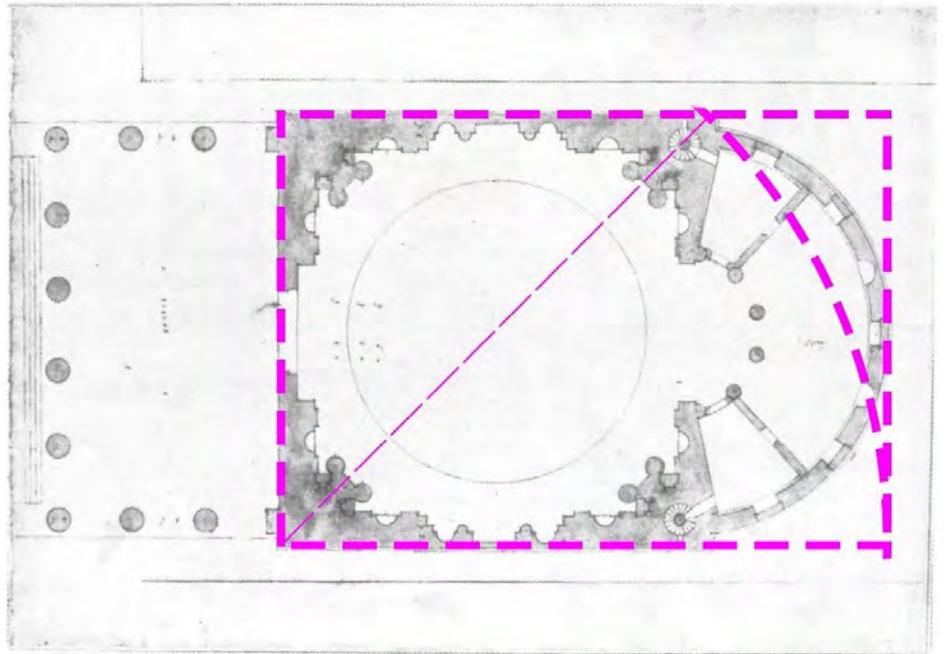


Figure V: figures on vaults from Palladio's Four Books on Architecture; additional dotted lines, by author, reveal the root two rectangles understated in Palladio's drawings (Source: “Portrait of a bridge...”, 2019, by author).

Palladio assumedly also uses the root two rectangle as a proportionality tool in other buildings other than the Rotunda Villa – The Villa Almerigo Capra in Vicenza – see figures 1 and 2. In the essay “Villa Poiana a struggle for the ideal”, by Daniel Ayad it is stated that in the Villa Poiana: “The outline of the central bay, on the other hand, is equivalent to the ratio of a root-square; the loggia in this instance being the root (sic) added onto the perfect square.”(emphasis added by author)



ii. (\*) =according to Wittkower in 1949 ("Architectonic Principles in the age of humanism", ex figures 40a and 40b) the San Nicola da Tolentino Church; according to the RIBA website, accessed in March 2020, the Redentore Church, also in Venice. RIBA Collections.

Figure 1: (graphic work courtesy of Ximena Parsons): Plan for the design by Palladio of a Church (\*)<sup>ii</sup> in Venice – 1579 – also inscribed in a "proportione diagonea", a root two rectangle

(\*) =according to Wittkower in 1949 ("Architectonic Principles in the age of humanism", ex figures 40a and 40b) the San Nicola da Tolentino Church; according to the RIBA website, accessed in March 2020, the Redentore Church, also in Venice. RIBA Collections.

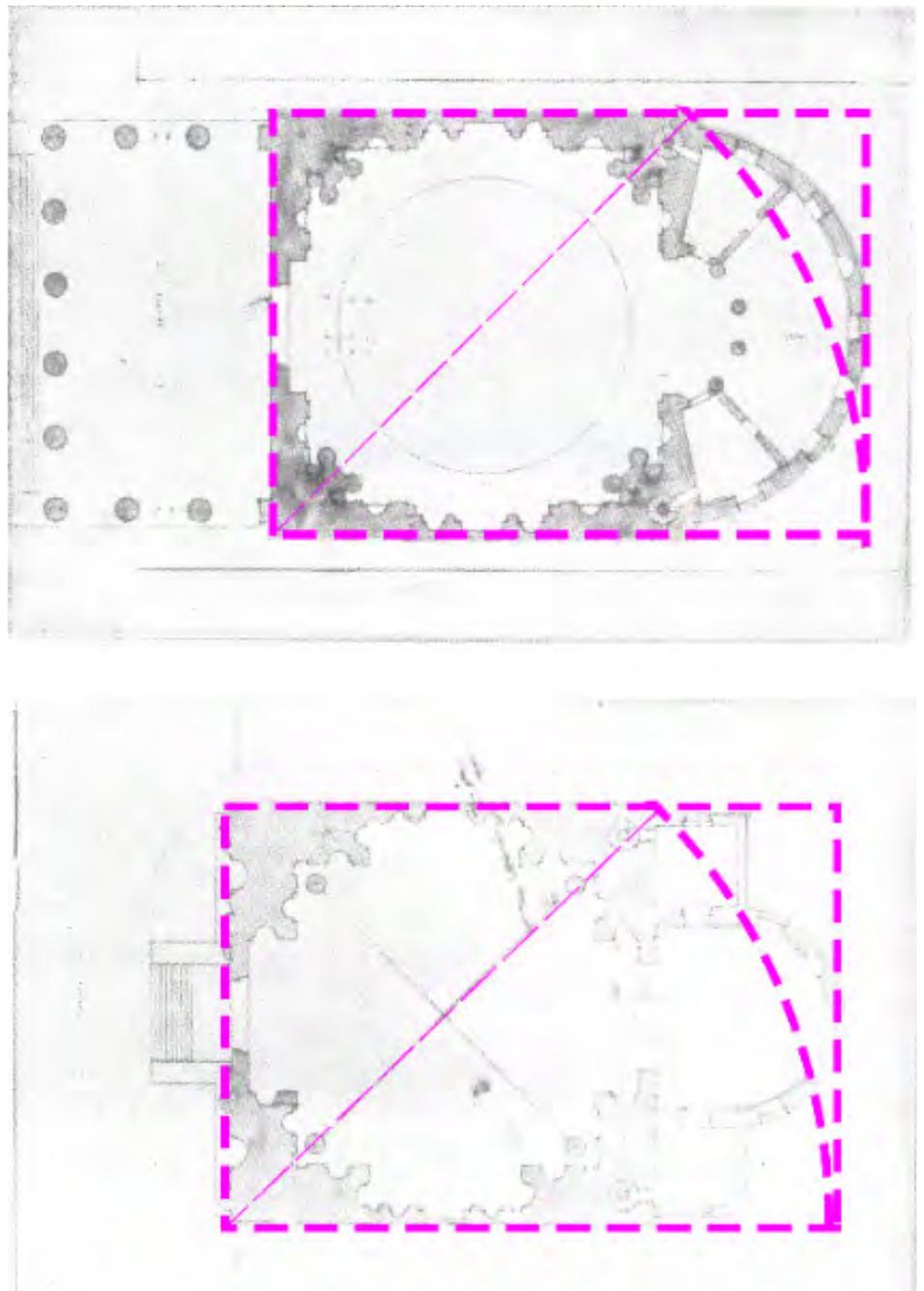


Figure 2: (graphic work courtesy of Ximena Parsons): after Wittkower, 1949 ("Architectonic Principles in the age of humanism", ex figures 40a and 40b) the San Nicola da Tolentino Church plans (upper one same as figure 1) by Palladio, that both fit in a root two rectangle proportioning tool. RIBA Collections.

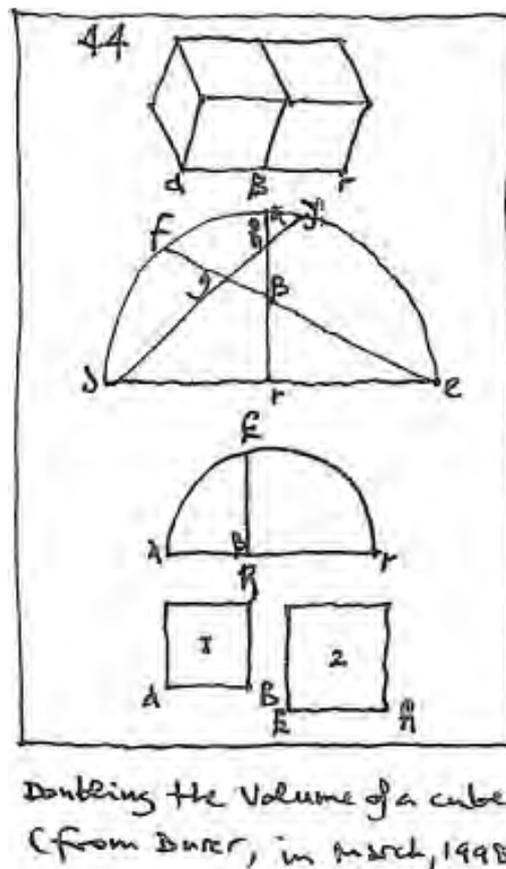
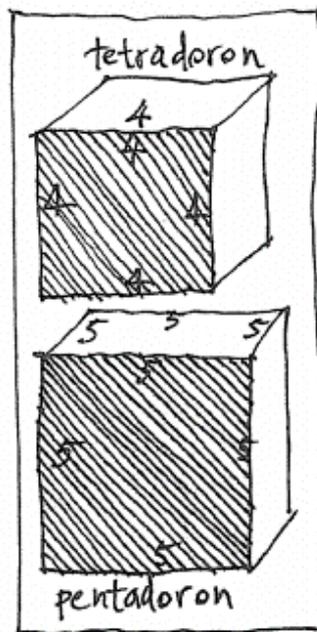


Figure D

iii. in *Principles of Palladio's Architecture*, 1944, page 111.

With the Doron principle, we imply that the dimensions of the Villa ought to be the same "in every way" (March, 1998), the puzzling "quoque versus" found in Vitruvius's Ten Books, that Morgan, in 1960, as reported in a note in Schofield's Penguin later translation, translates as "along all axes". The same dimensions in that case turn out to be root two rectangles based on the gnomon that is at the centre of the symmetrical building – we repeat symmetrical along the x and y axes and, furthermore, although unbeknown to most of visitors and scholars, most probably also along the z axis (at least based on the drawings and not also on the as-built building itself - until a 3D meticulous relief/survey is executed to duly check it out). We fully agree with Mitrovic (1990) when he states the following: "We may conclude that, although the theory of harmonic proportions accounts for most of the proportions in Book II, it does not account for all of them, nor it is the only theory used by Palladio" (emphasis added by author). With Mitrovic's other statement (also in Mitrovic 1990) that "Whether Palladio ever used any such 'principle of interproportionalization' is still an open question" we do not however agree. While Mitrovic goes on to formulate an original hypothesis about it, in his own words "plausible to a certain degree", we frame an altogether different one, hopefully plausible as well. It originates from Cornford's statement (1998), that truncating the Pythagorean Lambda to the cubes had nothing to do with musical harmony, it had to do with aiming at tridimensional solidity. In Wittkower's words<sup>iii</sup> "In contrast to France and England, most Italian monumental architecture is cubic and conceived in terms of a solid three-dimensional block. Italian architects always strove for an easily perceptible ratio between length, height and depth of a building, and all villas by Palladio have that block-like quality" (emphasis added by author).





iv. The Delic problem is one of the three "classical" mathematical problems: the one about how to double the volume of a cube. Doubling the side of one side of the cube will not double its volume. It was originally investigated by the ancient Greeks, to double the volume of the altar of the sacred temple of Delos (for the Gods to have mercy on the local population), hence the name.

Figure showing tetradoron and pentadoron cubic bricks, an early solution proposed by Barbaro to the Delic problem<sup>iv</sup> of doubling the cube, ex March, 1998

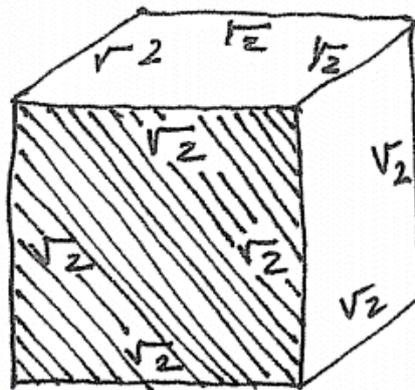


Figure showing a cube based on the root two rectangle "in every way" (March, 1998), "along all axes?" (Morgan 1960), sketch by author ("Portrait of a bridge...", 2019)

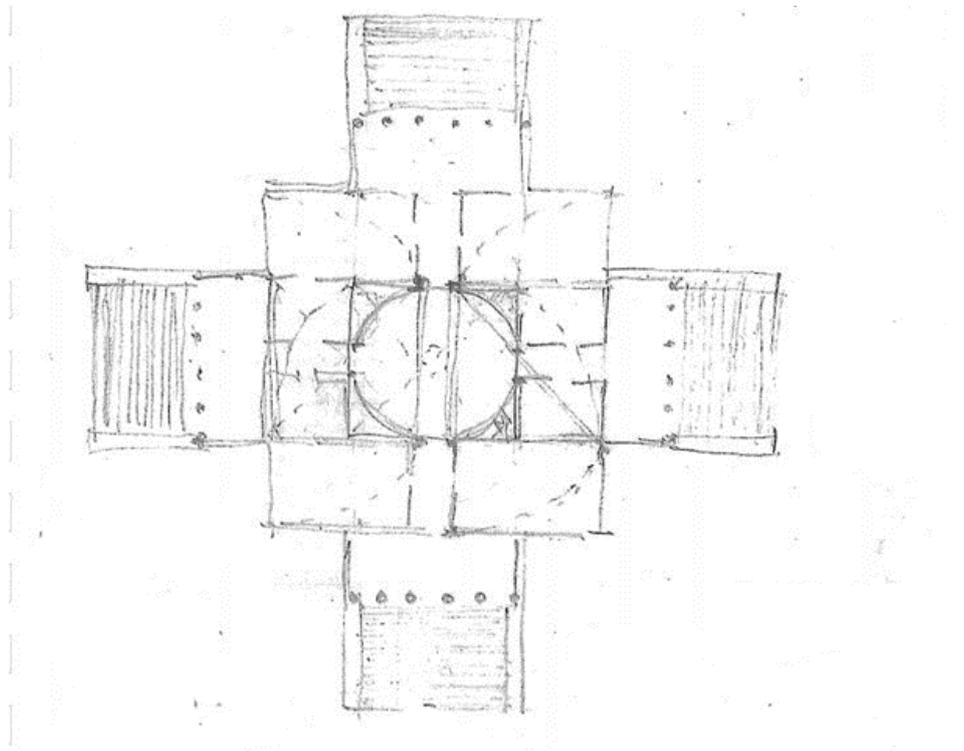


Figure P1: root two rectangles proportioning tool for the plan of the Rotunda, from a sketch by author ("Portrait of a bridge...", 2019)

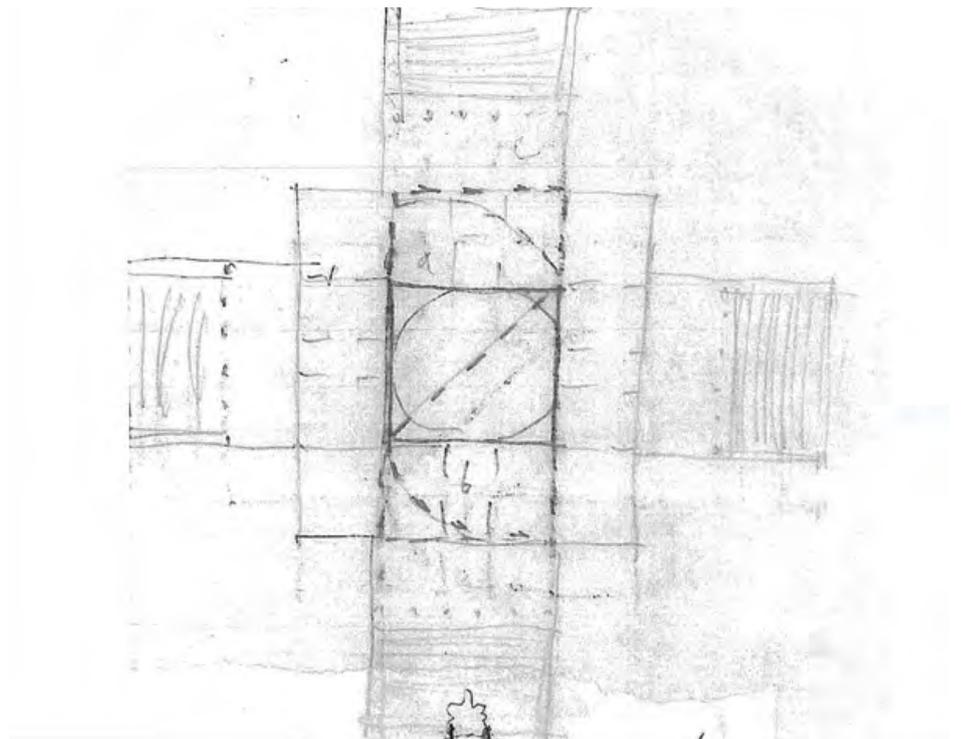


Figure Q: root two rectangles proportioning tool for the plan of the Rotunda, from a sketch by author ("Portrait of a bridge...", 2019)

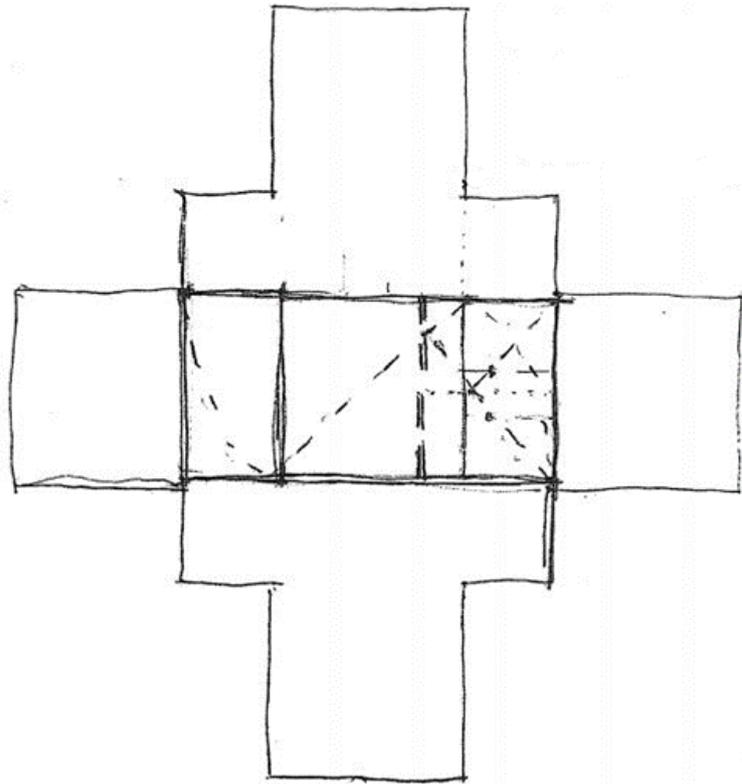


Figure C: plan of Rotunda with root two rectangles: proposed proportionality analysis and corridors based on that proportioning tool, from a sketch by author ("Portrait of a bridge...", 2019)

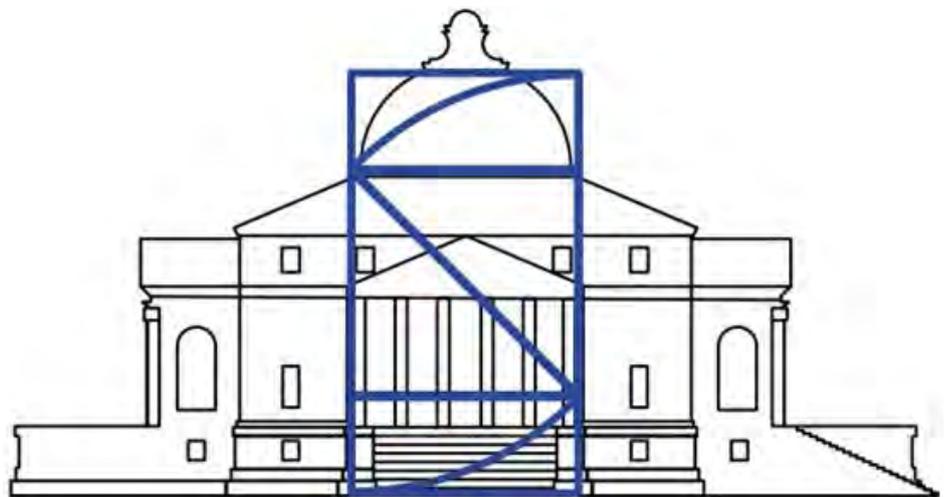


Figure E: elevation of Rotunda with root two rectangle proportioning tool: proposed proportionality analysis, from a sketch by author ("Portrait of a bridge...", 2019). It must be noted that Palladio's elevation had no lantern at the top of the dome, while Bertotti Scamozzi's drawing includes one.

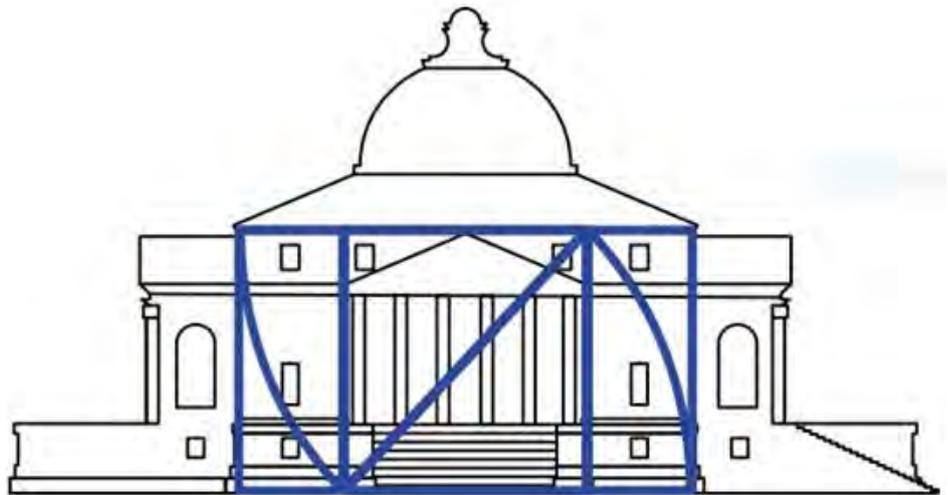


Figure F: elevation of Rotunda with root two rectangle proportioning tool: proposed proportionality analysis, from a sketch by author ("Portrait of a bridge...", 2019).

v. <https://www.youtube.com/watch?v=GmZIAVRKx8I>, accessed 16/09/2020.

A YouTube documentary<sup>v</sup> (whose authors also, like Serlio's translators Hart and Hicks, might not be aware of the prevailing/predominant use of the Root two rectangle during Renaissance), shows that the superimposition on the Rotunda Villa plan of Golden section Rectangles is also possible, which would somehow substantiate the hypothesis that a geometric construction with the Dürer -like first "geometric" method contains at the same time Root Two rectangles and Golden Section rectangles? It is noted that both Root Two rectangles and Golden Section rectangles can be conveniently divided into smaller rectangles that are proportional to the bigger ones, in line with Palladio's recommendations in his Four Books to have rooms with different, but "compatible", proportional, measurements - and heights when it comes to ceilings. As stated earlier, it is Wittkower's statement that only root two was a number of relevance in Renaissance architectural proportionality theory that leads us to the conclusion that the somehow "easier" to draft root two rectangles were the driving proportioning tool of the Renaissance-enlightened architect when he designed (in a centrifugal way) the Pantheon -like Rotunda Villa. Rachel Fletcher places the Golden Section in/on Villa Emo - a hypothesis categorically refuted by March.

The much cited "rigorous bi-axiality of Palladio's Villa Rotonda" (Anderson, 1994) – "diminished or destroyed in the English examples" (Anderson, 1994) - is in fact, according to the author of this paper, more of an equally-rigorous tri-axiality (in a UCS – Universal Coordinates System - along the x, y and z axes).

### **The Missing Link: Tetraktys-Based Pythagorean Examples of Proportions in Palladio's Four Books on Architecture**

Palladio's "harmonic" proportions are consistently based on the Pythagorean Tetraktys and Lambda. We note, after March (1998), that the numbers provided in his example - to find the height of a vault with the so-called "harmonic" proportions method - are all from the Tetraktys and Pythagorean Lambda.

*Pythagorean Lambda*, contains the *Tetraktys* (a small “pyramid’ built with 4 rows of#s: 1;2,3;4,6,9; 8,12,18,27), [in some way built on the Greek “*Teleon*”, (numbers 1,2,3,4; that added up to ten)], as seen in Raffaello’s “*Scuola di Atene*” in the *Stanze Vaticane*:

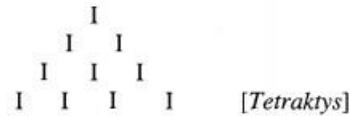


Figure L: Pythagorean Tetraktys (part of the Pythagorean Lambda) after author (2019), after March (1998)

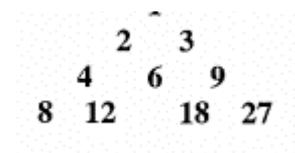


Figure T: the numbers of the Pythagorean “Tetraktys” (the Pythagorean Lambda truncated to the cubes), after March (1998)

other and then by multiplying breadth by length [of room in plan]:  $6 \times 12 = 72$  (result to then be placed below the [vertical] height of the room – already calculated previously by the arithmetic mean of breadth+length divided by two – 9 in the example provided by Palladio); following the simple calculations path sketched below we will obtain the searched harmonic vault height value, in this case, 8.

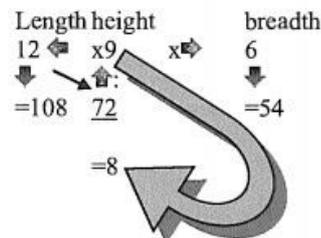


Figure H: method to calculate “harmonic” proportions to find height of vaults provided by Palladio in his Four Books on Architecture.

Also the previous methods mentioned by Palladio in his Four Books – arithmetic and first geometric method, let’s say the one after Dürer that uses (in a quite mysterious way, given that to do it he uses a “bendable” ruler, the workings of which are not known exactly at present to the author) the golden mean to find the length of the side of the double of a cube – use numbers that are elements of the Tetraktys. 4,6 and 9, the Albertian “*proportione sesquialtera*”, are all numbers of the Tetraktys and are aligned horizontally - the line being typical, according to March, 1998, of ‘geometric’ proportions in the Pythagorean Lambda. 6 and 12 are the numbers chosen for the arithmetic proportion example and they too, unsurprisingly, (even though only ever clearly stated by March, 1998) are from the “Tetraktys”.

The Harmonic proportions can be visualised (after March, 1998) as small triangles made with three numbers of the Tetraktys.

To revise the "harmonic" proportions, let's draw the Tetraktys a bit like a 4x7 Matrix:

|   |   |    |   |    |   |    |
|---|---|----|---|----|---|----|
| 0 | 0 | 0  | 1 | 0  | 0 | 0  |
| 0 | 0 | 2  | 0 | 3  | 0 | 0  |
| 0 | 4 | 0  | 6 | 0  | 9 | 0  |
| 8 | 0 | 12 | 0 | 18 | 0 | 27 |

|      | Columns |   |    |   |    |   |    |
|------|---------|---|----|---|----|---|----|
| Rows | 0       | 0 | 0  | 1 | 0  | 0 | 0  |
|      | 0       | 0 | 2  | 0 | 3  | 0 | 0  |
|      | 0       | 4 | 0  | 6 | 0  | 9 | 0  |
|      | 8       | 0 | 12 | 0 | 18 | 0 | 27 |

Where the numbers n (n being the numbers identified by row & column) of Matrix 4x7 are:

|      | Columns |     |     |     |     |     |     |
|------|---------|-----|-----|-----|-----|-----|-----|
| Rows | n11     | n12 | n13 | n14 | n15 | n16 | n17 |
|      | n21     | n22 | n23 | n24 | n25 | n26 | n27 |
|      | n31     | n32 | n33 | n34 | n35 | n36 | n37 |
|      | n41     | n42 | n43 | n44 | n45 | n46 | n47 |

vi. Where:  
 $n_{23} = n_{14} \times 2$   
 $n_{25} = n_{14} \times 3$

$n_{32} = n_{23} \times 2$   
 $n_{34} = n_{23} \times 3$ ;  $n_{34} = n_{25} \times 2$   
 $n_{36} = n_{25} \times 3$

$n_{41} = n_{32} \times 2$   
 $n_{43} = n_{32} \times 3$ ;  $n_{43} = n_{34} \times 2$   
 $n_{45} = n_{34} \times 3$ ;  $n_{45} = n_{36} \times 2$   
 $n_{47} = n_{36} \times 3$

With n=number, first index = row, second index=column and, therefore:  
 $1 = n_{14}$ ;  $2 = n_{23}$ ;  $3 = n_{25}$ ;  $4 = n_{32}$ ;  $6 = n_{34}$ ;  $9 = n_{36}$ ;  $8 = n_{41}$ ;  $12 = n_{43}$ ;  $18 = n_{45}$ ;  $27 = n_{47}$ <sup>vi</sup>

We note the pattern that any number of inferior row is multiplied by two on its left to obtain numbers (double the "original" number) in rows that have higher indices, while any number of inferior row is multiplied by three on its right, obtaining numbers in rows that have higher indices that will be triple the "original" number (for instance refer to numbers 1, 2 and 3 – etc.).

An "harmonic" proportion, based on the recommended method will be given by:

$$n_{34} \times n_{43} / n_{34} + n_{43} / 2 = n_{41}$$

In the example provided by Palladio:

$$6 \times 12 / 6 + 12 / 2 =$$

$$72 / 9 =$$

$$= 8$$

Similarly:

$$n_{36} \times n_{45} / n_{36} + n_{45} / 2 = n_{43}$$

$$9 \times 18 / 9 + 18 / 2 =$$

$$162 / 13.5 =$$

$$= 12$$

and so on, also in the Pythagorean Lambda where, for example:

$$\mathbf{12 \times 24 / 12 + 24 / 2 =}$$

$$288 / 36 / 2 =$$

$$288 / 18 =$$

$$= \mathbf{16}$$

vii. p. 98, MIT translation of Four Books on Architecture, 1997.

like the numbers used by Palladio for the design of the Palazzo, in Vicenza, of Mr Montano Barbarano, with Vicentine feet (in plan): **12, 16, 24**<sup>vii</sup>.

viii. p. 140, MIT translation, 1997.

ix. p. 138, MIT translation, 1997.

Both the Villa Thiene at Cicogna<sup>viii</sup> and the Villa Trissino at Meledo<sup>ix</sup> display the following Tetraktys' numbers: **36, 18, 12** (Vicentine feet, in plan), also in "harmonic proportion":

$$\mathbf{36 \times 12 / 36 + 12 / 2 =}$$

$$432 / 48 / 2 =$$

$$432 / 24 =$$

$$= \mathbf{18}$$

and that we can visualise as a small triangle in the Tetraktys as well.

Given the way the Tetraktys is built, we can find "arithmetic" means in it as follows:

an  $n14 + n25 / 2 = n23$  pattern, which, substituting with the numbers is, for example:

$$\mathbf{1 + 3 / 2 = 4 / 2 = 2;}$$

and an  $n41 + n32 / 2 = n34$  pattern, with the numbers of the Tetraktys being another example:

$$\mathbf{8 + 4 / 2 = 12 / 2 = 6.}$$

x. p. 136, op.cit. (H&L, 1982).

The following statement by Howard and Longair is in contradiction with our hypothesis, as 5 is not a number of the Tetraktys, "However, it should be remembered that all the harmonic numbers are multiples of 2, 3, and 5."<sup>x</sup> 5 is not in the Tetraktys, so should it even be a so-called "harmonic number"? The topic should be researched more in depth.

The same authors state the following. "A clear majority of the main living rooms are given dimensions corresponding to Palladio's seven preferred room shapes. Yet as many as 39% of the principal rooms have different proportions from those he recommends. The fact that certain simple musical ratios are absent or poorly represented on the plans suggests that Palladio tended to use his own recommended ratios in preference to musical harmonic ratios. In conclusion we should consider the wider implications of these results. In its simplest terms our analysis shows that Palladio had a definite preference for multiples of 2, 3, and 5 in the

xi. (H&L, 1982) p.136

dimensions which appear in the plans in Book II of the Quattro libri. In interpreting these results, various hypotheses could be made, including: (a) that Palladio used a system of musical harmonies, as Wittkower suggests; or (b) that he adhered to his own simpler recommendations concerning room shapes; or (c) that he recognized the practical advantages of using simple, easily divisible numbers.<sup>xi</sup> (emphasis added).

xii. p.59 MIT translation, 1997.

All these hypotheses seem not [to be] completely satisfactory to the author— especially after March's work of 1998- a) old hypothesis b) most probably correct, although a partial explanation (a different hypothesis of the author is that, in three dimensions, a mix of the recommended "methods" might have been used for each building and that would have echoed in the plans – interrelated to the heights - in Ching's words: with "interlocked" proportions [Ching, 2007]) c) compatible with Tetraktys' theory, but not strong enough, for instance: no mention is made to the practical need Palladio always keeps in mind – and also openly states in the Four Books<sup>xii</sup> – to end up getting, for the different rooms, ceiling heights that can "work" "well" together "so we should make use of each of these heights depending on which one will turn out well to ensure that most of the rooms of different sizes have vaults of an equal height and those vaults will still be in proportion to them, so that they turn out to be beautiful to the eye and practical for the floor or pavement which will go above them because they will all end up on the same level", (p. 59 MIT, 1997) (emphasis added by author). Palladio's motives in that respect were extremely "practical", as he puts it, in nature - a massive distraction, if not an incredible "omission"/omission, from the part of previous authors in general in not noticing, or downplaying, this motivational factor of the architect's work.

## Conclusion

In terms of overall considerations about Palladio's work: he worked on an innovative modern methodology to design buildings, in order to provide "standardized" methods that architects could use repeatedly, with slight variations according to the different needs of each single project.

His proposed system was practical and linked sizes of rooms (length and breadth) to their heights, in a way that would make them most of the time the same height, in order to have the ceilings - and the upper floors - at the same level.

The method used by Palladio was not always the "harmonic" one (it could have been the arithmetic one and/or the geometric ones – like in the case of the Rotunda Villa), so it does not make sense to say that Palladio always used "harmonic" proportions, as it is said in Wittkower's theory of musical harmonic proportions and in other authoritative authors' hypotheses as well, such as, for instance, that of the extremely scrupulous and detail-oriented Howard and Longair.

The proportionality analysis of the Rotunda Villa turns out to always have been undertaken unsuccessfully in the past. This work has offered a different approach to "reading" the Rotunda Villa, aimed at unveiling its design proportionality patterns. It is our understanding that the Rotunda

bears a tri-axial symmetry – along the coordinates x, y and z in space/ in 3D – and, although the sketches are approximate, the fact that also other designs of Palladio – see figures 1 and 2- are inscribable in Root two rectangles, would seem to corroborate this hypothesis. It would seem, furthermore, that the openings in the lateral corridors were placed there with the help of root two rectangles as proportioning tools (see figure C). Root two rectangles in plan (along both the x and y axes) and in elevation, along the z axis (see figures E and F), would seem to the author to have been used in the design phase. It remains ultimately uncertain which design and construction method Palladio was following while designing the Rotunda: his first “geometric” method, after Durer or simply the “doron” principle, after Barbaro, with the same dimensions “in every way” (March, 1998).

It would seem that, due to the omissions in the explanations of his recommended methods about how they actually worked/were “built”, based on the Tetraktys and the Pythagorean Lambda, that he left mostly understated, many architects and authors have been, consistently, at a loss, so often missing the point of the work and labors of our very subtle, and at the same time extremely practical, Pythagorean Palladio. Appendix: examples of “harmonic” proportion’s numbers in the Tetraktys and in the Pythagorean Lambda.

|    |   |    |    |    |    |    |    |    |
|----|---|----|----|----|----|----|----|----|
|    |   |    |    | 1  |    |    |    |    |
|    |   |    | 2  |    | 3  |    |    |    |
|    |   | 4  |    | 6  |    | 9  |    |    |
|    | 8 |    | 12 |    | 18 |    | 27 |    |
| 16 |   | 24 |    | 36 |    | 54 |    | 81 |

Geometric proportion: 4,6,9 (a straight line, as noted by March, 1998, in the Tetraktys and in the Pythagorean “Lambda”/λ)

|  |    |   |    |    |    |   |    |    |
|--|----|---|----|----|----|---|----|----|
|  |    |   |    | 1  |    |   |    |    |
|  |    |   | 4  | 2  |    | 3 |    |    |
|  |    | 8 |    | 12 |    | 6 |    | 9  |
|  | 16 |   | 24 |    | 36 |   | 18 | 27 |
|  |    |   |    |    |    |   |    | 54 |
|  |    |   |    |    |    |   |    | 81 |

“Harmonic” proportion: 6,8, 12 (a small triangle, as already noted by March, 1998, in the Tetraktys)

|  |    |   |    |    |    |   |    |    |
|--|----|---|----|----|----|---|----|----|
|  |    |   |    |    | 1  |   |    |    |
|  |    |   |    | 4  | 2  |   | 3  |    |
|  |    | 8 |    | 12 |    | 6 |    | 9  |
|  | 16 |   | 24 |    | 36 |   | 18 | 27 |
|  |    |   |    |    |    |   |    | 54 |
|  |    |   |    |    |    |   |    | 81 |

“Harmonic” proportion: 9,12,18 (a small triangle, as already noted by March, 1998, in the Tetraktys)

|    |   |    |    |    |    |    |    |    |  |
|----|---|----|----|----|----|----|----|----|--|
|    |   |    |    | 1  |    |    |    |    |  |
|    |   |    | 2  |    | 3  |    |    |    |  |
|    |   | 4  |    | 6  |    | 9  |    |    |  |
|    | 8 |    | 12 |    | 18 |    | 27 |    |  |
| 16 |   | 24 |    | 36 |    | 54 |    | 81 |  |

12, 16, 24: "Harmonic" proportion ( in the Pythagorean "Lambda"/λ)

|    |   |    |    |    |    |    |    |    |  |
|----|---|----|----|----|----|----|----|----|--|
|    |   |    |    | 1  |    |    |    |    |  |
|    |   |    | 2  |    | 3  |    |    |    |  |
|    |   | 4  |    | 6  |    | 9  |    |    |  |
|    | 8 |    | 12 |    | 18 |    | 27 |    |  |
| 16 |   | 24 |    | 36 |    | 54 |    | 81 |  |

12, 18, 36: "Harmonic" proportion ( in the Pythagorean "Lambda"/λ), as used by Palladio in Villa Thiene at Cicogna and at the Villa Trissino at Meledo.

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Drawings: RIBA Collections

# ULTRA

## **Positions and Polarities Beyond Crisis**

**SESSION 4: *Design Practice and Questions of Tradition***

# The Trajectory of Collective Life: The Ideal and Practice of New Village in Tianjin, 1920s-1950s

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## Keywords

New Village  
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## Abstract

Originated from New Village Ideal in Japan, New Village was introduced to China in the early 1920s and became a byword for social reform program. Many residential designs or projects whose name includes the term "Village" or "New Village" had been completed in China since that time. This paper uses the Textual Criticism method to sort out the introduction and translation of New Village Ideal theory in China, and to compare the physical space, life organization and concepts of the New Village practices in ROC with in early PRC of Tianjin. It is found that the term "New Village" continued to be used across several historical periods, showing very similar spatial images. But the construction and usage of New Village and the meaning of collective life changed somewhat under different political positions and social circumstances: New Village gradually became an urban collective residential area which only bore the living function since it was introduced into modern China. The goal of its practice changed from building an equal autonomy to building a new field of power operation, a new discourse of social improvement and a new way for profit-seeking capital. With the change of state regime, the construction had entered a climax stage. New Village then became the symbol of the rising political and social status of the working class, and the link between the change of urban nature and spatial development. Socialism collective life and the temporal and spatial separation or combination between production and live constructed the collective conscience and identity of residents. The above findings highlight the independence of architecture history from general history, help to examine the complexity of China's localization New Village practice and the uniqueness of Tianjin's urban history, and provide new ideas for the study of China's modern urban housing development from the perspective of changes in daily life organization.

## Introduction: New Village Ideal and Early Practice

1. Zhou Zuoren (1885-1967), a famous modern Chinese essayist, literary theorist, critic, poet, translator, thinker, pioneer of Chinese folklore and outstanding representative of the New Culture Movement.

2. Early 20th century, Japanese idealist writer Mushanokoji Saneatsu (1885-1976) launched the Atarashiki Mura (New Village) Movement in Japan to transform society, with the goal of promoting Human Life. His theory was based on naturalistic literature and inspired by the Mutual Aid theory of anarchist Peter Alexevich Kropotkin and the Pan-laborism theory of writer Lev Nikolaevich Tolstoy.

3. Ogawa Rikan, "Re-discussion of the Influence of Japanese New Village on Zhou Zuoren," *Modern Chinese Literature Studies* (Apr.2018), 147.

4. Before the May 4th Movement, the article *New Villages in Japan* by Zhou Zuoren that published in the journal *Xinqingnian* (新青年) which was an important position of the New Culture Movement. Zhou went to Japan in mid-July to live in the headquarters of New Village in Hiuga for four days and participated in labor to "experiencing the happiness life of the right person". Then he opened a branch of New Village in his home in Beijing in February of the following year.

5. Zhou Zuoren, "New Village in Japan," *Xinqingnian*, no.6 (Mar.1919), 266.

6. After the Russian Revolution of October and the June 3rd Movement in China, Chinese intellectuals paid more attention to the role of laborers and gradually advocated labor, especially manual labor. Cai Yuanpei (蔡元培) also shouted: "Labor is sacred." See Li Shaobing, "A New Study of New Village Ideal in the May 4th Period," *Journal of Historical Science* (June. 1992), 68.

There has been no evidence whether Zhou Zuoren<sup>1</sup> was attracted by the Japanese New Village Ideal<sup>2</sup> for he spent his childhood in a turbulent society and yearned for the life philosophy of "Great Harmony (大同)" in the primitive clan society of China, he was influenced by the literary thought of "individualist humanism" of Japanese Shirakamba (白桦派は) or he worried that the Russian October Revolution would brought the hope of saving China and violent revolution at the same time.<sup>3</sup> However, the New Village Ideal he actively promoted and organized started at the climax of the New Culture Movement.<sup>4</sup> In all his articles or speeches, Zhou repeatedly emphasized that the spirit of New Village was to promote "person's life", establish an ideal society where "everyone could do their best and obtain what they need" and "everyone could be cooperative, free, helpful and independent" and "advocate collective faith and freedom" through peaceful and improved ways.<sup>5</sup> His thoughts were in line with the ascendant movement of saving China from subjugation and ensure its survival in the early twentieth century as well as the anarchism that advocated personal freedom at that time. In addition, New Village's advocacy for voluntary labor, especially manual labor, catered to the "Work-study Program" trend at that time.<sup>6</sup> Therefore, New Village evoked repercussions in China from 1919 to 1921, with many celebrities from all walks of life actively discussing it and trying to practice it to call on people to move out from the city and create an ideal living environment characterized by equality, self-sufficiency and mutual help through improving traditional villages.

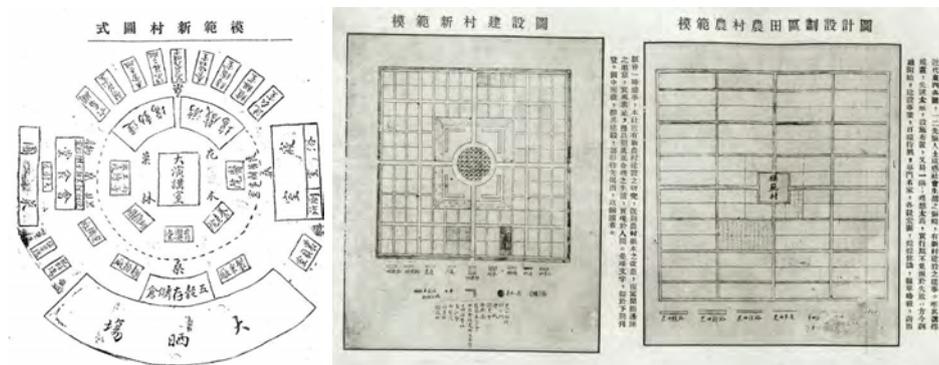


Figure 1: Model New Village proposal in 1922, Drawing by Gao Lvzhen (高履贞). Source: *Daoluyuekan*, no.3 (Jan. 1922), 95.

Figure 2: Proposal of Farming area and construction planning of Model New Village in 1928. Source: *Sanminbanyuekan* no.1 (Mar, 1928), 1.

During that stage, the construction of New Village including Longhua New Village (龙华新村) in Shanghai, Qixin Agricultural Factory (启新农工厂) in Nanjing as well as the Caiyuan New Village (菜园新村) and the Work-study Mutual Aid Team (工读互助团) established by Wang Guangqi and Li Dazhao was in full swing. However, the New Village builders only imitated the systems and models of Japanese New Village movement. Without the guidance of professional architects, these social reformers involved in the constructions overemphasized the existence of certain material spaces and failed to pay attention to specific planning and design.

## Translation: Spatial Model and Three Kinds of Practices in Tianjin

7. Hu Shi. "Non-individual's New Life," *Xinchao* (新潮), no.2 (Mar.1920), 475.

Hu Shi argued that the "Individualistic New Life"<sup>7</sup> advocated by the New Village Ideal in Japan was not applicable as it would break the great social division of labor and people's connections to external world, which was proved by the rapid bankruptcy of early New Village practices. From 1921, the New Village Ideal gradually slipped out of the popular consciousness. However, as a Utopian ideal, the term "New Village" had gradually become synonymous with social reform or urban reform. Foreign theories or practices similar to it, such as "Fallon Staier", "Agricultural and Manufacturing Villages of Unity and Mutual Cooperation", "Garden City", "Model City" and "Industrial Model Village" were all named "New Village" and introduced by social reformers of China.

8. Wu Shan, "Preface and Illustrated Explanation for the Establishment of Model New Village," *Daoluyuekan* (道路月刊), no.3 (Jan. 1922), 94-97.

9. Anonymity, "Proposal of Farming area and construction planning of Model New Village," *Sanminbanyuekan* (三民半月刊), no.1 (Mar, 1928), 1.

Based on more foreign theories and cases, domestic scholars started to develop the New Village spatial model. Both the "Model New Village" spatial model (Figure 1) concept proposed firstly in 1922 in the article *Preface and Illustrated Explanation for the Establishment of Model New Village*<sup>8</sup> and the New Village Model (Figure 2)<sup>9</sup> mentioned in the journal *Sanminbanyuekan* (三民半月刊) in 1928 were all based on rural reconstruction. Except that the latter reflects slightly the traditional planning method of Chinese "Square-fields System (井田制)", they are exactly the same as the "Garden City" in terms of functional layout and are hub and spoke based: in the center of a New Village is a park or lecture hall for gathering people, surrounded by various public service spaces needed for modern living, and in the outer space are residential units and production place supporting the economy of the New Village.

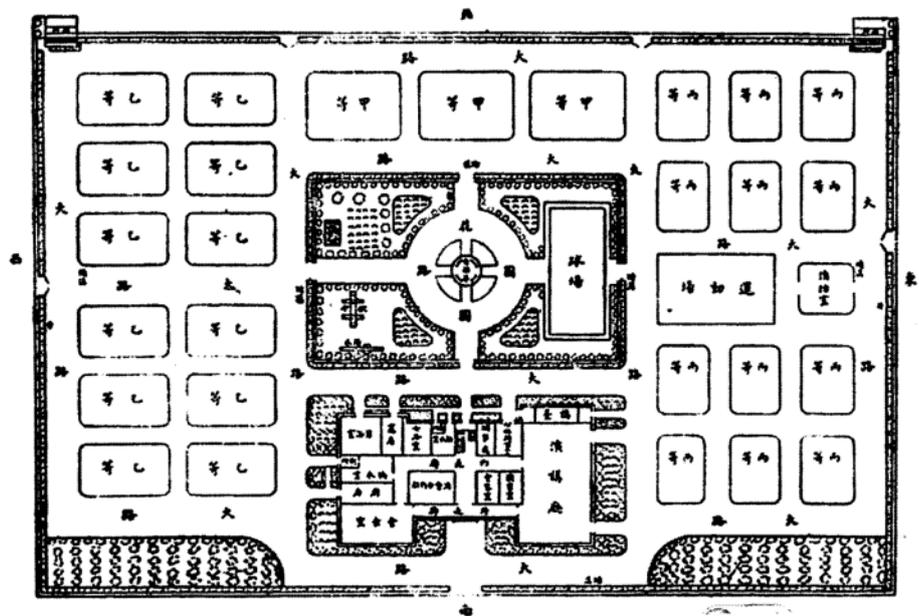


Figure 3: Proposal of the Laborers' New Village general layout standard. Source: *Laogongyuekan*, no. 2 (Jan.1933), 16.



Figure 4: Photos of Qian New Village (a) and Hou New Village (b), Tianjin, 1935. Source: *Haiwang*, no.7 (1935), 558\562.

10. Ju He, "Outline of Laborers' New Village Facilities," *Laogongyuekan* (劳工月刊), no.2 (Jan.1933), 82-83.

11. Rang, "Our New Villages," *Haiwang* (海王), no.7 (1935), 491-493.

12. Anonymity, "Improvement Plan of Tianyi Village in Tianjin," *Dianyetongxun* (电业通讯), no.43 (1948), 16.

13. The Oriental Corporation Ltd. Tientsin's, *Annual Journal of the Oriental Corporation Ltd. Tientsin's* (Tientsin: The Oriental Corporation Ltd. Tientsin's, 1934), 108-109.

14. The outline pointed out that the necessary facilities in a New Village includes a primary school, a labor cram school, a reading room, a lecture hall, a rumpus room, a clinic, a public bath, a park, a playground, a home craft factory, a fire station, a cooperative, a nursery, an orphans and disabled home, etc. See Labor Department of the Ministry of Industry and Commerce, *Outline of Laborers' New Village Facilities* (Peking: Jinghua Press, 1930), 9.

Around the 1930s, there were already no public utilities such as public fields, property, industry and commerce or collective consumption that satisfied daily life needs such as clothing, food and housing in the Laborers' New Village model (Figure 3).<sup>10</sup> The Laborers' New Village had become a new aggregated residential model built for laborers with the purpose of improving their living space and facilities, educating their children, cultivating their good characters and at the same time forming an autonomous group thus to build a sound new society.

For example, four companies named Yongli Industrial Company (永利制碱公司), Jiuda Salt Company (久大精盐公司), Huanghai Chemical Industry Research Institute (黄海化学工业研究社) and Yongyu Salt Industry Company (永裕盐业公司) had built staff residences in Tanggu District, Tianjin, called Qian New Village (前新村), Zhong New Village (中新村) and Hou New Village (后新村) (Figure 4). In addition to various staff residences, there were also gardens, tennis courts, clubs, children's playgrounds and kindergartens.<sup>11</sup> The No.1 Power Station of the Tianjin Branch of Jibei Electric Power Company (冀北电力公司天津分公司第一发电所) had improved the living conditions of its staffs who lived in Tianyi Village (天一邨), expanded the club, the library and recreation room, and increased the educational public games and sports equipment for children. They also actively held gardening and indoor cleaning competitions and other competitions.<sup>12</sup> The workers' dormitories of the Oriental Corporation Ltd. Tientsin's (天津东亚毛呢纺织有限公司) adopted more stringent management like turning off lights uniformly to control workers' work and rest and cultivating their hygiene habits and self-discipline awareness by arranging them to do cleaning in turn. A positive institutional environment was the prerequisite for the normal development and education function of staff dormitory.<sup>13</sup> Its Regulations for Staff Dormitory Management (职工宿舍管理规则) was quite consistent with the "Regulations" in the *Outline of Laborers' New Village Facilities* (劳工新村设施大纲)<sup>14</sup> promulgated in the later period of the ROC.



Figure 5: Photos of Daxing New Village (a) and Chuhui New Village (b). Source: Photos by authors, 2020.

It was worth noting that many residential areas named “Village” in Tianjin foreign concessions were still built or purchased by enterprises for staffs to live in, such as Daxing Village (大兴邨) and Chuhui Village (储汇邨) (Figure 5). Daxing Village included two parts, Daxing Old Village and Daxing New Village, both of which were built by Daxing Engineering Company (大兴工程公司). At that time, most of dwellers were staffs of the company and the family members of company’s chairman. Chuhui Village originally named Tian’anli (天安里), was changed into the dormitory of the Postal Savings and Remittance Bureau in 1945, and named with “Village” that showed the characteristics of the enterprise and New Village. At material level, these dormitories for staffs was built in pursuit of sanitation, non-traditional housing space and collective housing to achieve “supervision” over the daily lives of them; however, with the gradual disappearance of public service space, it was not different from other commercialized New-styled Lilong (里弄) named after the term “Village” or “New Village”.

15. Yang Yi, “Villages, Lilong and Villas in Tianjin Concessions,” 369 *Huabao* (三六九画报), no.17 (1942), 20.

The commoditized New Village was essentially the housing problem of modern society and was the core content of a whole set of discourse, knowledge, analysis about collective residence. Around the 1940s, many residences developed by the real estate enterprises in the Tianjin foreign concessions were named after the word “Village” but did not have the features of real villages. “The celebrities, hermits and traditional Chinese culture fans who lived there” were actually “Modern ladies or men in suits and leather shoes.” The house was new-styled, with flowers, plants and fruit trees in the courtyard. The roads in the village were wide and suitable for daily activities and communication.<sup>15</sup> With the development of national industry, the emerging middle class raised and tried to strengthen their identity through space consumption. The real estate developers made efforts to build marketing strategies by consuming modern, hygienic spatial intention contained in the word “New”, as well as taking advantage of the Chinese attachment to the traditional connotation of the word “Village”. The New Village became a symbol of identity and modern collective residential space. The concept of social improvement almost completely disappeared from it. In addition to the New Villages built by enterprises and real estate developers, the government-led Public Housing for Low-income became the third form of New Village. The Kuomintang (KMT) government chose a simplified Laborers’ New Village model to solve the living dilemma of poor people and relevant social problems to demonstrate its governing ability and political legitimacy. However, due

to the lack of fund, the supporting facilities and space of Low-income New Villages were often imperfect. The government could only take management and collectivization as the way to tackle the lack of public space and an institutional method to discipline the civilians. Though Tianjin Municipal Government had drawn up construction plans for many times, the actual number of completed housing was only eight; most of the planned public service spaces had also been abandoned to increase the number of residences like Xinminli (新民里) municipal housing; and even some basic public facilities such as tap water and toilets needed to be afforded by dwellers like Dongbei New Village (东北新村) built in 1948 (Figure 6).

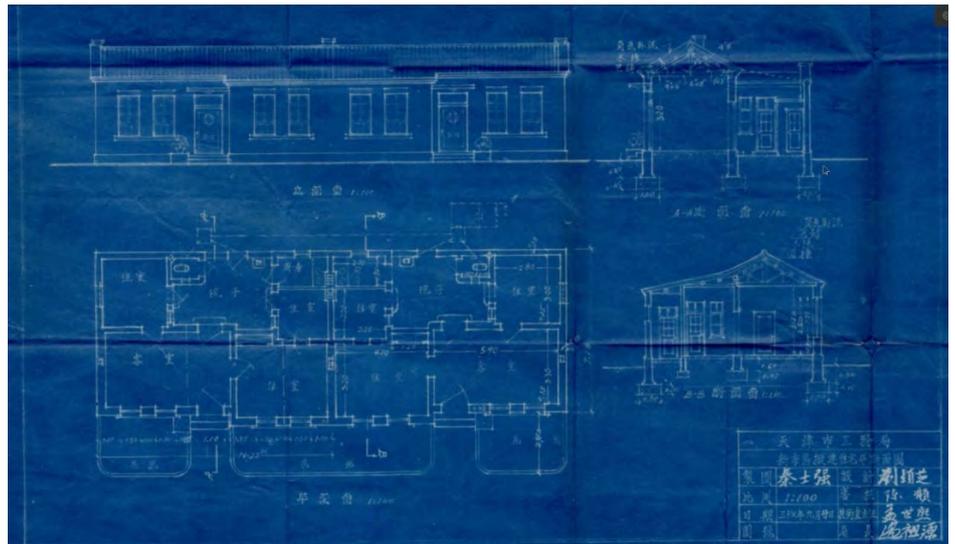


Figure 6: Architectural drawings of the houses in Dongbei New Village. Source: Tianjin Municipal Archives,[ J0101-1-001416].

### **Climax: Collectivized Expression of New Village in Socialist Country**

16. The Party Literature Research Center of the CPC Central Committee, *Mao Zedong's Early Manuscripts* (Changsha: Hunan Publishing House, 1990), 413.

During the New Culture Movement, Mushanokoji's New Village Ideal had an important influence on the early Communists. In 1919, Mao Zedong explored work-study program on the basis of the New Village and made a relatively specific description.<sup>16</sup> He even visited Zhou Zuoren for advice in the spring of 1920. After a long period of translation, New Village was chosen by the Communists again in 1949 when China became a socialist country. Then a new round of New Village construction began, which reflected and praised the new society and new system. From a practical point of view, when a new regime was established, the more blank the land was, the more favorable it was for the ruling party to build ideal New Villages, choose ideal residents and set up new living standards. The newly established regime could also provide a good political and institutional guarantee for the New Village Ideal, which was particularly evident during the nationwide construction of Workers' New Village.

After the founding of the PRC, the new regime formulated a development path of "more accumulation and less consumption" to realize the China's industrial modernization and economic development. The "more accumulation" of the economy enabled the rapid development and expansion of urban industries. At the Second Plenary

17. Mao Zedong, *Selected Works of Mao Zedong*, Vol 4 (Beijing: People's Publishing House, 1965), 1492.

Session of the 7th National Congress of the Communist Party of China (CPC), Mao proposed to increase the number of industrial workers, "turn a city of consumption into one of production", and "rely wholeheartedly on the working class"<sup>17</sup> to accomplish production goals. Then the political and social status of the working class had been improved as never before.

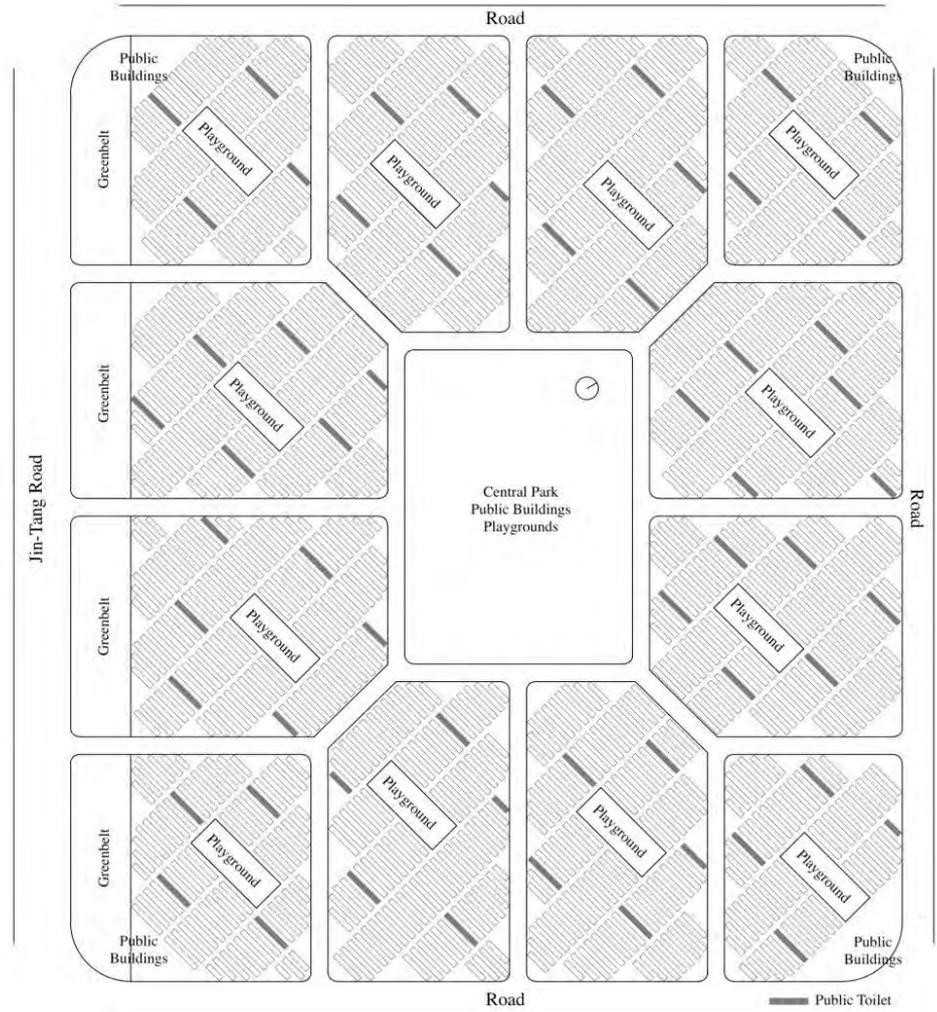


Figure 7: General layout of Zhongshanmen Workers' New Village (中山门工人新村) in Tianjin. Source: Diagram by authors based on the drawing obtained from Tianjin Municipal Archives, [X0159-C-000032-001].

18. The number of employees in Tianjin was 281,902 in 1949 and 451,814 in 1952. Among them, the number of employees in the state industrial sector was 111,705 in 1949 and 231,375 in 1952. See Tianjin Municipal Bureau of Statistics, *40 Years of Tianjin (1949-1989)* (Beijing: China Statistics Press, 1989), 273\291\415.

19. The Party Literature Research Center of the CPC Central Committee, *A selection of important documents since the founding of the PRC, vol 2* (Beijing: Central Party Literature Publishing House, 1992), 40-41.

From 1949 to 1952, the number of workers in Tianjin increased by 60%, with the number of employees in state-owned enterprises increasing by 107%,<sup>18</sup> much higher than the national level during the same period. At that time, the issue that workers across the country were facing serious housing shortages or poor living conditions. In addition, with the regularization of industrial production competition and the continuous expansion of production scale, the connection between workers and factories had become closer and the construction of concentrated worker dormitories had become an urgent task. At the beginning of 1951, the Central Committee of the Communist Party of China clearly required that "in urban construction plans of various regions, serving production and workers should be prioritized",<sup>19</sup> and the construction of Workers' New Village should be vigorously promoted as one of the welfare undertakings of national construction.

In the spring of 1952, the Tianjin Municipal Government established the Construction Management Committee (CMC) to mobilize all forces and built seven concentrated Workers' New Villages. The residences in the Workers' New Village were all bungalows arranged based on the planning theory of Neighborhood Unit with complete public and supporting facilities, forming a complete living community. With more than 55,000 residential units of the Workers' New Villages being built successively from the end of 1952 to the beginning of 1953, the long-term housing difficulty of 170,000 workers and their families was resolved.

20. Ten types of bungalows were designed by the CMC, and was built as model rooms by Tianjin Building Material Factory. The CMC invited worker representatives to visit twice and solicited their opinions, then determined the final style, including one type for family housing and two types for bachelor quarters. See Zhou Kang, "The First Step to Solve the Workers' Accommodation Problem Thoroughly- Record the Construction of Workers' Dormitories by People's Government of Tianjin," *People's Daily* (人民日报), May 21, 1952.

21. "The First batch of Workers' Dormitory Bases are being Surveyed Today and the Constructions will Start Next Week," *Tianjin Daily* (天津日报), March 28, 1952.

Although the foundations of Workers' New Villages in Tianjin are different, they are built based on the same standard drawing for residential building.<sup>20</sup> The building is a simple brick-wood structure bungalow with a coke button ground inside, 25 centimeters red brick walls, reed wattle roof of red tile. Each residential unit is a simple one-bedroom with wooden frame glass windows installed at the front and rear to ensure ventilation and lighting. Every 10-12 residential units are connected in a row, and several rows form a section, each of which is equipped with some faucets, public toilets and grocery stores. A New Village is planned according to the topography, composed with sections as repeating units and set up gardens, sports fields, service spaces and other public facilities (Figure 7).<sup>21</sup> However, the stylized residential design, unified residential indicators and various institutionalized construction standards have resulted in the monotony and inflexible spatial form. The residential buildings are arranged in a barracks style making the New Village more regular but not flexible enough. But it is the pursuit of homogenization that highlighted the social concept of absolute fairness (Figure 8).



Figure 8: Photos of the housing interior (a) and Zhongshanmen Workers' New Village (b). Source: Zhongshanmen Workers' New Village Museum, Tianjin.

If the spatial images of equality, justice, cleanliness and hygiene in the construction of previous New Village were adopted by the new government to create socialist living space, then the single function of the residences, that is, almost all other living needs besides sleeping relied on the public space, laid the foundation for the possibility of collective life. A large number of daily life practices occurred in public spaces greatly increased the contact and communication between workers and their families. Lowering housing standards, reducing and publicizing private space also alleviated the contradiction between the growing housing demand and the shortage of supply.

The activities in the public space in Workers' New Village had not only public attribute, but also collective attribute, which was reflected in housing construction and distribution, staff life and management.

22. Zhu Lin, "The Production of the Socialism Collective Space-In the Case of Tianjin Zhongshanmen Worker Model Village in 1950s," (Master diss., Nankai University, 2018), 35-36.

23. Tianjin Municipal Archives, [X0044-Y-000422-006].

24. Yan Lifei, "Changes of Village Imagination and the Image of the City: from Workers' Village to Century City Rebuild," *Urban Cultural Studies* (Jan. 2015), 221.

During the construction progress, both the government and work units encouraging even compelling workers to voluntarily participate in the construction and the active mutual assistance of workers in the later stages of house building had been continuously strengthening workers' sense of belonging and identification with the collective. The housing distribution was conducted according to the work unit and concrete shifts of the workers.<sup>22</sup> At that time, the relationship between the workers and the work unit established through production was extended to life, creating a collective space. Compared with the Unit System (单位制), the Street Office System (街居制) had a greater impact on the daily life management of workers and their relatives. It had eliminated the spatial divisions associated with work units and promoted the development of the concept of collectivization of residents within the jurisdiction scope through the organization of various publicity, education and mass activities such as the patriotic health campaign, activities of the mutual aid group, the shift duty of family members and the nursery service in the New Village.<sup>23</sup> Besides, this collectivization concept was cultivated for production.

As a kind of new socialist space, the spatial reproduction of the Workers' New Village not only promoted the collectivization of the residents' daily lives but also adjusted the industrial layout of industrial city. In Tianjin, the construction of Workers' New Villages was a part of the urban spatial layout and industrial layout all the way. It was clarified in the 1954 *Preliminary Planning for Tianjin Urban Construction* (天津城市建设初步规划方案) that Tianjin was an industrial city. The planning of the industrial zones were conducted based on the location of the Workers' New Villages to form industrial belts around the city, which overlapped or were close to them spatially.<sup>24</sup> The Workers' New Villages and the new industrial zones constituted the power source and growth poles for the vigorous development of this socialist industrial city with their marginal spatial locations, and had become the basic characteristics of Tianjin for a long time.

## Conclusion

The New Village Ideal was introduced from Japan to oppose human alienation as a tool of labor, advocate autonomous common work and life and try to establish a Utopian ideal society far away from the urban. However, in modern Tianjin, it was locally translated into a social improvement housing project for the development of enterprise dormitories, municipal welfare and market commodities. The first two were basically conducted in accordance with the model of Laborers' New Village, strengthening the internal organization to enhance local and collective cohesion to resist external mobility and uncertainty; or adopting strong discipline connotations to break the balance between individuals and collectivities and make individuals subject to the organization, which was far from the New Village spirit Zhou Zuoren advocated. The New Village, which had become a bulk commodity, was completely irrelevant to the connotation of social improvement but served as the tool for making profit. It could only provide people with imaginative space for modern life and leisurely rural life through naming. The luxury space created had also become the tool for the differentiation and polarization of the production society. After the

liberation of China, the Workers' New Village reflected the special political concern of the CPC and the new regime for the working class, and produced space with three attributes: political space, productive space and residential space. The new space shaped the daily life of the workers in the New Village and even the residents themselves; a series of collective activities further strengthened the egalitarian and collectivist concepts of daily life in the Workers' New Village.

25. Zhang Huakan studied construction engineering in the United States, and participated in the engineering design of the 22nd arsenal of the Military and Political Department of the Nationalist Government in 1936. In January 1949, he became the director of the Tianjin Municipal Public Works Bureau and began to perform the function of managing the construction of the Tianjin urban area.

26. Xiao Qiusheng, "Song Zhuqin: Tianjin Enters a New Era," *Tianjin Daily*, August 26, 2009.

It is undeniable that at the material level, the planning form and spatial intentions of the Workers' New Village were influenced by various theories and practices of New Village before liberation. During the early period of New China, the new construction system had not yet been established. Some individual architects, architectural design firms and contractors continued to practice under the old construction system. At that time, some experts who were already experienced in urban management, construction and planning before liberation and represented by Zhang Huakan,<sup>25</sup> deputy director of the CMC were in charge of the planning and design of Workers' New Village in Tianjin.<sup>26</sup> Therefore, the knowledge about the New Village reflects a kind of continuity in terms of professional thinking and professionals, highlighting the important difference between architecture history and general history. However, the connection between the Workers' New Village and New Village Ideal or Laborers' New Village had been intentionally or unconsciously concealed in the new government's discourse system. That the workers' collective residential area was named "New Village" highlighted the yearning for the communist ideal life characterized by that "everyone was equal and interdependent". The ideal life belonged to the working class who was the master of New China. The term "New Village" thus became a political symbol.

For early modern China, the New Village was a product of modernity, with ideality, modularity and advancement unmatched in traditional society; many planning and construction theories it contained had provided very important references for China's later practice of living space. The collective living form advocated by the New Village emphasized the relationship between individual and collective as well as the life form of individual in the collective. Although the practice of the New Village before liberation advocated the form of collective living, it paid more attention to the privatization of the family rather than public space. The New Village in the early stage of socialism embodied the "public private life" in the era of collectivization. The more the living space of individual was compressed, the more the will of the state could be conveyed to the masses. The Workers' New Village created an equal, voluntary and interdependent collective space and life. All the conveniences of life would be shared fairly by all the working class that generated wealth. It demonstrated the deep aspects of the imagination for socialist and collectivist city and reached another climax during the "Movement to Form Rural People's Communes (人民公社化运动)" which began in the late 1950s.

# The Nusantara Architecture Design Competition: A 'Forced' Traditionalisation of Indonesia's Architectural Identity Translation?

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## Keywords

Nusantaran Architecture  
Design Competition,  
Ten New Bali  
Traditionalism  
National identity  
Identity politics  
Orientalism  
The tourist gaze

## Abstract

The Indonesian government has recently adopted the term 'Nusantaran Architecture' as an alternative representation of Indonesia's architectural identity. This term is employed to capture the locality of the country, whose narration is developed around the idea of bringing back the indigenous culture as part of preserving the 'authentic' identity of the country. The term is incorporated in the national tourism plan, and is literally adopted in the Nusantara Architecture Design Competition, a platform from which the government obtains design translations of the perceived identity. However, this design competition leads to 'traditionalising' architecture, depicted in how the winning designs incorporate the traditional design elements to 'localise' the buildings. This design competition is problematic not only for its top-down Javacentric method employed, but also for its direction in appropriating traditionalism in contemporary built form based on the architects' and the juries' arbitrary approaches. Since economic motive through 'romantic tourist gaze' dominates the translation of identity, it portrays not only the hegemony of capitalism in the way the country imagines its own identity, but also the presence of an Orientalist view as a legacy of colonialism. This paper investigates the problematic implementation of the Nusantara Architecture Design Competition as an attempt to concretise the authorised version of the perceived identity. It also scrutinises the strong political influence that governs the whole identity construction process in adopting what is regarded as 'given' traditional architecture.

## Introduction

1. The term Nusantara was coined in the era of the Majapahit Kingdom (1293-1520), when Prime Minister Gajah Mada swore to conquer the Southeast Asia archipelago, called Nusantara, and brought victory to the kingdom. Nusantara itself is literary translated as 'the archipelago' that was once united under the sovereignty of Majapahit, despite lack of proof and evidence of the validity of this story. In the era of Indonesia's first president, Sukarno, the term Nusantara was re-imagined to be the alias of Indonesia, and this understanding persists until today. Therefore, Nusantaran Architecture is seen as equal to Indonesian Architecture in representing the country's architectural identity, despite different directions and emphasis given in their translation.

2. Johannes Adiyanto, "Mencari DNA Arsitektur di Nusantara," (paper presented at the Seminar dan Sarasehan Arsitektur Nusantara, Surabaya, March 2018), B015-22.

National identity has been an ongoing discussion in the Global South post-colonial countries, since there is an urge to represent themselves to the international world as new and free countries that have escaped from the hegemony of colonialism. In Indonesia, the discussion of architectural identity resurfaced in the 1980s when a group of architects questioned what Indonesian Architecture was. Its unclear and undefined meaning led to the emergence of the term Nusantaran Architecture, which referred to traditional architecture as the repertoire in developing the country's architectural identity.<sup>1</sup> The discussion stayed dormant for some decades until it reappeared in 2011 after the term Nusantaran Architecture was used quite extensively in the rhetoric of the Wae Rebo preservation project (Figure 1). This philanthropic project gained national and international attention, so did the term Nusantaran Architecture. The soaring popularity of this project brought the term back to the national discussion. Nusantaran Architecture was even promoted as the 'core', even the 'DNA', of the country's architectural identity.<sup>2</sup> The discussions that followed revolved around preserving the 'authentic' traditional architecture from which the country's architectural identity should be reclaimed.



Figure 1: The Mbaru Niang houses at Wae Rebo after reconstruction (Source: Untung Saroha Sihombing, 2015 - reprinted with permission)

The preservation project put Wae Rebo on the international tourism destination list and brought unprecedented tourism activities hence significant economic leverage to the place. Seeing this potential, the government started to adopt a similar method to other places in Indonesia, using cultural preservation as a catalyst for tourism, providing an exotic experience of living among the locals in remote villages. The government then incorporated the term Nusantaran Architecture in the Ten New Bali programme, which is the national tourism development blueprint to copy the success story of Bali, in terms of attracting tourists and contributing to the national income, in the ten different places in Indonesia. The term was then applied in a design competition entitled 'Nusantaran Architecture Design Competition', a platform in which architects competed to design various tourism amenities in the ten

dedicated places, using traditional architecture as the source of ideas to represent the culture and tradition of the place.

This paper problematises the appropriation of the traditionalist view in designing the country's so-called 'architectural identity.' It also discusses the strong Javacentrism in the Nusantara Architecture Design Competition, as all things related to the competition were done and decided in Jakarta, implying a top-down method and showcasing the power assertion of the regime. It also problematises the intention to make the winning designs as template designs for the tourism amenities in the ten places, treating what is claimed to be cultural representations no different than industrial products that can be mass-produced. Further, this paper pinpoints the presence of Orientalism in the way the idea of identity is contested in the competition, with exoticised culture heavily embedded in the designs and its rhetoric. This paper also questions the constructed identity based on the notion of the tourist gaze, signalling the hegemony of capitalism in how the government chose the authorised version of the country's identity.

## The Nusantara Architecture Design Competition

Since 2016, the Indonesian government introduced the Ten New Bali project that became the new tourism development blueprint, aiming to double the number of foreign visitors and raise the country's world tourism ranking as instructed by President Joko Widodo.<sup>3</sup> Tourism was also projected to be one of "the core business[es] and the backbone of the economy of the country in the future."<sup>4</sup> There are ten places that were projected to be the next Bali; they are Danau Toba (North Sumatra), Tanjung Kelayang (Bangka Belitung), Tanjung Lesung (Banten), Kepulauan Seribu (Jakarta), Borobudur (Central Java), Bromo Tengger (East Java), Mandalika (West Nusa Tenggara), Labuan Bajo (East Nusa Tenggara), Wakatobi (South East Sulawesi) and Morotai (Maluku).<sup>5</sup> Aiming to copy the 'success story' of Bali, the government intended to develop similar cultural tourism, which was seen as a win-win solution in merging the economic benefit of tourism with what was claimed to be culture preservation. This Ten New Bali project is one of the implementations of the President's ambition to decentralise the dominance of Javacentric development, as mentioned in his *Nawa Cita* as his strategic plan.<sup>6</sup> In this program, the government positions culture as a spectacle in the national identity-making policy. Culture, in this case, loosely refers to the form of culture that still maintains a traditional way of life and still possesses traditional artefacts. The propaganda of preserving the 'pristine' national culture is accentuated to nurture people's sense of belonging to the country. It also becomes an instrument with which the government positions itself as the 'saviour' of the local culture as part of its populist strategies.<sup>7</sup> This reference to traditional culture is put under the spotlight since it carries the potential to be commoditised, bringing additional income for the country; although it means other 'unpristine' and 'unexotic' cultures might not get similar attention and even becomes subjects of dispute.

The re-emergence of the term Nusantara Architecture attracted a paint company, PT. Propan Raya, to incorporate the term into its existing annual design competition, previously named 'Green House Design

3. Diah Asih Purwaningrum and Athina Ardhyanto, "The Commodification of Nusantara Architecture in Indonesian Tourism: A Pathway to Culture Preservation or Universalism?" (paper presented at the 4th International Conference on Indonesian Architecture and Planning (ICIAP), Yogyakarta, 26-27 July 2018), 2.

4. Dwi Murdaningsih, "Menpar Paparkan Target Kunjungan Wisatawan kepada UNWTO," *Republika.co.id*, October 11, 2016, <https://www.republika.co.id/berita/kemenpar/berita-kemenpar/16/10/11/oev62h368-menpar-paparkan-target-kunjungan-wisatawan-kepada-unwto>.

5. Likupang (North Sulawesi) was added to the list in 2019 and made it 'the eleven super-priority destinations'. However, in this paper, I still refer to the Ten New Bali program in pinpointing the selected tourism destinations since it is the initial Ten New Bali program that was embedded in the early development of the Nusantara Architecture Design Competition.

6. *Nawa Cita* (the Nine Missions) is a political promise made by Joko Widodo in his electoral campaign in the 2014 presidential election. One of the missions is to 'build Indonesia from the periphery by strengthening regions and villages under the unity of the country.' See "Nawacita," *Simpul Perencana* 29 (2017): 2.

7. Diah Asih Purwaningrum, "Indonesian Architects and Being Indonesian: Contemporary Context of Nusantara Architecture in Architectural Design and Theory" (PhD dissertation, The University of Melbourne, 2021), 169-171, <http://hdl.handle.net/11343/277047>.

8. PT. Propan Raya changed the competition title after Kris Rianto Adidarma and Yuwono Imanto, consecutively the CEO and the Director of the company, visited Wae Rebo together with Prof. Josef Priyotomo who is the initiator of the term Nusantara Architecture. During their visit, the group discussed their concerns that architecture schools in Indonesia have been focusing too heavily on the modern development of architecture and have forgotten to look into the cultural history of Indonesian architecture. PT. Propan Raya then decided to bring this issue into their competition and changed the name and the theme of the competition. For further details, see Purwaningrum, "Indonesian Architects," 159-161.

9. Yuwono Imanto (Director, Propan Raya Company), interviewed by the author, July 20, 2018.

10. Purwaningrum, "Indonesian Architects," 159-161.

11. Jeihan Kahfi Barlian, "Kemenpar Gelar ISTA dan Sayembara Pusat Cenderamata Pariwisata 2018," *Wonderful Indonesia Co-Branding Forum*, December 3, 2018, <https://swa.co.id/wicf/news/kemenpar-gelar-ista-dan-sayembara-pusat-cinderamata-pariwisata-2018>.

12. Arimbi Ramadhiani, "Diikuti Peserta Terbanyak, Sayembara Homestay Raih Rekor Muri," *Kompas.com*, October 26, 2016, <https://properti.kompas.com/read/2016/10/26/122141121/diikuti.peserta.terbanyak.sayembara.homestay.raih.rekor.muri?nomgid=0>.

Competition' that was initiated in 2012. The name was then changed to 'Nusantaran Architecture Design Competition' in 2014.<sup>8</sup> This literal use of the term Nusantara Architecture not only boosted the popularity of the competition, but also marked the company's rebranding strategy to show a benign intention to preserve the country's cultural heritage, despite the concealed profit-oriented objectives. The company then strategically used this competition to collaborate with the government, seen in how its director, Yuwono Imanto, actively offered the Minister of Tourism to incorporate both the term Nusantara Architecture and the design competition into the national tourism plan. This attempt was particularly successful as the competition finally received the Minister's support. With this alignment, the competition's themes were then curated to fit the development plan. In 2017, President Widodo openly supported this competition by choosing the theme and the title for its fifth cycle, the 'Nusantaran Restaurant'.<sup>9</sup> With this full support from the government, the competition series was officially set to be part of national tourism planning, particularly within the Ten New Bali program, and it meant that the winning designs would be built and funded by the central government. This also highlighted that the government was not the sole actor in orchestrating and exercising the identity construction strategy.<sup>10</sup>

The competition aimed to obtain design proposals for different tourism amenities in the ten places (i.e. homestay (2016), restaurant (2017), souvenir centre (2018), tourism information centre (2019)), and the winning designs were planned to be the template designs for each facility at each place. The competition itself has become one of the biggest design competitions in the country, not only for its substantial prizes for the winners, but also for its promise of future development projects (Figure 2). Aside from the financial benefits offered to the winners, the competition has also been campaigned as a strategy to 'save' the country's threatened cultural heritage, hence any participation would be seen as a philanthropic effort to help the government save the country's culture and tradition. In this case, the Minister of Tourism emphasised that the role of the competition was to "introduce, keep, and preserve national culture", and it increased the popularity of the competition unprecedentedly in the country.<sup>11</sup> In its third cycle in 2016, 993 teams registered to join, and the competition received 728 design proposals. It was then recorded in the Indonesia World Records Museum (Museum Rekor Indonesia–MURI) as the design competition with the most participants.<sup>12</sup>



Figure 2: The publication posters of the Nusantara Architecture Design Competition on tourism information centre cycle mentioning the massive prize offered (Source: Propan Raya, 2019 - reprinted with permission)

13. Margus Vihalem, "Everyday aesthetics and Jacques Rancière: Reconfiguring the common field of aesthetics and politics," *Journal of Aesthetics & Culture* 10 (2018): 1-11.

14. PropanRaya, "Kerangka Acuan Kerja - Sayembara Desain Pusat Cenderamata Pariwisata," *Sayembara Desain Arsitektur Nusantara*, 2018, <https://arsitekturnusantara.propanraya.com/>.

15. Lawrence Vale, *Architecture, Power and National Identity* (London: Routledge, 2008).

This competition has also become one of the prominent instruments that has carried the government's identity politics agenda. Architecture, in this case, has become a spectacle of political instruments to showcase the preferred image of the government, since "politics is not conceptualised; it is visualised; ... it must be showed-off and staged; it must be realised in the sensible."<sup>13</sup> The government's involvement in the competition and the incorporation of the winning designs in the national tourism plan made the competition an official platform from which the government attained architectural representations it preferred as the face of Indonesia, both for domestic and international audiences. This is part of the national government constructing an idea of cultural identity, especially as the competition brief mentioned that the designs were expected to portray the country's cultural richness and to "accentuate the local identity and wisdom in the area".<sup>14</sup> How culture and identity were understood in this competition might show how the government understands local identity and how, therefore, the winning designs can be seen as official translations of it. This also confirms that the image construction of national identity is orchestrated by the ruling elites, hence curated based on their tastes, preferences and agendas.<sup>15</sup>

### Traditionalisation of architecture in the competition

16. PropanRaya, "Sayembara Desain Rumah Wisata (Homestay) Nusantara," *Sayembara Desain Arsitektur Nusantara*, 2016, <https://arsitekturnusantara.propanraya.com/>.

Traditionalisation appeared rather explicitly in this Nusantara Architecture Design Competition. Although the competition literally employed the term Nusantara Architecture in its title, the competition's brief barely explained its meaning. Instead, the brief relied on people's over-familiarity with the term 'Nusantara' due to a prolonged indoctrination and idealisation of this term in the era of Indonesia's first and second Presidents, Sukarno and Suharto. In most briefs for the competition, Nusantara Architecture was linked to 'locality' (kelokalan), yet what was meant by 'local' itself was not discussed. In 2016, which was the beginning of the competition being attached to the Ten New Bali plan, the brief started to delineate that the design submitted "must attain the inspiration from traditional architecture in the area" as part of the scope of the competition.<sup>16</sup> This directed how the participant understood the design competition; therefore, it was expected that most design proposals, if not all, had a reference to the traditional architecture as a source of ideas for the design exercise.

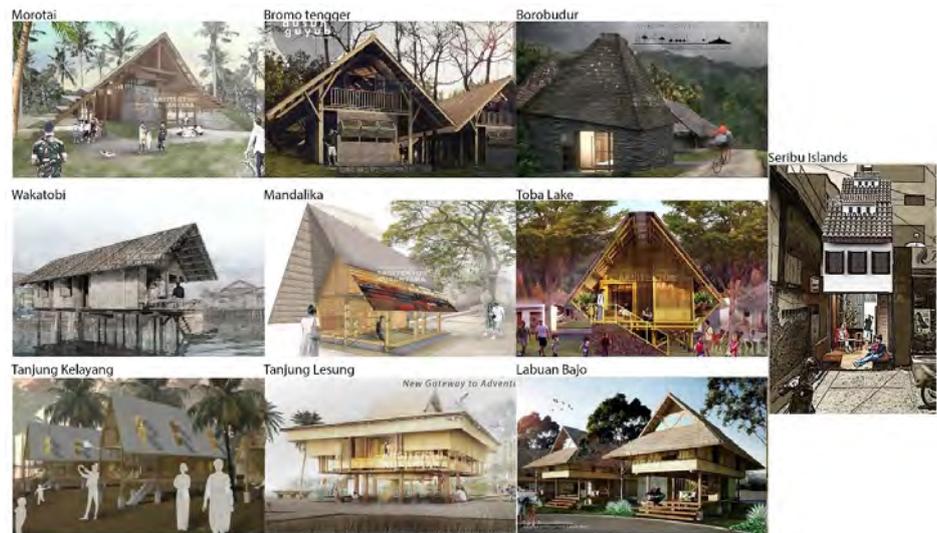


Figure 3: The winning designs of the Nusantara Architecture Design Competition on homestay cycle 2016 (Source: Propan Raya, 2016 - reprinted with permission)

17. To see some examples of this translation, see Purwaningrum, "Indonesian Architects," 201-204.

18. For more explanation on the juries of the competition, see Purwaningrum, "Indonesian Architects," 189-191.

19. PropanRaya, "Sayembara Desain Restoran Nusantara," *Sayembara Desain Arsitektur Nusantara*, 2017, <https://arsitekturnusantara.propanraya.com>.

Referring to the traditional architecture of the ten places became a typical way to 'contextualise' the submitted designs. Many of them, if not all, referenced the traditional architecture in various ways, such as by adopting the form and shape; adapting the zoning and function; replicating the intended activities to happen; and employing more abstract and philosophical ideas as design justifications. However, with the architects' limited understanding of the local context and the local architecture, this reference might be translated rather arbitrarily.<sup>17</sup> Resemblances with traditional architecture became common signifiers to anchor the design to the place. Although problematic, this approach was legitimated, at least by the juries, since designs employing such approaches were selected as winners hence incorporated in the national projects (Figure 3).<sup>18</sup> It somehow informed how the juries, as the extension of the government, perceive locality in choosing the face of Indonesia's contemporary cultural representations. In this case, the appropriation of traditional culture in architecture was authorised by the state under the jargon of 'preserving local culture and tradition,' especially with specific instruction in the brief that the designs must refer to the design of the traditional house.<sup>19</sup>

20. Purwaningrum, "Indonesian Architects," 189.

21. Amanda Achmadi, "After Jakarta: Imagining a New Capital," *Indonesia at Melbourne*, June 25, 2019, <https://indonesiaatmelbourne.unimelb.edu.au/after-jakarta-imagining-a-new-capital/>.

22. Anneke Prasyanti (the Team Leader for the Homestay Development Acceleration Task Force), interviewed by the author, September 24, 2018.

As an official instrument for the national agenda, the centralised Nusantara Architecture Design Competition fortifies a Javacentrism, if not Jakarta-centrism, in how decisions are made, despite the President's mission to decentralise the decision-making process in the nationhood. The competition was held in Java, participated in by designers who mostly live in Java, and the winners were selected by the juries who also mostly live in Java.<sup>20</sup> Since this process did not have any participatory engagements with the local people, the competition became a platform that facilitated only the government's perspective. It aligns with Amanda Achmadi's assertion that in Indonesia, "... [the] elites consider the preferred image of the nation ... [by] relying purely on planning and design professionals' utopian ideals ... [and] imposing a singular idealised version [on the people]."<sup>21</sup> In this case, the voice of the locals has been put aside for the sake of a fast implementation process and for facilitating the elites' ideal imagining of the country.<sup>22</sup> Whose interest is being served here is highly questionable, especially with the underlying business interests at play.

23. Alfredo Brillembourg and Hubert Klumpner, "Forget about Utopia," in *Now Urbanism: The Future City is Here*, ed. J. Hou, B. Spencer, T. Way and K. Yocum (London: Routledge, 2014), 195-205.

24. Edward Said, *Orientalism* (New York: Vintage Book, 1979), 205.

25. For more elaboration on how Orientalism has been widely accepted and rigorously used by the Orientals in imagining their own identity, see Purwaningrum, "Indonesian Architects," 27-29.

26. John Urry, "The Tourist Gaze and the Environment," *Theory, Culture & Society* 9 (1992): 9.

27. There are many discussions on what is deemed authentic and inauthentic in terms of culture for tourists' consumption. Many researchers, such as Michael Pretes (1995), Dean MacCannell (1989) and Erik Cohen (1988), highlight the complexity in understanding what is 'authentic' in the cultural tourism industry, as they argue that performative culture and cultural commodification might still remain genuine or can become genuine over time within the host culture. Umberto Eco (1986) and Daniel Boorstin (1992) assert that in post-modern tourism, although some tourists are aware that the culture they see is a reproduced object that is exaggerated and romanticised versions of reality, yet they still see it as 'better' than the original culture and are less interested in experiencing the original.

In dealing with cultural issues, the elites sometimes lean on pre-held assumptions, which are often inaccurate. Their distant position from the grassroots culture leads them to have a particular perspective in which the local people are not considered independent agents. This creates the so-called 'forest-and-tree' perspective, that the elites, with their distance, can only see the forest as a whole and fail to see the trees as the individuals that occupy the space.<sup>23</sup> Exoticising culture happens this way, as the elites observe the traditional living tradition and reflect it to their daily modern city living; hence the idea of locating an 'authentic culture' in places far from the city becomes very engaging. With romanticism maintained, traditional culture is then idealised and seen as 'fragile' under the threat of modernism. This perpetuates the urge to preserve and reproduce this 'authentic' way of life, although, most of the time, the implementations disregard the socio-economic challenges faced by the locals.

Exoticising culture is inherently problematic, as it is a paradoxical concept as a legacy of colonialism. In the colonial period, colonisers emphasised this exoticism to distinguish the East and the West. It is a form of Orientalism, a perspective that sees the Orient (the East) as the 'Other', deemed as different, marginal, illiterate, and even savage compared to the modern Occident (the West).<sup>24</sup> Orientalism once became a tool to justify Western colonialism in Asia, as the Western imperialists claimed the importance to salvage the Orient from its backwardness. Although colonialism has long gone now, the Orientalism perspective is still maintained and reproduced differently. Interestingly, from the eyes of the Orient, contemporary Orientalism is now seen as empowering instead of marginalising them. Most post-colonial Asian countries, if not all, are proud of being exotic and having exotic culture as their perceived identity.<sup>25</sup> This exoticism is then developed for the culture-selling business, mainly serving the expectation of the Western audience as the consumers. With the recent tourism boom, exotic culture is treated as a spectacle, an object of consumption, a commodity. In this case, any appropriation and 'gimmickisation' of the traditional culture are anticipated as part of the tourism effects. This reveals that the imagining process of identity has been driven by the 'romantic tourist gaze', something that pushes forward a visual consumption and an aesthetic judgment rather than one based on reasons and discourses.<sup>26</sup> This drive will create a 'phony' culture that potentially 'contaminates,' and further alter, the 'authentic' local culture that grows naturally among local people.<sup>27</sup> Further, the merge of identity imagining with tourism industry marks the hegemony of capitalism in how a country perceives itself. This also reflects how Orientalism persists today, that post-colonial countries still gain their significance from comparing themselves to the West.

## Culture and the (A)Political Stance

With stereotypical romanticised ideas at play, the widely critiqued visual judgment was fortified in the Nusantara Architecture Design Competition, as if dealing with culture was merely about physical artefacts and visual engagements. The intertwined social-political contestation that is entrenched in the culture-making process was left untouched, probably intentionally, for its severe complexities that

28. It started with the brief of the competition that was very generic and broad, focusing on creating representations of national culture as tourism spectacles instead of understanding, nurturing, and developing the local culture. The initial purpose to 'contemporise Nusantara Architecture,' as mentioned in the 2013 brief, was shifted toward tourism purposes, especially after the 2016 cycle. Since 2019, serving the tourism industry has become the only competition's objective mentioned in the brief. In this case, the intricate local socio-political contestation became less important to discuss in the competition. See Purwaningrum, "Indonesian Architects," 185-187.

29. Aditya Wiratama (the 2016 Nusantara Architecture Design Competition winner), interviewed by the author, October 18, 2019.

30. Purwaningrum, "Indonesian Architects," 139.

31. Abidin Kusno, *After the New Order* (Honolulu: University of Hawai'i Press, 2013), 85.

hurdled, hence slowed down, the design process.<sup>28</sup> Some architects might consider this competition as a pure design attempt at culture preservation project, therefore they might fail to see, or refuse to see, beyond the layer of architecture as a built form. They tend to overlook the severe social and cultural implications of their designs that potentially impact the place and its people. This is often seen in architectural practices in Indonesia, as architects tend to stay, mostly deliberately, in their comfort zone and treat architecture as only being about design exercise. Aditya Wirata, one of the competition winners, clearly mentioned that architects' scope of work was mainly about design and construction.<sup>29</sup> The broader socio-political aspects of the place, despite being recognised, were deemed to be outside the responsibility of the architects. Wirata even added that for the architect, being critical to the area of economy, society and politics could be a sign of a 'professional ego' since it showed that architects have stepped outside their professional expertise and boundaries.

Wirata's statement can be considered an attempt to sterilise his professional conduct from the discussion of politics. This apolitical position is common in the profession, something that is even maintained, including through the development of the term Nusantara Architecture which limits its scope on cultural issues and avoids discussing politics.<sup>30</sup> This resentment toward politics is a legacy of Indonesia's second president, Suharto, who detached politics from almost everything, including arts and architecture, to maintain his power.<sup>31</sup> As a remnant of his prolonged imposition, some Indonesians still see politics as wicked and malignant, hence it needs to be avoided, as it is closely associated with high-level dirty politics instead of something embedded in the day-to-day people's life. With this strong apolitical standpoint, some architects use a positivist perspective towards government agendas, including the Nusantara Architecture Design Competition, hence failing to see beyond the propaganda of an alleged attempt at culture preservation.



Figure 4: The Office of Attorney General of West Sumatra  
(Source: Dini Fitriyani, 2020 - reprinted with permission)

32. Purwaningrum, "Indonesian Architects," 246.

33. Abidin Kusno, *Behind the Postcolonial: Architecture, Urban Space, and Political Cultures in Indonesia* (London and New York: Routledge, 2000), 72-76.

34. Johannes Widodo, "Modern Indonesian Architecture: Transplantation, Adaptation, Accommodation, and Hybridization," in *The Past in the Present: Architecture in Indonesia*, ed. Peter J. M. Nas (Leiden: KITLV Press, 2007), 23.

35. Diah A. Purwaningrum, "Long Road to Identity: Critical Study of Contemporary Nusantara Architecture," *Journal of Comparative Cultural Studies in Architecture* 12 (2019): 12-20.

36. Purwaningrum, "Indonesian Architects," 88-89.

Another legacy of Suharto is that cultural imposition is authorised through official regulations. In his time, the term 'culture' was generally associated with traditional culture in such a way that the two became interchangeable.<sup>32</sup> He showed an excessive adoration to traditionalism, inserted in how the country was managed and presented, mostly to justify his concealed political agenda. He extensively promoted Indonesia's traditional culture as authentic, pristine and existing, which needed to be preserved and kept 'pure'. It is particularly apparent in the infamous Taman Mini Indonesia Indah, a Disneyfied theme park that showcases miniature versions of the country's traditional architecture narrated as 'the peak of local culture' (puncak kebudayaan daerah).<sup>33</sup> With his way of understanding culture, traditionalising architecture became a common practice in his era.<sup>34</sup> It was authorised in some building regulations that required public and governmental buildings to employ traditional roofing and decorations.<sup>35</sup> This practice was widely accepted in the community and has been passed to contemporary times. Today, some regional governments still impose Suharto's traditionalist lens in their local regulations, sometimes with coercion.<sup>36</sup> It is, for instance, shown when the current Governor of West Sumatra, Irwan Prayitno, criticised the new Regional Police Headquarters Building that did not incorporate gojong, a Minangkabau traditional roof with saddle-like shape and pointy horn-like ends. Prayitno stated that "the building is magnificent ... too bad that it does not have gonjong [that] carries the characteristic of West Sumatra ... [and] indicates the region's

37. Angga Indrawan, "Gubernur Kritik Gedung Polda Sumbar tak Bergonjong," *Republika.co.id*, February 12, 2017, <https://www.republika.co.id/berita/nasional/daerah/17/02/12/ol9h83365-gubernur-kritik-gedung-polda-sumbar-tak-bergonjong>.

38. Peter J. M. Nas, "Introduction," in *The Past in the Present: Architecture in Indonesia*, ed. Peter J. M. Nas (Leiden: KITLV Press, 2007), 9-13.

39. Roxana Waterson, *The Living House, an Anthropology of Architecture in South-East Asia* (Singapore: Oxford University Press, 1990), 12-26.

40. Gilbert Ryle, *The Concept of Mind* (New York: Routledge, 2009), 17-20; Nigel Cross, "Designerly Ways of Knowing," *Design Studies* 3, no. 4 (1982): 221-227.

41. Bryan Lawson, "Cognitive Strategies in Architectural Design," *Ergonomics* 22, no. 1 (1979): 59-68.

42. Jeremy Till, *Architecture Depends* (Cambridge: The MIT Press, 2009); Alan Berman, "Opinion: Why Starchitecture Fails Society," *Architects' Journal*, December 14, 2015, <https://www.architectsjournal.co.uk/news/culture/opinion-why-starchitecture-fails-society/8692723.article>; Witold Rybczynski, "The Franchising of Architecture," *The New York Times*, June 11, 2014, [https://www.nytimes.com/2014/06/11/t-magazine/gehry-norman-foster-moshe-safdie-starchitects-locate-franchising-of-architecture.html?\\_php=true&type=blogs&\\_r=0](https://www.nytimes.com/2014/06/11/t-magazine/gehry-norman-foster-moshe-safdie-starchitects-locate-franchising-of-architecture.html?_php=true&type=blogs&_r=0).

identity."<sup>37</sup> For this reason, and because it has become a requirement in the building code, Prayitno suggested adding gonjong to the building, just as he had done to the Office of Attorney General of West Sumatra that led to the adding of gonjong on top of the modern building (Figure 4).

This traditionalist perspective persists because the bias that sees indigeneity as equal to precolonial 'exotic' culture is maintained and reproduced in the contemporary context. This bias refers to what is claimed to be 'authentic' traditional culture as the source of the country's identity while demonising the modern 'westernised' culture that is blamed for contaminating the local culture. This reference is problematic since culture constantly evolves and is always in the state of becoming. One culture merges with another culture to make a hybrid that responds to the potential and challenges in one particular time. This hybridisation gets even faster with people's movements within or outside the county, creating a fusion that might possess a new identity that does not belong to either preceding culture. It is a constant process that cannot be paused, let alone stopped. Moreover, it is also crucial to acknowledge that traditional architecture that we see today, despite having been passed down for generations, is not a pre-existing and authentic culture of the island of Indonesia. Instead, it is an accumulation of influences from many foreign countries, like China, Japan, India, Persia and Europe; while its architecture is a mixture of traditional, vernacular, Islamic, Chinese, Hindu, and colonial architecture.<sup>38</sup> It is thus easy to find commonalities between culture in Indonesia and the neighbouring countries, especially within the Austronesian world.<sup>39</sup> With this mixture and with the complexity that underlays the long cultural process itself, claiming one culture as authentic is, therefore, problematic, especially because it signals that some other cultures can be deemed as inauthentic. With no boundaries in a cultural space, there are many shared cultures among neighbouring countries; therefore, the ownership of cultural practices cannot be secured and exclusively owned. Pragmatism in the architectural profession makes it worse when dealing with the complexity of cultural issues. Referring to British philosopher Gilbert Ryle, Nigel Cross mentions that in Design as a discipline, 'knowing how' is more important than 'knowing that', implying that Design is a skill-rather than knowledge-focused.<sup>40</sup> In this sense, architects might focus on developing how to design and build things rather than exercising what to build amidst the contexts and circumstances that precede and follow the design. By employing 'solution focusing strategy' instead of 'problem focusing strategy', as asserted by Bryan Lawson, it is common for architects to do research no further than to get ideas to start and justify the design process.<sup>41</sup> Some architects do not intend to dig deeper to comprehensively understand the existing conditions of the place and the people, especially with the time and budget constrains; thus, any complexities found are very likely to be disregarded. With this approach, the offered solutions can be very simplistic and superficial. This is a challenge that has been highlighted by many design critics, like Jeremy Till, Alan Berman, and Witold Rybczynski.<sup>42</sup>

In the Nusantaran Architecture Design Competition, this pragmatism was shown not only in the design approaches employed by the architects, but also in the way the brief was compiled by the stakeholders. Using one brief for ten places, without any additional

43. Brian Christens and Paul W. Speer, "Tyranny/Transformation: Power and Paradox in Participatory Development," *Forum Qualitative Sozialforschung* 7, no. 2 (2006).

explanation for each place, showed that the government did not intend to comprehend the cultural condition of each place with its visible and concealed intricacies. Instead, the ten places were pragmatically approached using a one-size-fits-all framework, and even assumed that there was a 'unity' among people living in each place. With no specific sites proposed where the design would be specifically located in each place, the winning designs were expected to be generic enough to fit anyone in any place in the area. In this case, the government treated people in one area as one single institution and eliminated the possibility of cultural and political variations and diversities among them. It is a problematic view, since even within a small group of local people, there are still local power differentials caused by never-ending political and social contestation among different agencies in the community.<sup>43</sup> Therefore, imposing one single 'ideal' face for a dynamic society is dangerous, as it risks leading to another form of dictatorship, despite subtly. It might end up suppress the minorities, especially if the plan comes with coercion.

44. Purwaningrum and Ardhyanto, "The Commodification", 4.

With the attachment of the competition to the national tourism industry, there is a high demand for fast-produced architecture. The intention to make the winning designs a template for tourism amenities shows that what is deemed as cultural representations are no different from industrial products. With its potential to be mass-produced, it promises a fast and standardised result in the application, especially that the tourism industry has a certain hospitality standard, particularly on hygiene and sanitation.<sup>44</sup> This rapid top-down method, however, is opposite to the bottom-up culture-making approach. With this forced assertion of the design, local people might develop different meanings toward it, both positive and negative, and this might turn into cultural imposition if the people unwillingly adopt it. In this case, the design becomes a ready-made cultural artefact injected into the local culture, making the local people passive receivers, instead of active players, in the process of making their own culture. This might create social and cultural problems if people cannot develop a sense of ownership of the inserted architecture.

### Closing Remarks

This paper has scrutinised the current development of the Indonesian government's identity politics and how it is translated into architecture. Incorporating the term Nusantara Architecture in the national tourism plan marks the merging of the national identity imagining with capitalistic business. The constructed architectural identity exercised through the Nusantara Architecture Design Competition signals the traditionalisation of the country's perceived identity. This paper has also discussed some problematic approaches shown in the competition, including the generic compilation of the brief, the direction toward exoticising culture and traditionalising architecture, the strong Javacentrism in the decision-making process, and the problematic top-down implementation plan using a one-size-fits-all framework. The appropriation of traditional perspective in imagining Indonesia's architectural identity becomes the main scrutiny in this paper, showing the bias in understanding culture. By referring back to traditional culture and artefacts in the identity translation, it means that the complexity of

contemporary real-life struggle has to be pushed aside, if not eliminated, to make way for a utopian ideal that is far from the urban and vernacular reality. When the state single-handedly reproduces this view on a national scale, this can be seen as a forced traditionalisation of the architectural identity, especially when the traditional life is no longer a common practice in largely urbanised Indonesia. The romanticism that is maintained in this agenda can potentially be a cultural imposition since there is a chance that not all local people can relate to such culture and its architecture. Problems and conflicts might entail this imposition if the local people cannot develop a sense of belonging and ownership to the inserted architecture, especially if the presence of this architecture only adds the burden of maintenance for the people.

Therefore, the government and other stakeholders must shift the perspective in seeing culture, from focusing on the exotic part of the country, to paying more attention to people's actual socio-political contestation in their everyday lives. Instead of maintaining the utopian image of Indonesia, one of which by employing the term Nusantara Architecture, the government should start digging into what presents in the society. The factual condition of largely urbanised Indonesia, such as the sprawl of urban kampong, the mushroomed informality in public spaces, and even the recurrent problem of floods, haze and mountain eruption, needs to be considered, as these conditions what constitute the contemporary culture of Indonesia.

# Community Participation in Conservation Proposals of Islamic Pilgrimage Sites

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## Keywords

Islamic pilgrimage destinations  
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Community participation  
Historic urban landscapes  
Sustainable development

## Abstract

There is increasing pressure on urban landscapes surrounding Islamic pilgrimage sites to accommodate growing numbers of pilgrims. Recent developments have responded to this issue with comprehensive clearance of historic urban landscapes, constructing grand open spaces and dislocating local residents. The traditional expansion of Islamic pilgrimage sites was characterised by a layering of interconnected structures with continuous functions that merged gradually over time into the surrounding landscape. The rift between the traditional urban growth and the recent expansion approach across the Muslim world is inconsistent with international developments that seek to incorporate sustainable development into urban heritage conservation. To achieve sustainability, developments should meet intergenerational equity and protect the interests of stakeholders including the community. Literature has established two operational characteristics for sustainable development that helps gauging the extent to which it is integrated into practice: Stakeholder participation and strategic planning. Participatory processes create shared visions among stakeholders and facilitate long-term directions. However, in non-Western contexts where decision-making power and financial control reside in the central state, participation is either considered a threat to the state or its potential benefit is unrecognised. This paper argues where conservation objectives are determined by experts in isolation from the community's interests, the plans fail to be achieved. This will be demonstrated by undertaking a comparative analysis of conservation proposals prepared by international heritage experts for Islamic pilgrimage sites of Mecca, Medina, Kāzīmāyn and Shiraz. Visited by millions of pilgrims annually, the four sites have similar clearance and expansion patterns. This paper analyses the extent of community participation integrated into these proposals as one of the significant operational dimensions of sustainable development and a crucial link that enhances strategic planning. Finally, by reflecting on site specifics and social methods, this paper recommends participatory methods to enhance community engagement.

1. WCED, *Our Common Future*, <http://www.un-documents.net/wced-ocf.htm>, 1987, Ch 2 art 27; S. Quick, "Brundtland report," in *The sage international encyclopedia of travel and tourism*, edited by L. Lowry, 173-174. SAGE Publications, Inc, 2017. <https://www-doi-org.ezproxy.library.uq.edu.au/10.4135/9781483368924.n68>

2. K. Simpson, "Strategic planning and community involvement as contributors to sustainable tourism development," *Current Issues in Tourism* 4, 1 (2001): 3-41; L. Wilson and E. Boyle, "Interorganisational collaboration at UK World Heritage Sites," *Leadership & Organization Development Journal* 27, 6 (2006): 501-523; P. Williams, "The governance of sustainable development in Wales," *Local Environment* 11, 3 (2006): 253-267. <https://doi.org/10.1080/13549830600558754>; D. Rodwell, "Sustainability and the Holistic Approach to the Conservation of Historic Cities," *Journal of Architectural Conservation* Vol. 9, no. 1 (2003): 58-73.; D. Rodwell, "The World Heritage Convention and the exemplary management of complex heritage sites," *Journal of Architectural Conservation* 8, 3 (2002): 1-21; Lisa Ruhanen, "Strategic planning for local tourism destinations: An analysis of tourism plans," *Tourism and Hospitality Planning & Development* 1, no. 3 (2004): 239-253. <http://dx.doi.org/10.1080/1479053042000314502>; C. Aas and A. Ladkin and J. Fletcher, "Stakeholder collaboration and heritage management," *Annals of Tourism Research*, 32, no.1 (2005): 28-48.

3. A stakeholder is defined as a person who has the right and capacity to participate in the process; thus, anyone who is impacted upon by the action of others has a right to be involved (B. Gray, *Collaboration Finding Common Ground for Multi-party Problems* (San Francisco: Josey Bass, 1989) in Aas et al., *Stakeholder*, 31).

4. Aas et al., "Stakeholder"; Jamal and Getz, "Collaboration"; J. McCann, "Design"; Jamal and Getz, "The environment-community,"

5. The paper uses Sullivan's perception of the local community as the 'present local populations regardless of whether they can be shown to have traditional associations with the place' (Sullivan, "Local involvement," 54).

6. Simpson, "Strategic"; Sullivan, "Local involvement"; Jamal and Getz, "The environment-community"; Jamal and Getz, "Collaboration"; Aas et al., "Stakeholder collaboration"; C. Landorf, "A framework for Sustainable Heritage Management: A Study of UK Industrial Heritage Sites," *International Journal of Heritage Studies* Vol 15, no. 6 (2009): 494-510. <https://doi.org/10.1080/13527250903210795>; C. Landorf, "A Future for the Past: A New Theoretical Model for Sustainable Historic Urban Environments," *Planning, Practice & Research* 26: 2 (2011): 147-165. <https://doi.org/10.1080/02697459.2011.560458>; E. Rojas, "Governance in historic city core regeneration projects," in *The Economics of Uniqueness: Investing in Historic Cores and Cultural Heritage Assets for Sustainable Development*, ed. G. Licciardi and R. Amirtahmasebi (Washington, DC: The World Bank, 2012), 143-181; D. Throsby, "Investment in urban heritage conservation in developing countries: Concepts, methods and data," *City, Culture and Society* xxx: (2015): 1-6; M. Reza Shirazi and Ramin Keivani, "Critical reflections on the theory and practice of social sustainability in the built environment – a meta-analysis," *Local Environment* Vol 22, 12 (2017): 1526-1545, <http://dx.doi.org/10.1080/13549839.2017.1379476>; F. Bandarin and A. P. Roders, *Reshaping Urban Conservation: The Historic Urban Landscape Approach in Action* (Singapore: Springer, 2019); Brandon and P. Lombardi, *Evaluating Sustainable Development in the Built Environment* (Oxford: Blackwell Science, 2005).

This paper first reviews strategic dimensions of sustainable development and explains the gap in the literature. Before analysing conservation proposals in the cases, the paper provides a background to the conceptual core of pilgrimage and its spatial practices. Then, it examines large-scale demolitions and developments in the sites since mid-twentieth century. This part investigates conservation proposals that international heritage experts adopted in each case to assess (any) community participation in the standard-setting conservation frameworks. The paper finally proposes alternative ways of enabling participation in the contexts of cases that may render conservation objectives more sustainable.

## Sustainable Development and Community Participation

'Sustainable development' is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs.<sup>1</sup> Literature shows two strategic dimensions are widely accepted as operational characteristics of sustainable development: Stakeholder participation and empowerment, and strategic orientation (long-term and holistic planning).<sup>2</sup> The dimensions are recognised in international heritage frameworks and guidelines through reflecting intergenerational approach to cultural heritage and long-term and holistic approach to planning processes. This paper focuses on stakeholder<sup>3</sup> participation as a key factor in fostering a sense of ownership and responsibility for the sustainable development of heritage.<sup>4</sup> Among the broad scope of stakeholders, the paper narrows down the focus to the community<sup>5</sup> because of their role in ensuring long-term viability of agreed-upon ends.<sup>6</sup>

Community participation is an active process by which beneficiary or client groups influence the direction and execution of a development project with a view of enhancing their well-being in terms of income, personal growth, self-reliance or other values they cherish.<sup>7</sup> Inclusive participation leads to empowerment and helps implementing long-term change and increasing the effectiveness of decision-making.<sup>8</sup> Participation must be seen as an underlining operational principle which should underpin all activities.<sup>9</sup> Nonetheless, the practical implementation strategies for achieving authentic participation are non-specific.

In contexts with centralised structures of authority, participation is thought of as 'a fertile soil out of which trouble can grow.'<sup>10</sup> Jukka Jokilehto and Ken Taylor recognise that power differences in non-Western contexts do not allow for deep listening to community voices and participatory processes.<sup>11</sup> Moreover, Ginzarly et al. argue identifying local values in places dominated by centralised planning is problematic.<sup>12</sup> Yet, further research is required to investigate the challenges of participatory processes in non-Western contexts and identify potential solutions.

7. S. Paul, community participation in development projects (Washington, DC: World Bank, 1987).

8. Chris Landorf, "Managing Industrial World Heritage Sites: Preservation, Presentation and Sustainability." PhD thesis., Deakin University, 2011; E. Rocha, "A Ladder of Empowerment." *Journal of Planning and Education Research* 17: 31–44.

9. UNDP, *Empowering*.

10. John Warren and Roy Worskett, "Conservation and Redevelopment of the Kadhimiyeh Area in Baghdad," in *Adaptive Reuse: Integrating Traditional Areas into the Modern Urban Fabric*, ed. Margaret Bentley Sevckenko (Cambridge, Mass: MIT Laboratory of Architecture and Planning, 1983), 46.

11. Jukka Jokilehto, "Evolution of the Normative Framework," in *Reconnecting the city: the historic urban landscape approach and the future of urban heritage*, edited by Francesco Bandarin and Ron Van Oers (John Wiley & Sons, 2015), 205–219; K. Taylor, "Cities as Cultural Landscapes," in *Reconnecting the City: The Historic Urban Landscape Approach and the Future of Urban Heritage*, ed by F. Bandarin and R. Van Oers (Oxford, UK: Wiley-Blackwell, 2015), 179–202.

12. Manal Ginzarly and Claudine Houbart and Jacques Teller, "The Historic Urban Landscape approach to urban management: a systematic review," *International Journal of Heritage Studies* 25, no. 10 (2019): 999–1019.

13. Kathryn Kueny, "Pilgrimage," in *Encyclopedia of Islam and the Muslim World*, ed. Richard Martin (New York: Macmillan Reference USA, 2004), 529– 530.

14. A.J. Wensinck and J. Jomier, "Ka'ba," *Encyclopaedia of Islam*, Second Edition, ed. P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs (Online edition, 2012); Sophia Arjana, "Islamic pilgrimages and sacred spaces," Published Sep 23, 2019, <https://www.bl.uk/sacred-texts/articles/islamic-pilgrimages-and-sacred-spaces#>; Sami Angawi, "The Hajj and conservation," in *Conservation as Cultural Survival*, ed. Renata Holod (Philadelphia: Aga Khan Award for Architecture, 1980), 41–43.

15. Angawi, "The Hajj"; Kueny, "Pilgrimage"; Carol Delaney, "The 'hajj': Sacred and Secular," *American Ethnologist* 17, no. 3 (1990): 513–30, <http://www.jstor.org/stable/644859>.

16. R. I. Lawless and G. H. Blake, "The future of historic centres: conservation or redevelopment," in *The Changing Middle Eastern City*, edited by Gerald Blake and Richard Lawless (Routledge, 1980), 178–208.

17. R. Bsheer, "The property regime: Mecca and the politics of redevelopment in Saudi Arabia," *The online journal of Jadaliyya*, published on 8/9/2015. <https://www.jadaliyya.com/Details/32436>; Hossein Sadri, *Neo-liberalism and the Architecture of the Post Professional Era* (Springer International Publishing, 2018).

18. Stefano Bianca, *Urban Form in the Arab World - Past and Present* (Zurich: vdf, 2000); "Hajj Statistics," General Authority for Statistics Kingdom of Saudi Arabia (2019), [https://www.stats.gov.sa/sites/default/files/haj\\_40\\_en.pdf](https://www.stats.gov.sa/sites/default/files/haj_40_en.pdf)

## Conservation and Development

### Islamic Pilgrimage Sites: Mecca and Medina

Islamic pilgrimage sites attract large number of pilgrims who perform practices in particular times and places. Iran, Iraq and Saudi Arabia are homes to the most prominent Islamic pilgrimage sites. The holy cities of Mecca and Medina, with the pilgrimage sites of Ka'ba, the Holy Mosque and the Prophet's Mosque, are destinations for about two million Muslims from approximately 160 countries annually (fig 1).<sup>13</sup> Every year pilgrims make the greater pilgrimage (Hajj-al-Tamattu) during the seventy-day pilgrimage season or the lesser pilgrimage (Hajj Umra) during the year.<sup>14</sup> The practice of Hajj dates back to 632 AD and includes certain rites tied to a specific time and place, such as performing the circumambulation of the Ka'ba (tawāf) seven times, making seven trips between the hills of Safa and Marwa (Sa'y), drinking from the Well of Zamzam, and the Sacrifice at Mina.<sup>15</sup>



Figure 1: Pilgrims praying around the Ka'ba in Mecca in 2019. The background shows buildings under construction (Photograph by Abd-al-Ghani Bashir on CNN News, <https://edition.cnn.com/2019/08/08/world/gallery/hajj-pilgrimage-mecca-2019/index.html>).

Since mid-twentieth century, the physical structures around Islamic pilgrimage sites that corresponded to cultural and social practices were cleared (fig 2, 3). A primary enabler of this approach is what Richard Lawless calls the 'ill-conceived monument-objective approach' where the policy is to free public buildings from their surroundings.<sup>16</sup> The other drivers are practicing religious hegemony associated with these sites and increasing revenue from pilgrimage.<sup>17</sup> In Mecca and Medina, the sevenfold increase of pilgrims since 1950- reaching 2,489,406 annually- has put development pressure on the holy cities with demand for vehicular access to the sanctuaries, paths for pedestrian movement, and large-scale construction of apartment buildings for seasonal pilgrim accommodation.<sup>18</sup>

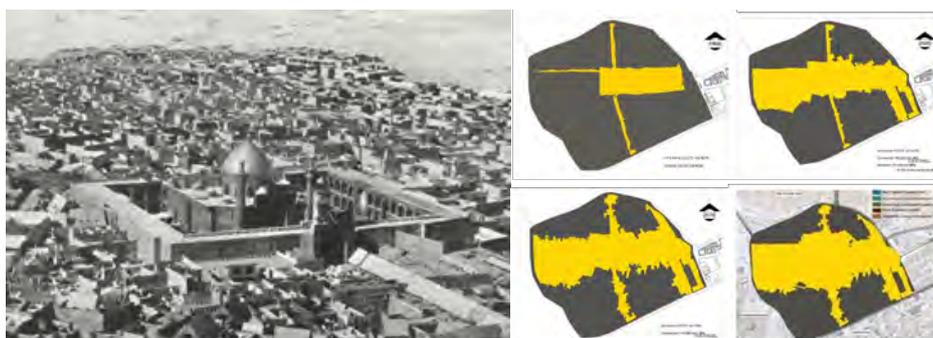


Figure 2: Left: An aerial view of Najaf Old City in 1945 shows the Imām Ali's shrine and the roofed Grand Bazaar sitting in the middle of the cluster of houses (Edward Lewis, "Edward Lewis explores the city of Najaf," *The Architectural Review*, originally published in July 1945 and republished in April 2016, <https://www.architectural-review.com/author/edward-lewis>; Right: the progressive clearance of the historic urban landscape surrounding the shrine in 1968, 2005, 2016; the plan for the site's re-development by 2030 (Dewan Architects, Stage Five Report, cited in Falah, "the shrine," 137, modified by the author).

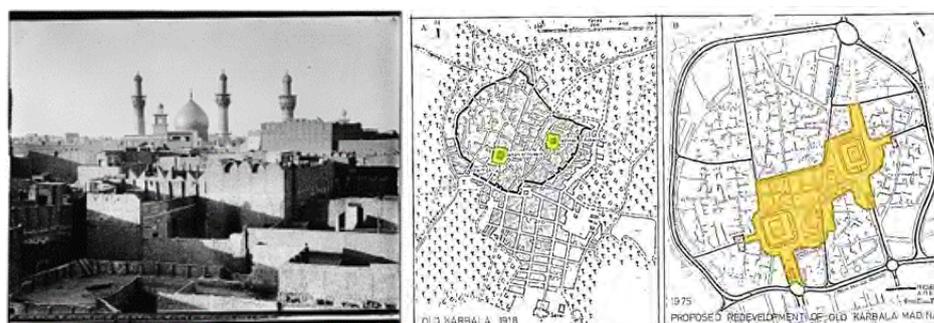


Figure 3: The shrine of Hosayn and Abbās in the historic city of Karbala in 1932 sitting in the heart of the city (Eric and Edith Matson Photograph Collection from the Archive of the U.S Library of Congress, <https://www.loc.gov/pictures/resource/matpc.07402/?co=matpc>); The map of Karbala in 1918; the proposal for the development of the two sites in 1975 by local Iraqi authorities after Fotiadis Associates recommended the entire old town should change its function to be dedicated to pilgrimage (Fethi, "Urban conservation," 202-4, modified by the author).

19. According to UNESCO Recommendation 2011, 'The historic urban landscape' is the urban area understood as the result of a historic layering of cultural and natural values and attributes, extending beyond the notion of "historic centre" or "ensemble" to include the broader urban context and its geographical setting. This paper uses urban landscape instead of fabric to evoke the lived landscape unless the term 'fabric' is used in sources.

20. Angawi, "The Hajj," 42

21. Angawi, "The Hajj"; Richard I. Lawless, "The future of historic centres: conservation or redevelopment," in *The Changing Middle Eastern City*, ed. Gerald Blake and Richard Lawless (Routledge, 1980), 178-208; Bianca, *Urban Form*.

22. Bianca, *Urban Form*.

23. The HAJJ Research Centre was set up in 1975 at the King Abdul Aziz University, Jeddah, Saudi Arabia, with the aim of studying the environment of Hajj—the annual pilgrimage to the Holy City of Mecca. See Z. Sardar (1978), "The Information Unit of the Hajj Research Centre," *Aslib Proceedings* Vol. 30, no. 5 (1978): 158-164, <https://doi.org/10.1108/eb050627>

24. Dr. Stefano Bianca is an architect and urban designer specialized on conservation in the Islamic world.

25. Bianca, *Urban Form*.

26. Bianca, *Urban Form*, 225-230.

The historic urban landscape<sup>19</sup> of Mecca was noted for its three- to five-story buildings facing the Ka'ba.<sup>20</sup> However, the traditional townscape has been transformed by high-rise hotels and highways to respond to the needs of the increasing flow of pilgrims (fig 4 and 5).<sup>21</sup> Major issues with this urban development are unsympathetic nature of the extensions to the historic structures and obstruction of the mountainous topography of Mecca.<sup>22</sup> In 1984, the Hajj Research Centre in Jeddah<sup>23</sup> decided that urban problems in Mecca needed urgent attention and thus, started a collaboration with Stefano Bianca.<sup>24</sup> Bianca advised that the urban design scheme for Mecca should improve public transportation efficiency while considering aesthetic, economic and environmental dimensions.<sup>25</sup> His proposal included alternative transportation solutions for the inner city, construction of temporary pilgrim villages, adoption of height codes, and repairing the original historic urban form (fig 6).<sup>26</sup> This proposal involves a spatial evolution analysis, adopts a holistic approach to conservation and development and integrates the protection of historic urban form into broader planning programmes for the city (advised by UNESCO 1972, 1976 and ICOMOS 1976). While it focuses on the urban morphology, it does not illustrate thorough social analysis of the context (advised by UNESCO

1976); nor community participation (advised by UNESCO 1976 and ICOMOS 1979). The project was discontinued due to a lack of support from local authorities and was replaced by a denser scheme with high-rise apartment and hotel buildings.<sup>27</sup>



Figure 4: Mecca townscape in 1885. The surrounding urban landscape faces the Holy Mosque and represents the influence of Hajj (photograph by the Dutch Orientalist Scholar, Christiaan Snouck Hu Hurgronje, available on The Online Khalili Collection).

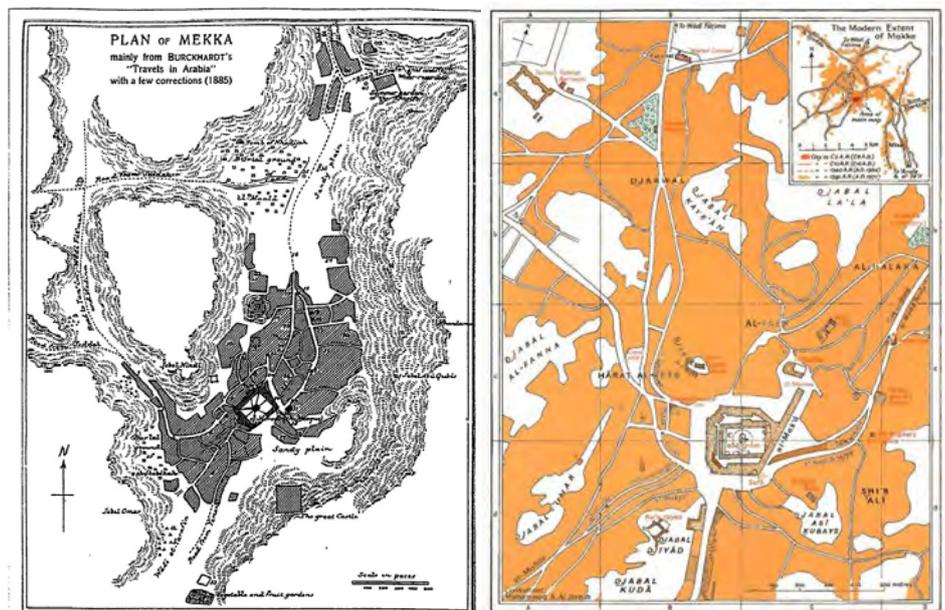


Figure 5: Left: The plan of Mecca in 1818 before mid-twentieth century demolitions, shows the Holy Mosque was integrated into the neighbouring landscape (El Sayed M Touba, "Conservation in an Islamic context a case study of Makkah" (Master thesis., Durham University, 1997), Available on Durham E-Theses Online: <http://etheses.dur.ac.uk/4981/>, page 58 after John Lewis Burckhardt); Right: Mecca in 1970, after the first major extension of the Haram (W.C. Brice, *An Historical Atlas of Islam* (Leiden: Brill, 1981), 23 (North sign corrected by the author)).

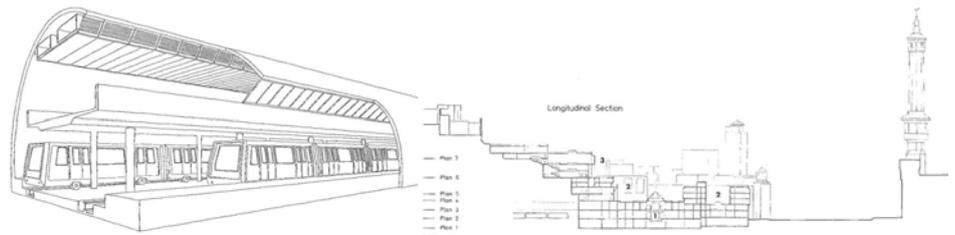


Figure 6: Left: Schematic drawing shows how the 'People Mover system' as an alternative transportation system; Right: A cross-section through the infill complex proposed above the outlet of the *Kodey* tunnel (including the terminal hall and commercial facilities (1), hotels (2), and a conference centre (3)) to improve the townscape disruption caused by cutting the mountain slope in the developments (Bianca, *Urban Form*, 228, 9).

28. Bianca, *Morphology as*.

29. Bianca, *Urban Form*, 234; Stefano Bianca, "Madinah Al-Muniwarah: Planning and Urban Design Concepts for the Central Area," in Mimar 12: *Architecture in Development*, ed. Hasan-Uddin Khan, (Singapore: Concept Media Ltd, 1984), 40-46.

30. Bianca, *Urban Form*, 235-236.

31. Stefano Bianca, "Designing Compatibility between New Projects and the Local Urban Tradition," in *Proceedings of the fourth seminar in a series offered by Continuing Education Program of the M.I.T. Laboratory of Architecture and Planning and the Harvard Graduate School of Design in collaboration with Aga Khan Program for Islamic Architecture at Harvard and M.I.T: Continuity and Change Design Strategies for Large-scale Urban Development*, edited by Margaret Bentley Sevcenko (1984): 21-35.

32. Stefano Bianca, "The Threat to Historic Islamic Cities through western style development: The case of the holy city of Medina." *Islamic Quarterly* 26, no. 2 (1982): 108-116; Bianca, *Urban Form*.

Similar to Mecca's proposal, there is limited evidence that indicates community engagement in Medina's conservation planning strategies. The focus of this project (1982) is on repairing the urban morphology to revive the traditional interrelations between single components and the overarching spatial system.<sup>28</sup> Three-quarters of the historic landscape around the Mosque have been progressively demolished between 1952 and 1978 to provide wider open spaces, vehicular access and car parks for pilgrims (fig 7).<sup>29</sup> Bianca proposed a plan for a 'Cultural Area' around the Mosque as the keystone of a Master Plan rooted in the traditional image of Medina; a sanctuary embedded in a cluster of houses.<sup>30</sup> The Cultural Area included a complex of interconnected blocks of auxiliary buildings such as hotels, shops, pilgrim centres, cultural institutions, etc., to reweave the fragmented urban fabric (fig 8).<sup>31</sup> During the development of this Master Plan, national government authorities commissioned an independent scheme for the Mosque's extension with grand open spaces.<sup>32</sup> This intervention received minimal objection from the community.

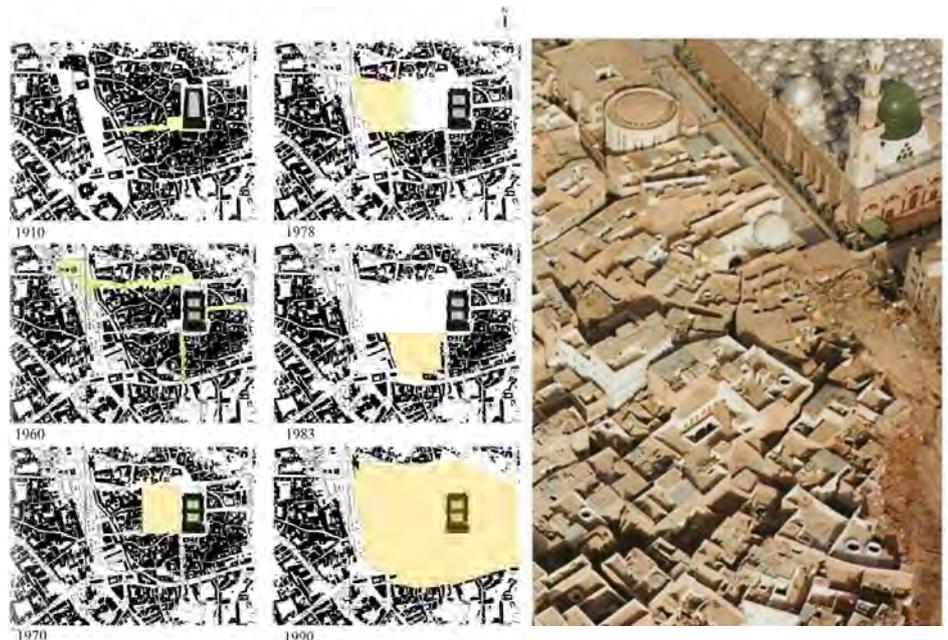


Figure 7: Left: The progressive clearance of the historic urban landscape around the Prophet's Mosque from 1910 to 1990 (Bianca, *Urban Form*, 232, modified by the author); Right: The Mosque used to be integrated into the surrounding urban landscape (@ Anaserafi, "al-Masjed Nabavi in the past, before the modern expansions, and the Al-Aghat lane, Aref Hekmat library, and Abu Ayyub al-Ansari house appear before removal," Twitter post, Dec 4, 2013, <https://twitter.com/anaserafi/status/407909444140691456>).

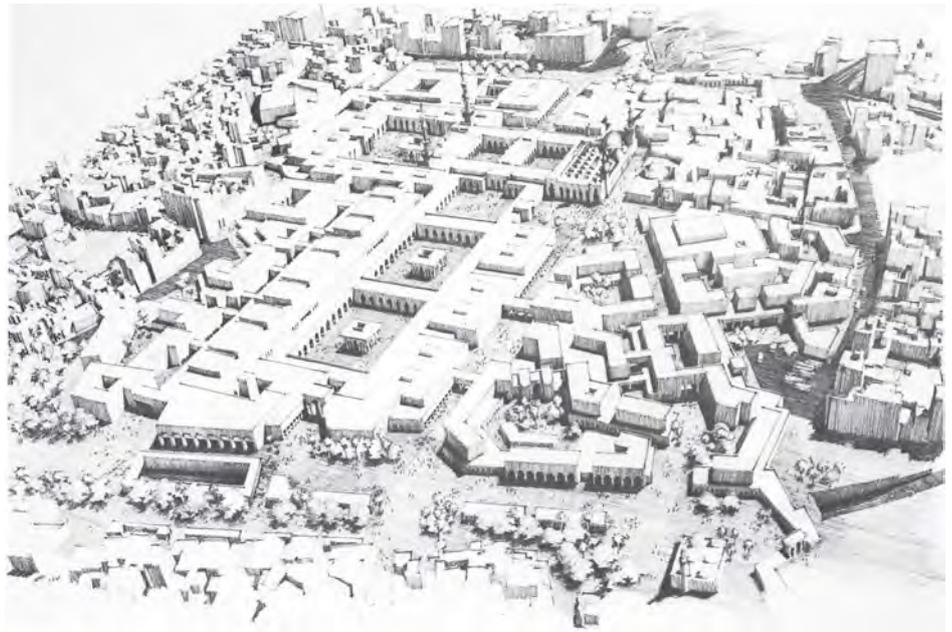


Figure 8: Bianca's unrealised proposal for the Haram extension seen from southwest: A new volumetric arrangement for the rehabilitation of the large open spaces is visible in the central area (Bianca, "Madinah," 44).

### The Shi'i shrines in Kāzimiya and Shiraz

33. Hamid Algar, "Emamzada," *Online Encyclopedia of Iranica* (1998, last updated 2011), <https://iranicaonline.org/articles/emamzada-i>

34. Richard Martin, "Ziyāra," in *Encyclopedia of Islam and the Muslim World*, ed. Richard Martin (New York: Macmillan Reference USA, 2004); A.K.S Lambton, "Imāmzāda," in *Encyclopedia of Islam*, Second Edition, ed. P. Bearman, Th. Bianquis, C.E. Bosworth, E. van Donzel, W.P. Heinrichs (2012), [http://dx.doi.org.ezproxy.library.uq.edu.au/10.1163/1573-3912\\_islam\\_SIM\\_3552](http://dx.doi.org.ezproxy.library.uq.edu.au/10.1163/1573-3912_islam_SIM_3552)

35. Shubber Falah, "The Shrine that Consumed Its Town: The Role of Religion and Politics in Reshaping the Iraqi City of Najaf" (PhD diss., University of Cincinnati, 2018); Sadiq Abid, "An examination of heritage protection and conservation practices in the pilgrimage city of Najaf" (PhD diss., University of Sheffield, 2016); Bianca, *Urban Form; Lawless*, "The future"; Ihsan Abdul Wahab Fethi, "Urban conservation in Iraq: the case for protecting the cultural heritage of Iraq with special reference to Baghdad, including a comprehensive inventory of its areas and buildings of historic or architectural interest" (PhD diss., University of Sheffield, 1978).

36. Fethi, "Urban conservation"; Stanek, *Architecture*.

37. John Warren, "Baghdad: Two case studies of conservation," in *The Arab city: its character and Islamic cultural heritage. Proceedings of a symposium held in medina, kingdom of Saudi Arabia* (28 feb.-5 mar.1981): 242-250.

Similar to Hajj, other forms of pilgrimage include time- and place-oriented rituals. Pilgrimage to Shi'i shrines (the burial sites of the Twelve Shi'i Imāms or their descendants) is called Ziyāra and dates back to 680 AD. Common rituals of Ziyāra include performing daily prayers, circumambulation of the tomb, and seeking the intercession of the Imām or making a vow to them (nazr).<sup>33</sup> Compared to Hajj, Ziyāra is less formalised, less dependent on time and place, and includes local variations in ritual performance and architecture.<sup>34</sup> Despite differences among practices of Hajj and Ziyāra, patterns of development are very similar in the Holy Mosques and Shi'i shrines. For the purpose of this paper, the shrines of Mūsā-al-Kāzim (d. 802 AD) and Muhammad Taki (d. 834 AD) in Kāzimiya (Iraq) and the shrine of Ahmad and Muhammad Ebn-al-Musā-al-Kāzim (d. 817 AD) in Shiraz (Iran) are selected. The cases both demonstrate similar patterns of expansion.

Since 1960, the cluster of houses abutting Shi'i shrines gave way to open spaces, accommodation for pilgrims, and commercial tenancies pushing the residents to the boundaries of the historic city. Early intentions for this model of expansion were focused on monumentalising the shrines and freeing them from their surroundings.<sup>35</sup> In 1976, the shrine of Kāzimayn was separated from its close-knit surrounding by a Polish firm- Miastoprojekt-Karakow (1967-73)- whose planners were charged by Baghdād Municipality to prepare a conservation plan for the historic core (fig 9).<sup>36</sup> The extensive demolitions caused social degradation in the area and created an urge for the city of Baghdād to commission conservation work to conserve both the fabric of the city and a way of life which reflected Islamic traditions and architectural values.<sup>37</sup> UK-based architects, John Warren and Roy Worskett, were appointed by Baghdād municipality to prepare a proposal for rebuilding the demolished landscape around the shrine,

38. John Warren was a conservator in UK, Iraq, Saudi Arabia and Kuwait. Roy Worskett was the appointed Bath city architect and chief planning officer in the aftermath of The Sack of Bath (Rodwell, *The historic*).

39. This was done very briefly due to inadequate time assigned to the initial phase of the project by government. '... we were simply not given the opportunity. We had to rely on *intuition*' (Warren and Worskett, *Conservation*).

40. John Warren and Roy Worskett, "Conservation," 45.

41. John Warren and Roy Worskett, "Conservation," 32.

impart new life and commercial vigour to the area.<sup>38</sup>

The conservation proposal does not reflect an in-depth examination of the community's values and interests. The interviews with leading architects of the project show they paid attention to the socioeconomic profile of residents,<sup>39</sup> insufficient amenities in the city, and the loss to substantial historic areas. However, the experts were specifically told by the government 'not to be involved in any form of citizen participation'.<sup>40</sup> Their planning process reflects long-term and holistic planning (advised by UNESCO 1972, 1976, 1979) with some levels of community consideration (advised by UNESCO 1976). Despite this, the architects decided to 'design for a gradual upward change to entice back, if not the original population, at least a comparable middle-income group' instead of designing for current residents.<sup>41</sup> This project remained unrealised too.

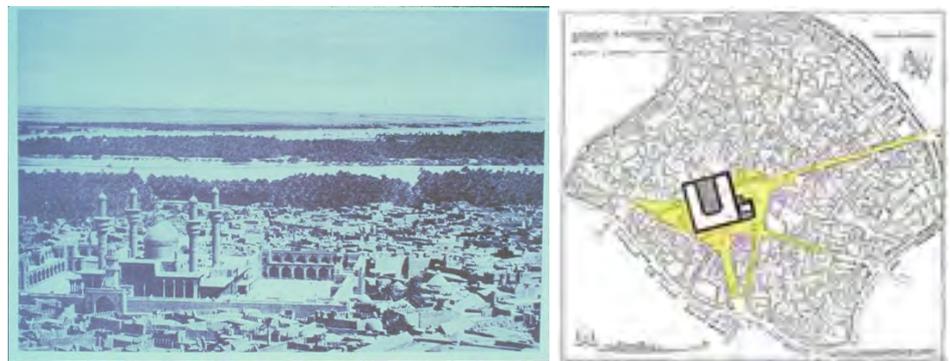


Figure 9. Left: The shrine in its original setting in 1920 (MIT Libraries, <http://hdl.handle.net/1721.3/28042>); Right: The progressive clearance of the historic urban landscape around the shrine, 1973 (Fethi, "Urban conservation," 305, modified by the author).

- Design Proposal**
- Existing building
  - Buildings of architectural or historic impor
  - Underground Development
  - 1-2 Storey New Buildings
  - 3-4 Storey New Buildings
  - Vehicular Movement
  - Bazar
  - Parking
  - Pedestrian movement
  - Trees
  - Pedestrian Exit form Underground



Figure 10: Left: Warren suggested reconstructing the demolished buildings sympathetic to the character of the past but designed for the needs of future (Warren, "Baghdād," 6, modified by the author); Right: New buildings were designed to create a ring of bazar around the shrine and allow circumambulation [https://www.archnet.org/sites/3848?media\\_content\\_id=5330](https://www.archnet.org/sites/3848?media_content_id=5330).

The last case, although indicates the application of heritage best practices, do not represent a process of community participation at any levels. In 2015, a team of international heritage experts, was appointed by national authorities to prepare a Conservation Master Plan (CMP)

42. Meysam Deghati and Mohammad Mehdi Norouzian, "The measures taken by UDRC in an attempt to revitalise historic and cultural areas," in *Abadi Journal*, no. 77-78 (Autumn and winter 2017): 106- 123.

43. Ginzarly et al., "The historic," 1008.

44. ICOMOS, "European Charter of the Architectural Heritage 1975," <https://www.icomos.org/en/charters-and-texts/179-articles-en-francais/ressources/charters-and-standards/170-european-charter-of-the-architectural-heritage>, Article 1.

45. UNESCO, "Recommendation on the Historic Urban Landscape," (Paris: UNESCO, 2011), <http://whc.unesco.org/en/activities/638>, Article 10.

46. UNESCO 2011, Article 11.

for the historic city of Shiraz. The objective was to enhance the living environment, and balance conservation and development in the historic city including the demolitions around the shrine of Shah-e Cherāgh. The site has undergone several clearances and developments since 1950s with a view to re-enacting a notable building and expanding pilgrim-oriented services (fig 11-15). The heritage experts adopted the Integrated Conservation approach to maintain the significance of the historic city and the Historic Urban Landscape approach (HUL) as a management system for implementing the conservation plan.<sup>42</sup>

The HUL and Integrated Conservation approaches do not offer precise implementation strategies for different local contexts with complex political and economic structures. Ginzarly et al. (2019) note, to substantiate the operational dimension of the HUL, future research needs to address, to a greater extent, the different levels of governance, the tension between universal and national norms, and the procedural and discursive issues in the process of achieving sustainability.<sup>43</sup> The Integrated conservation emphasises the significance of groups of lesser buildings, all areas of historic or cultural interest as the architectural heritage besides the individual buildings.<sup>44</sup> The HUL provides the basis for an integrated approach to the identification, assessment, conservation and management of historic urban landscapes within an overall sustainable development framework.<sup>45</sup> It aims to preserve the quality of the human environment, enhance the sustainable use of urban spaces, while recognising their dynamic character, and promoting social and functional diversity.<sup>46</sup> Yet, transferring these practices to local contexts requires further research.

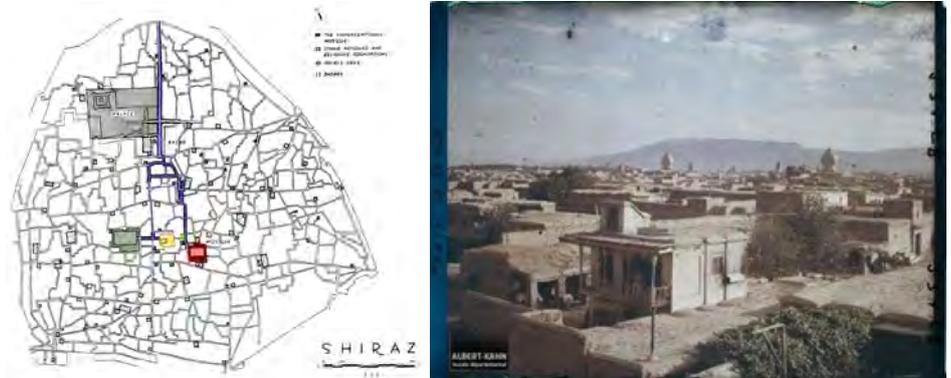


Figure 11: Left: The last map of Shiraz (1936) before the changes in the surrounding landscape of the Sha-e Cherāgh. The Shah-e Cherāgh is highlighted in yellow, The Heritage listed Atâbeg Mosque in green, the Ancient Mosque in red, and bazārs in blue (Donald Wilber, *The Masjed-e Atiq of Shiraz* (Shiraz: Asia Institute, Pahlavi University, 1972), 67, modified by the author); Right: Photograph of Shiraz townscape on 17/09/1927 shows how the shrines sit in the urban landscape (Albert Kahn, "Archives de la Planète," Operateur: Frédéric Gadmer, 1927, <http://collections.albert-kahn.hauts-de-seine.fr/>)



Figure 12: Aerial photographs show the progressive demolition of the landscape surrounding the Shah-e Cherāgh in 1964 and 1975 (The Archive of Iran National Cartographic Centre).



Figure 13: The aerial view shows the demolitions between 1964 and 1975 (Old\_Shiraz. 2020. "Old map of Shiraz," Instagram Photo, December 20, 2020. [https://www.instagram.com/old\\_shiraz/?hl=en](https://www.instagram.com/old_shiraz/?hl=en))).



Figure 14: Changes to the shrine's surrounding from 1981 to 1996 (The Archive of Iran National Cartographic Centre).



Figure 15: Demolitions in the urban landscape surrounding the shrine. Number 1 is the Shah-e Cherāgh, the light gray mark shows 1995 demolition, the dark gray mark shows the demolished landscape after 2009 (Google Map, modified by the author).

47. Jukka Jokilehto and Carlo Cesari and M.A. Soheil, "Report on mission to Iran," Oct 2015, 1-24; "Report, documentation of preparing the Conservation Master Plan for the historic city," UDRC, MRUD, February 10- 28, 2016 (b), 1-84; "Report: Re-development and Revitalisation scheme of the Shah-e Cherāgh Complex and its surrounding urban fabric," UDRC, MRUD 2016 (c), 1-7; "Report, documentation of preparing the Conservation Master Plan for the historic city," 2016 (a), UDRC, MRUD, May 28- June 11, 2016, 1-81; M.A. Soheil and A. Soltāni, and Z. Mahzūn, 2017. "Report, A general report of the CMP project, Shiraz (A collaboration between the international team and the Office of Shiraz Urban Conservation Plan," Translated by Homā korāsāni from English to Persian, October 25, 2017, 1-126.

48. "Report 2016 (a)," 46-55; "Report 2016 (b)," 27- 37.

49. "Report 2016 (b)," 29.

However, the available evidence from Reports and Action Plans<sup>47</sup> prepared by the team between 2015 and 2017 shows conducting a comprehensive survey did not advance to further steps as well as 'reaching consensus on what values to protect and transmit to future generations and determining the attributes that carry these values.' Also, documentation sheets indicate the collected information mainly hinged on physicality of the urban fabric such as the state of conservation of the existing buildings, function, typological characteristics of buildings and open spaces, street networks, ownership status, ethnicity of residents, and population.<sup>48</sup> The social survey included limited information including living satisfaction and safety, sense of belonging (familiarity with neighbours, having relatives living in the area, immigration status), socio-economic information (living costs, education level, residents' occupations).<sup>49</sup> The community has not been involved in the planning process to date. After struggling with 'reaching an agreement about what values to protect,' the project was finally stopped in December 2021.

**Table 1: Comparative analysis of patterns of change and public consultation**

| Islamic pilgrimage site                 | Re-development issues  | Conservation proposal  | Design Considerations   | Available documents   |
|---|--|--|---|---|
| The Ka'ba and Holy Mosque Mecca (1984)  | Large-scale demolition of the immediate neighbourhood surrounding Ka'ba<br><br>Disrupted townscape of the city<br><br>Traffic congestion in the area | Re-development scheme for the urban landscape surrounding the Ka'ba<br><br>Summary of main objectives: Maintain the traditional urban form and (physical) continuity, an integrated approach combining public transportation efficiency with environmental improvement, maintaining an underlying coherence, preservation of a human-scale environment benefiting the religious experience | Pilgrimage requirements at different times of the year (such as space required for performing rituals, accommodation required in peak seasons, efficient transportation during Hajj) considered   | Conceptual guidelines in Bianca, <i>Urban Form</i> .  |
| Prophet's Mosque, Medina (1982)         | Large-scale demolition of the immediate neighbourhood surrounding the Mosque   | A Master Plan for Medina<br><br>Summary of main objectives: An integrated approach, re-establish a continuous urban fabric with a new Volumetric Arrangement (including auxiliary buildings, such as hotels, shops, restaurants, pilgrim centres, cultural institutions, a conference hall, etc.), re-organise vehicular traffic   | Pilgrimage requirements considered. Flexible design considered to leave an opportunity to coming generations to decide according to their needs and convictions. Rehabilitating a community courtyard<br><br>Bianca defined pilot projects to receive feedback and improve decisions accordingly.   | Conceptual guidelines in Bianca, <i>Urban Form</i> ; Bianca, "Madinah."   |
| Shrine of Kazimayn, Iraq (1980)         | A major loss to substantial historic areas in recent re-developments   | Design and arrange the construction of the re-development around the shrine<br><br>Summary of main objectives: An integrated approach, restore community life, defining a Conservation Area with regulations that control physical interventions to the historic and new areas around the shrine together, re-establish some of the previous functions                                     | Architects were told by government NOT to be involved in any form of citizen participation. However, they considered the following:<br><br>Urban landscape to adapt to the life of what they thought would go on for the next 50 years (cater only to the middle- and higher-income groups).<br><br>The owners to be entitled to receive grant aids towards the cost of approved schemes of house improvements. | John Warren and Roy Worskett, "Conservation," John Warren, "Baghdad."   |
| Shrine of Shah-e Cheragh, Shiraz (2015) | Large-scale demolition of the immediate neighbourhood surrounding the Shah-e Cheragh and in general in the historic city of Shiraz                   | Prepare a Conservation Master Plan and a Conservation Management Plan<br><br>Summary of main objectives: Integrated conservation of the historic city, re-arranging street networks, socio-economic revitalisation, improving touristic infrastructures and facilities.  | The integrity of the urban morphology considered.<br><br>Limited evidence of exploring local community values and considering the community groups as part of the landscape.  | Jukka Jokilehto et al., "Report on mission to Iran"; M.A. Soheil et al., "Report"; "Report 2016 (a)"; "Report 2016 (b)"; "Report 2016 (c)." |

50. "We do not register historic buildings to avoid safeguarding responsibilities," ILNA News, June 13, 2015, <https://www.ilna.news/fa/tiny/news-283351>; "We will not allow the demolition of historic houses. Said Head of SCC," Khabaronline News, July 7, 2018, <https://www.khabaronline.ir/news/788264/>

51. The author does not intend to argue this was the only reason behind unsuccessful conservation proposals, but a significant factor.

The findings indicate all four proposals included limited interpretation of Islamic pilgrimage sites as part of the larger political and economic context (Table 1). They were initiated by governmental organisations and designed by experts in isolation from the community. They were interrupted or discontinued by governments without receiving much objection from residents despite their dissatisfaction with radical developments.<sup>50</sup> While conservation plans have been developed to improve the physical integrity in all four cases, the analysis shows little consideration was given to understanding the values that the contemporary society attributed to their urban heritage. The paper argues lack of informed involvement of the community was one important factor that rendered conservation proposals unsustainable.<sup>51</sup> In the following section, this paper looks for alternative perspectives to integrate this element into planning processes.

## Community Participation; An alternative perspective

52. UNDP, *Empowering people: A guide to participation*. United Nations (1997).

53. M. Ripp et al, "Heritage-Based Urban Development: The Example of Regensburg," in *Reshaping Urban Conservation: The Historic Urban Landscape Approach in Action*, edited by Francesco Bandarin and Ana Pereira Roders (Singapore: Springer), 435-458.

54. 'Information: when stakeholders are informed about their rights, responsibilities, and options, the first important step towards genuine participation takes place. The main drawback at this stage is that emphasis is placed on one-way communication, with neither channel for feedback nor power for negotiation.

Consultation: this level entails two-way communication, where stakeholders have the opportunity to express suggestions and concerns, but no assurance that their input will be used at all or as they intended. Therefore, it could be said that at this level stakeholders are 'participating in participation'. The most frequent approaches to consultation are chaired meetings where stakeholders do not contribute to the agenda, public hearings, and surveys.

Consensus-building: here stakeholders interact in order to understand each other and arrive at negotiated positions which are tolerable to the entire group. A common drawback is that vulnerable individuals and groups tend to remain silent or passively acquiesce.

(UNDP, *Empowering*)

55. Setha Low is a professor in environmental psychology. S.M. Low, "Social Science Methods in Landscape Architecture," *Landscape Planning* 8 (1987): 137-48.

56. Low, "Social Science."

57. Low, "Social Science."

58. Low, "Social Science."

To identify strategies of community participation, it is important to rethink and contextualise potential areas of participation in individual contexts. According to United Nations Development Programme, there is no universal model for the process of participation. However, participation has critical stages- decision-making, implementation, benefit sharing, evaluation- and areas of development- participation as a MEANS, participation as an END.<sup>52</sup> To contextualise community participation in cities with complex structures of authority and institutional arrangements, possible arenas of participation should be identified according to specific analysis of the social, cultural and political climate. When it is not possible to employ civic participation models common in European contexts such as the inclusive working groups created in Regensburg in Germany,<sup>53</sup> it is necessary to design alternative civic engagement tools to balance conservation and sustainable development. This will help conservation proposals to progress from 'non-participation' and 'information' to 'consultation' and an achievable extent of 'consensus building.'<sup>54</sup>

To put this into practice in non-Western contexts with power imbalances, this paper suggests employing social methods proposed by Setha Low (1987).<sup>55</sup> Low proposes various sampling techniques and methods to collect data about stakeholders' needs, desires and potential conflicts: Questionnaire (to obtain representative data on population indicators), unstructured interview of a selected sample (to provide depth of information), participant observation (to gain perception of social interaction), and demographic analysis (to present an overview of the population characteristics).<sup>56</sup> A further step in data collection is identification of conflicts that may impact the future success of the plan.<sup>57</sup> To address this issue, Low proposes network analysis and unstructured interviews to perceive the local community associations, interconnections and their attitudes concerning group equanimity.<sup>58</sup> Considering the difficulty of inclusive participation in the contexts of examined cases, the paper suggests Low's methods be integrated into 'mapping of the city's resources.' This step can be anchored to enhance community participation, identify their values, and raise awareness regarding the significance of heritage and conservation projects. This is by no means a definitive strategy, but suggestions to trigger alternative ways of promoting community participation rather than simply excluding it from planning in contexts with centralised systems of governance. One final consideration is that the choice of methods depends on available funds in the project, the size and composition of the population, and acceptability of a method in a particular political climate.

## Conclusion

This paper set out to examine community participation in conservation proposals of Islamic pilgrimage sites (and their extended settings) in Mecca, Medina, Kāzimiya, and Shiraz. This was achieved through a critical analysis of Project Progress Reports, Action Plans, design alternatives, interviews, maps and photos provided in publications of heritage experts who have worked in these sites. Urban heritage conservation around Islamic pilgrimage sites where state-sanctioned

expansion threatens the integrity of surrounding historic urban landscapes and communities is challenging. These sites have evolved over centuries and have unique spatial qualities and functional densities. Recent expansions have, however, followed a different model based on unsubstantiated value system focusing on aesthetics of sites and evaluating the surrounding historic urban landscape as slums with no value to be conserved. The sites have undergone progressive clearance of the urban landscape, imposing vistas, and central interventions motivated by State economic interests.

The conservation proposals in all cases mainly hinge on creating a coherent urban fabric, maintaining the traditional urban form and (physical) continuity, upgrading the physical environment and providing facilities mainly for pilgrims while leaving community participation out of the planning processes. Although the paper acknowledges the political and administrative complexities in non-Western contexts further complicate heritage initiative, it argues lack of context-specific situation analysis, identification of local values and community capacities limited the long-term influence of conservation proposals in all four cases. For heritage conservation to be sustainable, it is significant to give a voice to the community. Although community participation is a dominant dimension in sustainable development, strategies of engagement remain problematic. Therefore, the paper suggests identifying possible arenas of participation in particular contexts and applying social methods to data collection stage may enhance community engagement with their heritage.

# Chinese Public Memorials: Under the Effect of Exclusively Pursuing Solemnness, Sacredness, and Grandness

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## Keywords

Chinese public memorials  
Historical development  
Memorials' design

## Abstract

Authentic public memorials did not appear in the Chinese public space until the late 19th century. As a result of Western influence, many war memorials were built during the Republic of China era (1912-1949). Since the establishment of the People's Republic of China in 1949, the government has invested much in developing public spaces. Also, the government placed many memorials in Chinese cities to shape collective memory and urban identity. The affection of solemnness, sacredness, and grandness is the main affection that most memorials are intended to embody, particularly those that commemorate famous people, the government's achievement, and the deceased from natural disasters and wars.

By taking the example of memorials built from 1942 to the present in Chongqing, China, this paper critically examines changes over time in the forms. In addition, taking the analysis result from memorial forms as a base and combining widely cited literature in Chinese and English, the paper further explores the negative impacts of the intensive focus of solemnness, sacredness, and grandness.

This paper's analysis identifies standard, persistent and symbolic features in Chinese memorials, despite the diverse landscape elements and advanced construction techniques. Key themes emerge from this research are solemnness, sacredness, and grandness. Also, it reveals the issues raised by the exclusive pursuit of these affections, including similar memorial forms, insufficient engagement of memorials, and the unitary research topics on memorials.

## Introduction

1. Joubert Joubert and George H. Calvert, *Some of the "Thoughts" of Joseph Joubert* (W.V. Spencer, 1867), 102. <https://books.google.com.au/books?id=YXEaAAAAYAAJ>.

2. Yang Zhiyu, "Zhongguo Gudai Gongong Jinianxing Diaosu Queshi De Yuanxin," *Dazhong Wenyi* 000, no. 023 (2014), 51-52; Gao Junling, "Chengshi Kongjian Zhong Jinianxing Diaosu Fazhan Tanxi," *Yishu Keji* 30, no. 01 (2017), 189.

3. Xu Kai and Klaus Semsroth, "Gonggongxing De Moluo Dao Fuxing—Yu Ouzhou Chengshi Gonggong Kongjian Duizhaoxia De Zhongguo Chengshi Gonggong Kongjian," *Chengshi Guihua Xuekan*, no. 03 (2013), 61-69.

4. Robert Harbison, *The Built, the Unbuilt, and the Unbuildable: In Pursuit of Architectural Meaning* (MIT Press, 1993); *Huanjing Yishu Gailun*, ed. Xi Yueliang (Qinghua Daxue Chubanshe, 2006), 42. <https://books.google.com.au/books?id=am4fwhGiAgsC>; Wu Hung, "Monumentality of Time: Giant Clocks, the Drum Tower, the Clock Tower," (2003).

5. Erika Doss, *Memorial Mania: Public Feeling in America* (University of Chicago Press, 2012), 20.

6. Wang LaiYang, "Minguo Shiqi Zhongguo Chengshi Diaosu Yu Bentu Gonggong "Wuyu" De Goujian Yu Chengxian," *Diaosu*, no. 2 (2013), 26-31; Jiao Xingtao and Li Zhu, *Chongqing Diaosu 70 Nian* (Chongqing Chubanshe, 2016), 15.

7. Luo Shiping, "Jinianbei Yu Jinianxing Huanjing," *Meishu*, no. 09 (1988), 42-45; Ji Feng, "Jinianbei, Ouxiang, Fuhao Yu Gonggong Yishu—Ge Lishi Fazhan Jieduan Zhongguo Chengshi Diaosu Fanying De Shehui Lishi Xingtai," *Makesi Zhuyi Miexue Yanjiu* 12, no. 01 (2009), 271-77; Liu Libin, *Xiandai Diaosu De Qiyuan: Mingguo Shiqi Xiandai Diaosu Yanjiu*, 10-12.

8. Liu Guangwei, "Lun Zhongguo Dangdai Jinianxing Diaosu De Yangshixing Tezheng," *Huizhou Xueyuan Xuebao* 29, no. 03 (2009), 85-89.

"Monuments are the grappling-irons that bind one generation to another. Preserve what your fathers have seen."<sup>1</sup>

Public memorials add value by keeping past events alive in our collective memory and providing a physical representation of that which cannot easily be expressed – loss, grief, and pain caused to the public through war, terrorism, natural disasters, and genocide. Looking back to Chinese memorial history, scholars argue that authentic public memorials did not appear in Chinese public space until the late 19th century.<sup>2</sup> There was little publicness in the cities of ancient China due to the strict regime; hence, there were no authentic public memorials in public spaces.<sup>3</sup> Those commemorative structures in ancient China, like gateways, stelae, ornamental columns, and Chinese pavilions, bell towers and drum towers, were mainly an embodiment of monarchy without publicness, even though they have monumentality— commemorating events and people. Undeniably, these precedents have a significant impact on later Chinese memorial forms.<sup>4</sup>

What factors influenced the appearance of public memorials in China? In the late 19th century, it was the time that commemorative structures mushroomed in Western countries' urban space.<sup>5</sup> Also, European colonists built many monuments in the concession of Shanghai, marking the beginning of public memorials in China. Under such influence, the well-educated Chinese who came from abroad advocated building indigenous memorials. Then, genuine Chinese public memorials appeared in the early 20th century.<sup>6</sup>

Little Chinese research discusses the development of Chinese public memorials, but the process can be concluded by reviewing related work on urban sculptures. In formal terms, three stages in Chinese memorials' development, memorial stele (1912-1976), urban memorial sculptures (1976-1998), and memorial landscapes (1998-present).<sup>7</sup> However, one thing is never changed. Chinese memorials pursue the image of solemnness, sacredness, and grandness almost exclusively.<sup>8</sup> How do Chinese memorial forms constantly develop but pursue the same image along the way? For answering this question, this paper explores multiple memorials in Chongqing from 1941 to the current. In addition, it points out issues raised by exclusive pursuing after case study and literature review.

As one of the four cities directly under the control of the central government and the provisional capital in the Republic of China (ROC, 1912-1949), Chongqing is an ideal location to research Chinese public memorials. This is because its economic, historical, cultural, and political context offers a solid foundation for memorials' development, helping explore Chinese memorials across different times.



Figure 1: The Sichuan Revolutionary Martyrs Monument. (Photographed by Zhu Qiuyu, 2021).

### Memorial Stela and Statues 1912-1976 (纪念碑与纪念像)

9. Sun Zhenhua, "Yu Lishi Fazhan Xinghu Yinzheng—Zhongguo Chengshi Diaosu 40 Nian," *Meishu* (2018), 11-16.

10. Ji, "Jinianbei, Ouxiang, Fuhao Yu Gonggong Yishu" 273-77.

11. Bai Zuomin, "Chengshi Diaosu De Leixing, Ticao Ji Gousi," *Meishu*, no. 12 (1982), 3-7; Fu Chuanyu, "Lun Zhongguo Zaoqi Jinianbei Diaosu Xingshi De Chixxing Yiyi," *Meishu Dagan*, no. 08 (2013), 56-57.

12. "Yuzhong: Sichuan Geming Xianlie Jinianbei Yizun Haoqichangcun De Fengbei," Propaganda Department of Central Committee, 2016, accessed 16th June, 2020, [http://www.wenming.cn/syjj/dfcz/zq/201606/t20160603\\_3414608.shtml](http://www.wenming.cn/syjj/dfcz/zq/201606/t20160603_3414608.shtml).

13. Mark A Schneider, "Sacredness, Status and Bodily Violation," *Body & Society* 2, no. 4 (1996), 75-92.

Previously, scholars believed that the form of memorials should be stela and statues, despite the current fact that memorials are in various forms.<sup>9</sup> Contemporary scholars divided this period into three parts: The Republic of China (ROC) (1912-1949), The People's Republic of China (PRC) to the beginning of the Cultural Revolution (1949-1966), and the Cultural Revolution (1966-1976). In this period, vertical stela and giant statues predominated Chinese public memorials from 1912 to 1978.<sup>10</sup>

Many scholars suggested that vertical and straightforward forms of memorial stela strengthen the feeling of grandness and sacredness.<sup>11</sup> In addition, the memorial stele is a typical symbol of memory because, in ancient China, people used it to record important history and events. Many modern memorials utilised such form. For example, the Sichuan Revolutionary Martyrs Monument located in the first public park of Chongqing was built in 1942 to commemorate the Martyrs Peilun Yu, Guoliang Rao, and Qin Bin. They perished in The Huanghuagang Uprising initiated by Sun Yat-sen in 1910 (fig.1). The memorial is a 7.18-meter high rectangle stone table placed on a highly raised pedestal in order to outline its grandness. The grandness of this memorial is also embodied in its location. Due to the hilly topography, the park was a terrace garden. The particular topography of the park affords a sense of "hierarchy". The stele was placed on the highest terrace of the park to outstand its superior status.<sup>12</sup>

Distancing people from memorials also contributes to a sense of sacredness and solemnity.<sup>13</sup> In addition to their height, physical fences that enclose memorials further distinguish them from the secular life. At Sichuan Revolutionary Martyrs Monument, a series of stone pillars were set along the edge of the terrace. Between each pillar, an iron chain separates the memorial from the people. The fence keeps people from getting close to memorials to shape sacredness and solemnity.

The pattern of pedestal and fences existed in other contemporary memorials in Chongqing (fig.2).



Figure 2: *Left*. The Monument for Zhang Peijue. *Right*. The Monument for Firefighters in Chongqing. (Photographed by Zhu Qiuyu, 2021).

14. "Jiefangbei Naxie Xianweirenzhi De Gushi: "Bei" Zi Shao Yipie Zhongbiao Ceng Tingbai Lougao Buguo Bei," *XinhuaNet*, 2021, accessed 7th June, 2021, [http://m.xinhuanet.com/cq/2021-06/16/c\\_1127566095.htm](http://m.xinhuanet.com/cq/2021-06/16/c_1127566095.htm).

15. Ji, "Jinianbei, Ouxiang, Fuhao Yu Gonggong Yishu," 271-77.

Over time, memorials began to dominate surrounding environments. For instance, in 1947, the People's Liberation Monument was erected to celebrate China's victory after World War II, which is a 24.5 meters high octagonal prism placed on a 1.6-meter high terrace (fig.3). Moreover, the government did not permit the surrounding buildings to be higher than the monument; these rules were not broken until urgent needs of building multi-story shopping malls in 1973. In the later interview, the construction manager recalled the difficulties persuading the government to break the rule.<sup>14</sup> Another consideration is the location of this monument. It is in a central location of an intersection. Scholars suggested that such deployment creates the feel of grandeur and authority.<sup>15</sup> Two crossed streets are extended until hundreds of meters away, enabling people to see them distantly. In 1950, the new central government erased the original inscriptions on the People's Liberation Monument because it was from officers belonging to the ROC government. Memorials played as a political vane.

16. Sun, "Yu Lishi Fazhan Xinghu Yinzheng," 11-16.

The central government took memorials to emphasise its dominance, and educate citizens, encourage patriotism. Many memorials' topics were about victory in the war and heroism. Under such context, the idea was maximised—pursuing an atmosphere of solemnness, sacredness, and grandeur at memorials. This idea dramatically affects the later development of Chinese memorials.<sup>16</sup>



Figure 3: Left. The People's Liberation Monument in 1947. (<https://commons.wikimedia.org/wiki/File:抗戰勝利紀功碑.tif>). Right. The People's Liberation Monument in 2021. (Photographed by Jie Zhu, 2021).

### Urban Memorial Sculptures 1976-1998 (紀念性城市雕塑)

17. Ji, "Jinianbei, Ouxiang, Fuhao Yu Gonggong Yishu," 271-77.

18. He Jingzhi, "Yingjie Woguo Chengshi Diaosu Shiye De Huangjin Shidai—Zai Quanguo Chengshi Diaosu Dierci Guihua Huiyi Shang De Jianghua," *Meishu*, no. 7 (1984), 5-8+22.

19. Jiao and Li, *Chongqing Diaosu 70 Nian*, 126-28.

20. Zhang Jian, "Yishi Xingtai, Wenhua He Gonggong Jinianxing Diaosu—Dangdai Zhongguo Gonggong Jinianxing Diaosu De Huigu Yu Qianzhan," *Meishu Yanjiu*, no. 03 (2000), 22-25.

21. Immanuel Kant, *Observations on the Feeling of the Beautiful and Sublime* (Univeristy of California Press, 2003), 51-53.

22. Liu, "Lun Zhongguo Dangdai Jinianxing Diaosu De Yangshixing Tezhen," 85-89.

After the ten years of the Cultural Revolution, the Chinese government realised the value of sculptures on urban identity, collective memory, and urban beautification. This provided unprecedented opportunities for public memorials' development.<sup>17</sup> In 1984, a statement in The Second National Conference of Urban Sculptures Planning redefined the meaning of the memorial: "there are two kinds of urban sculptures in terms of their purpose; one is for commemoration and education, and another one is for urban ornamentation."<sup>18</sup> The new definition marked public memorials' creation tried to break through the constraints on traditional forms.<sup>19</sup>

Under the influence of western humanism, traditional pedestals, terraces, and fences did not adapt to the social needs of that time. Some memorials were with a lower pedestal, or the pedestal was designed in artistic ways; the terrace and physical fences gradually disappeared; memorials attempted to horizontal development, not just vertical.<sup>20</sup> Nevertheless, seemingly humanised changes were by no means that Chinese memorials stop chasing grandness, sacredness, and solemnness. Designers were seeking to make memorials deliver these feelings through metaphors and implications. As Immanuel Kant claimed, there are two factors of the sublime, mathematical sublime and dynamical sublime; mathematical sublime harness oversized forms to shape sublime; in contrast, the dynamical sublime is raised by a mental agent without direct material forms.<sup>21</sup> Liu, Guangwei asserted that Chinese memorials eulogise virtues such as perseverance, fearless sacrifice for revolution, and loyalty to the Communist Party through metaphors and symbols. They are the invisible force that arouses visitors' feeling of grandeur and sanctity.<sup>22</sup>

For instance, in 1987, a memorial was erected on an ancient city gate, Tongyuan Gate, to commemorate martyrs who perished in the “331 Incident” (On 3rd March 1927, the Kuomintang in Chongqing brutally suppressed the assembly in Chongqing). It is a vast stone fist breaking out from the tall pedestal. The clenched fist symbolises the spirit of the martyrs who broke through without fear of death; the pedestal was designed as a vast and rough rock that is the emblem of constraints and suppression from outsiders (fig.4). Moreover, a collection of silhouetted figures is attached to the walls under the sculptures. Those exaggerated gestures of silhouettes stand for the martyrs’ qualities of tenacity and persistence in revolution.<sup>23</sup>



Figure 4: The Monument of the “331 Incident.” (Photographed by Zhu Qiuyu, 2021).

24. Yun Gang, “Jinianxing Diaosu Zengyang Chu “Xin”—Xiang Kangri Zhanzheng Qundiao Jin,” *Meishu Guan*, no. 12 (1997), 10.

Additionally, diversified-central and architectural sculptures provide more opportunities for people to sense grandeur and sanctity.<sup>24</sup> For example, the Chongqing Bombing Memorial, constructed in 2000, is located on one of the busiest streets in Yuzhong District, Chongqing (Fig.5). It was built on the historical site to remember the citizen who died in the tunnel because of an air raid from the Japanese Force during the Second World War. Compared to previous examples, there is no central figure. Instead, a crowd of people carved onto a giant rock.

25. Jiao and Li, *Chongqing Diaosu 70 Nian*, 132, 202.

Furthermore, people’s severe and painful expression on the relief, which contrasts to the prosperous and bright street scene, implies the sites’ particularity and the solemn atmosphere.<sup>25</sup> People cannot reach out to these figures and have to head up to observe the iconic figures, contributing to a sense of solemnness from every angle. In addition, the memorial serves as a gate of the underground museum, taking nearly whole sidewalks. Thus, people are more likely to pass through the memorial on their travels down to the street.

During this period, memorials deliver solemnity, grandeur, and sanctity from metal forces. Also, changes in forms are a reply to the need for humanistic care. However, the essence of memorials pursuing those atmospheres does not change.



Figure 5: The Chongqing Bombing Memorial. (Photographed by Zhu Qiuyu, 2021).

### Memorial Landscape 1998- Present (纪念性景观)

26. Liu Bingyi and Li Kairan, "Jinianxing Jingguan Yuanze Chutan," *Guihuashi* (19, no. 2 (2003), 21-25; Liu Bingyi, *Jinianxing Jingguan Yu Lvyou Guihua Sheji*, vol. 1, Southeast University Press, (2005), 4-6.

27. Chen Wei, Chen Tuo, and Huang Biao, "Lun Chengshi Jinianxing Jingguan Sheji De Keduxing Biaoda," *Lvse Renju*, no. 35 (2015), 1-2.

28. Chen Sijia and Zhang Hongwei, "Lun Dangdai Jinianxing Jingguan Zhong Jianzhu De Xiaoyin," *Zhongguo Yuanlin* (China Landscape Architecture) 34, no. 08 (2018), 78-81; Zhang Li, "Chuzhi De Jinianbei He Shuipin De Gongyuan—Zhong Xi Dangdai Jinianwu Zhi Bijiao," *Jianzhu Yu Wenhua* (Architects and Culture), no. 3 (2017), 133-34.

29. Chen Xiewei, "Jiyu Changsuo Lilun De Jinianxing Jingguan Sheji Yaodian Qianxi," *Dazhong Wenyi*, no. 02 (2019), 66-67

In 2003, a new definition of memorials was proposed. Liu, Bingyi contends that “纪念性景观” is composed of three elements: the physical form of memorial landscape, the connotation of landscape, and its visitors.<sup>26</sup> This marked that a change in the conception of memorials—from a single object to spaces. Liu’s research became the basic theoretical framework to support later Chinese research on the memorial landscape in Chinese, which facilitates memorials’ spatialisation in China.<sup>27</sup>

A few scholars realised that solemnness, grandness, and sacredness are not exclusive features of memorials.<sup>28</sup> Nevertheless, the motivation to create spectacular memorials still exist. Apart from being presented only through memorial objects, this awareness is infused into the whole commemorative environment.<sup>29</sup>

For example, in 2007, a memorial plaza, Red Rock Soul Square (the name of Red Rock Soul (红岩魂) refers to the revolutionary spirit of the Communist Party), was constructed to commemorate the communists and their relatives who died in the 11.27 Massacre (Fig.6) (Before leaving Chongqing, the ROC government executed detainees on 27th November 1949). The symmetrical and rectangular square is composed of platforms and flights of stairs. In this case, people process along stairs, maintaining a view upward to memorials. Moreover, the whole plaza is flanked by a row of upright pine and cypress. All memorial objects are located in the middle axis but have different forms. Distancing people from memorials still exist but in a subtle manner. For example, the pool keeps people away from the central memorial object, the rough stone pavement marks the particular area that potentially keeps people at bay, or physical fences are hidden behind the flowers. These fences try to separate from people’s daily lives.



Figure 6: The Red Rock Soul Square.(Photographed by Jie Zhu, 2021).

30. Liu Binyi and Jiang Shan, "Jinianxing Jingguan De Shijue Tezheng Jiexie," *Zhongguo Yuanlin* 28, no. 03 (2012), 22-30.

31. Liu Bingyi and Li Kairan, "Jinianxing Jingguan De Jiben Tushi Muti," *Zhongguo Yuanlin*, no. 05 (2003), 20-23.

32. Cheng Yuning and Tan Ming, "Jiyu Lianghua Jishu De Jingguan Secai Huanjing Youhua Yanjiu—Yi Nanjing Zhongshan Linyuan Zhongzhouxian Weili," *Xibu Renju Huanjing Xuekan* 31, no. 04 (2016), 18-25.

This memorial form is the stereotype of memorial landscapes in China.<sup>30</sup> Scholars believe the symmetrical and regular shape (square, rectangular, and circle) and repeated elements create a sense of grandeur and sanctity, which derives from the similar deployment of the ancient imperial cemeteries.<sup>31</sup> Those massive imperial cemeteries are always symmetrical and connected by the ascending staircase flanked by uniform stone columns. Thus, similar deployment of modern memorials is an implication, promoting reverence and awe. Plus, scholars suggest that the pine and cypress strengthen the sense of sacredness and grandness because of their dark colour and upright shape; they are also a metaphor of eternal existence after death in Chinese culture.<sup>32</sup>

Current memorials are involved in the competition of elevation. One recent memorial in Chongqing, the statue of Fighters in the Anti-Japanese War near the Egongyan Bridge, exemplifies this fact (Fig.7). It was erected in 2018 for Sichuan soldiers who participated in the Anti-Japanese War (1931-1945) with a 7-meter high statue placed on a 23-meter high pedestal. Several layers of roadway overpass spiral around the memorial but remain lower than the statue. A fearless soldier holding a rifle and striding to the battlefield stands on the top. It is a remarkable fact that the 23-meter tall pedestal, making the statue 5-meter higher than the elevated bridge. In this case, people are able to see the statue from the overpass while sitting in their vehicles, being offered a "look-up" perspective instead of looking down. This is an example of Chinese memorials responding to the higher urban interface challenge—becoming higher. Spatial memorials have become sites for secular life. They try to find a new development direction in the conflict between sustaining spectacular images and adapting to new urban contexts and people's needs.



Figure 7. The Statue of Fighters in the Anti-Japanese War. (Photographed by Li Bo, 2021).

### The Issues Raised by Exclusively Pursuing Solemnness, Sacredness, and Grandness

33. Cheng Yuning and Tan Ming, "Jiyu Lianghua Jishu De Jingguan Secai Huanjing Youhua Yanjiu—Yi Nanjing Zhongshan Linyuan Zhongzhouxian Weili," *Xibu Renju Huanjing Xuekan* 31, no. 04 (2016), 18-25.

Undeniably, present Chinese memorials have progressed dramatically since the 1990s and become critical elements shaping urban identity.<sup>33</sup> The above analysis of memorial forms has demonstrated Chinese memorials pursue solemnness, sacredness, and grandness along the way. Nevertheless, exclusively pursuing those spectacles on memorials cases also raise some issues.

Exclusive pursuit constrains the diversity of memorial forms. Examining memorials from Sichuan Revolutionary Martyrs Monument to Fighters in the Anti-Japanese War, it is evident that Chinese public memorials maintain some features on forms. First, the obsession with height exists in the whole Chinese memorials' history. Terraces and pedestals are probably not necessities; nevertheless, memorials are designed on

33. Cheng Yuning and Tan Ming, "Jiyu Lianghua Jishu De Jingguan Secai Huanjing Youhua Yanjiu—Yi Nanjing Zhongshan Linyuan Zhongzhouxian Weili," *Xibu Renju Huanjing Xuekan* 31, no. 04 (2016), 18-25.

a massive scale or placed on higher ground are substitutes. Vertical memorials have to compete for elevation with surroundings, like the Fighters in the Anti-Japanese War memorial. Besides, memorial objects always occupy the centre of the space, which becomes a convention. All this evidence express an awareness that memorials are supposed to be massive and remarkable.

How do memorial forms change over time? Compared to the memorial stele in early China, current memorial sculptures still emit infectious zeal via figuratively depicting the solemn or grand moment. Meanwhile, metaphors and mental implications encourage people to feel revolutionary spirits that are always bound to sacredness, grandness and solemnness. Also, spatial memorials construct a commemorative atmosphere with various methods, including organised plants and spaces, specific and vivid imagery, and enough open space to attract people to visit. However, these elements keep the original spiritual meaning—grandness, solemnness, and sacredness. Hence, even if memorial forms change, those changes always have the same aim — strengthening the spectacle of memorials and making them adapt to the current social context. Correspondingly, the constraints on memorial forms also limit people's engagement with memorials, which might accelerate people's ignorance of them.

34. Anita Bakshi, *Topographies of Memories: A New Poetics of Commemoration* (Springer, 2017), 196; Q. Stevens and K. Franck, *Memorials as Spaces of Engagement* (Routledge (New York, United States), 2015), 129-38.

Apart from commemoration, memorials serve as spaces for daily engagement. People can connect with memorials by using them rather than just in a passive position, such as acquiring memory only from seeing the pale imagery on fenced memorials.<sup>34</sup> To promote sanctity and solemnity, Chinese memorials seek to exclude people's physical engagement. The fence still exists but is transformed as short plants or water pools to stop people from getting close. Plus, scholars believe that the linear and regular space with flights of steps, which is similar to the imperial cemeteries, inspires people's worship and reverence as processing forward. Nevertheless, raised plaza and steps might damage the engagement because steps become a barrier for older people or people with the stroller; plus, people cannot have various activities compared to the flat ground.

35. Jan Gehl, *Life between Buildings: Using Public Space* (Island Press, 2011), 134-60.

36. Chang-tai Hung, "Revolutionary History in Stone: The Making of a Chinese National Monument." *The China quarterly* (London), no. 166 (2001): 472-473.

Additionally, scholars contend that placing the memorial in the middle of space can arouse people's worship and awe because of its similar form to the ancient ritual sites. However, according to the edge effect, people tend to remain on the outer edges of sites.<sup>35</sup> So, how can they connect with the memorial by a brief pass? In this case, these memorials might be ignored due to little connection with visitors, which deviates from the original intention—remembering. Probably, designers intentionally designed memorials to be less engaging. This seems to corroborate some scholars' point that Chinese memorials are primarily political propaganda and education.<sup>36</sup> Constraints on people's engagement mean easy management and stopping the generation of competing ideas.

37. Liu, "Lun Zhongguo Dangdai Jinianning Diaosu De Yangshixing Tezhen," 85-89.

Also, pursuing solemnness, grandness, and sacredness is a popular topic of public memorial research.<sup>37</sup> It also means the exclusive pursuit of these affections constrains the development of memorial research. Early research is an era to advocate spectacle and is primarily about describing public memorial forms, which could date back to 1950.<sup>38</sup> The

38. Tan Yuan et al., "Shanghai Baoshan Lieshimu Jinianningbei," *Tongji Daxue Xuebao* (Journal of Tongji University), no. 02 (1978), 38-43.

39. Liu Kaiqu, "Renmin Yingxiong Jinianbei," *Zhuangshi*, no. 01 (1958), 10+18-19.

40. Zhang, "Yishi Xingtai, Wenhua He Gonggong Jinianxing Diaosu," 22-25.

41. Luo, "Jinianbei Yu Jinianxing Huanjing," 42-45.

42. Bai, "Chengshi Diaosu De Leixing, Ticao Ji Gousi," 3-7.

43. Liu and Li, "Jinianxing Jingguan Yuanze Chutan," 21-25.

44. Zhang, "Yishi Xingtai, Wenhua He Gonggong Jinianxing Diaosu," 22-25.

enthusiasm for those feelings lay under the scholars' descriptions of them. Liu, Kiaqu described the Monument to People's Heroes (The first public memorials initiated by the central government of the PRC ): the monument is towering and grand, erected in the centre of Tiananmen Square.<sup>39</sup> Meanwhile, some works examined public memorials in the Soviet Union, which was the primary reference for creating early public memorials in China.<sup>40</sup> These works complemented the grand and sacred image of memorials in the Soviet Union and suggested that Chinese memorials should learn from them.

In 1978, Chinese public memorials encountered new opportunities. However, scholars were still keen on studying memorial forms, and delivering and maintaining the sense of grandness and sacredness. Luo, Shiping contended that the memorial sculptures should coordinate with surroundings to shape grandness and solemnness.<sup>41</sup> Bai, Zuoming suggested that casual site selection and building memorials everywhere damage their sacredness.<sup>42</sup> This idea contrasts sharply with the fact that memorials in western countries are in neighbourhoods.

After 2000, under the background of memorials' spatialisation, more scholars focus on memorials. Research on memorial landscapes explores not only memorial objects but also other elements, including plants, spatial deployment and shape, and touring routes.<sup>43</sup> However, this research has a similar purpose. That is to grant memorials with a feeling of grandness, solemnness, and sacredness through environmental elements. After reviewing the development process of Chinese public memorials' research, the result implies that most scholars concentrate on transferring and stimulating grand, solemn, and sacred affections. In this case, such persistence might make scholars ignore other research topics of memorials.

## Conclusion

This paper has explored examples of memorials erected in the city of Chongqing from 1942 to the present. It argues that the Chinese memorials have continued to pursue a sense of grandeur, solemnity, and sanctity. Factors shaping these affections include massive scale, keeping people away from memorials, symbols and metaphors, raised ground, and orderly deployment. They have hampered public memorials' development and people's engagement with memorials. Through studying Chinese public memorials, it is possible to glimpse the relationship between the public and government. Memorials are products of the centralised system of China— probably serving to educate people and motivate patriotism.<sup>44</sup> Although memorial forms constantly change, their essence pursuing grandeur, solemnity, and sanctity barely changes. Thus, Chinese memorials are bound to pursue solemnness, sacredness, and grandness exclusively. Future research should explore what Chinese memorials mean to citizens, how people respond to these memorials exactly, and how the government maintains and strengthens memorials' spectacle image.

# ULTRA

## **Positions and Polarities Beyond Crisis**

### **SESSION 5: *Local and Regional Modernism***

# Barbara van den Broek. Contributions to the Disciplines of Landscape Architecture, Town Planning and Architecture

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## Keywords

Landscape Architecture,  
Modern Architecture  
Town Planning  
Architectural Education

## Abstract

Barbara van den Broek (1932-2001) trained as an architect in Auckland, New Zealand before moving to Brisbane with her husband and fellow architect Joop, where they established an architectural practice. van den Broek went on to run an office as a sole practitioner and took on architecture and landscape architecture projects. Over the course of her career she completed post-graduate diplomas in Town and Country Planning, Landscape Architecture and Education, and a Master of Science – Environmental Studies, and collaborated on a number of key projects in Queensland and Papua New Guinea (PNG).

Our paper will build an account of her career. In assessing the significance of her contribution to landscape architecture, planning and architecture in Australasia, it will bring a number of other spheres into the frame: conservation and Australia's environment movement; landscape design and the bush garden; and van den Broek's personal development that included artistic expression, single parenthood, teaching, and the navigation of male-dominated professional environments to develop a practice that contributed to town planning projects in cities across Australia, and made significant contributions to landscape projects in Queensland and PNG.

## Introduction

1. Julia Gatley, "Back to the South": Cyril Knight and the Modernisation of the Auckland School of Architecture', in *The Journal of Architecture*, 25: 4, 2001, 396-418, DOI 10.1080/13602365.2020.1766541.

2. Julia Gatley and Lucy Treep, eds., *The Auckland School, 100 years of Architecture and Planning*. Cambridge, Auckland: School of Architecture and Planning, University of Auckland, 2017, 55.

Barbara van den Broek nee Whitman (1932-2001) was awarded the Diploma in Architecture from Auckland University College in 1956. The Diploma was a four-year qualification and Barbara met her husband Joop van den Broek, who graduated one year earlier in 1955 during the course of her studies. They completed their diplomas while Professor Cyril Knight (1893-1972) was undertaking a modernisation of the School as first Chair and Dean of Architecture, prior to his retirement in 1958.<sup>1</sup> At this time there would have only been three or four other women in her classes.<sup>2</sup>

Sketch Plans for a House on a steep site on Upland Road in Auckland completed in July 1952 – when Barbara was nineteen years old – were chosen for publication in the Auckland School of Architecture Prospectus of 1953 (Figure 1). The sketch plan proposal was preceded by a research report compiled for a specific family that included measured drawings, presumably of the family's existing house, illustrating the School's move to research and the adoption of realistic briefs. Whitman proposed a simple two-storey low-pitch extruded gable form, with living areas above and dormitory space below, and provision for a nuclear family with three children – emblematic of a commitment to affordable post-war houses – that was supplemented by a linear pavilion on the street, and a tennis court at the bottom of the site, presumably reflecting the aspirations of the family in question. Also noteworthy was her terracing of the sloping terrain and addition of a double carport next to the entrance, outdoor terrace for the upper level, and outdoor patio at ground level. The steepest part of the site above the tennis court was given over to gardens, including a "farmer's garden". The whole landscape was precisely managed, in a portent of things to come.

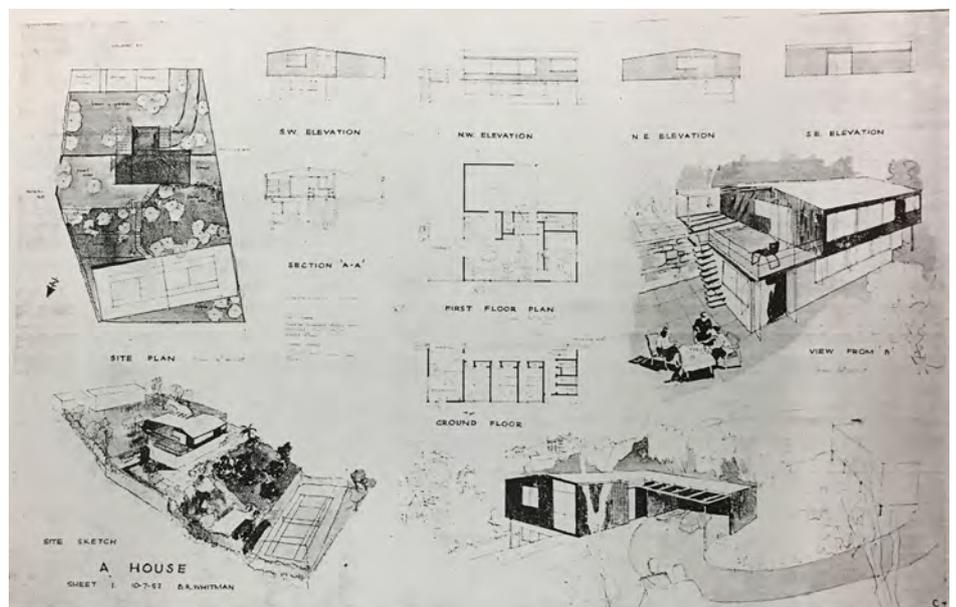


Figure 1: Sketch Plan for a House by Miss BR Whitman (1952). Source: Auckland School of Architecture Prospectus, 1953.

## Queensland Landscape Architectural Culture

3. Marion Pennicuik, 'Obituary, Barbara Ruth van den Broek', in *Landscape Australia*, No. 4, 2001, 57.

After graduation Barbara moved with her husband to Brisbane, established an architectural practice, and eventually moved to architectural and landscape practice as a sole practitioner and single parent.<sup>3</sup> van den Broek was a founder of the profession of landscape architecture in Queensland and a key contributor to the formation of the Australian Institute of Landscape Architects (AILA). In the 1960s in Australia the profession was still in its infancy. Moves to institutionalise the profession had begun around 1963 in Melbourne but there were state-based enclaves of landscape-interested people emerging in connected if idiosyncratic ways. Notable was the array of different kinds of practitioners, their different disciplinary backgrounds leading to an uneven way in which landscape architecture began to define itself. This had implications for how practitioners developed their practices, along with the redefinition of the roles of architect/planners, engineers, horticulturalists, foresters and others who had previously engaged in landscape work.

4. Malcolm Bunzli, "Malcolm Bunzli", in Australian Institute of Landscape Architects Queensland Group, *An Evening with Harry Oakman Malcolm Bunzli George Trapnell George Williams*, Occasional Paper No. 1 (Brisbane: Australian Institute of Landscape Architects Queensland Group), 16 October 1979, 11.

Unlike some of her more parochial Queensland peers, over time van den Broek developed a national practice, with consultancies in Darwin, Alice Springs, Brisbane, Sydney, Canberra (new towns), Perth, and Papua New Guinea (PNG), only a fraction of which are presented here. She also made formidable contributions to designed landscapes in South-east Queensland and to the establishment of the AILA's Queensland Chapter, the Queensland Association of Landscape Architects (QALA). The first five members of QALA were Arne Fink (1930-1993), Karl Langer (1903-1969), Bernard Ryan (1930-2015), Barbara van den Broek and John Wheeler (dob. 1926).<sup>4</sup> The QALA endured into the 1970s with van den Broek as Secretary and President between 1973 and 1975. It co-existed with the AILA at the national level and its contribution to the AILA included the drafting of national codes of professional conduct and scales of fees, making Queensland's landscape architects leaders for the nation.

5. George Williams, *Landscape Architecture Education at QIT/QUT, Stories from the first 50 years*, ed. George Williams. Unpublished manuscript (Queensland University of Technology Digital Collections. <https://digitalcollections.qut.edu.au/4513/>), 5.

Landscape architectural education in Queensland commenced with a three-year part-time postgraduate Diploma of Landscape Architecture at the Queensland Institute of Technology (QIT, later QUT) with first enrolments in the 1967 academic year. Malcolm Bunzli became Course Coordinator and a member of QIT's part-time staff with Karl Langer one of three part-time lecturers, teaching 'History of Landscape Design'<sup>5</sup> and inspiring students with engaging exercises in interpreting principles of Japanese garden design.<sup>6</sup> Bunzli was one of a small group of Australians who travelled to England in the 1950s and 60s to take up studies in landscape design at King's College in Newcastle upon Tyne (then a college of Durham University). This course was overseen by UK landscape architect Brian Hackett (1911-1998), whose practice and teaching centred on an ecological approach, so it followed that Bunzli sought to establish a similar approach for the QIT course.<sup>7</sup> The first intake included fourteen students, predominantly architects, including two of the 'Langer Five' – Bernard Ryan and Barbara van den Broek, who both graduated in 1969.<sup>8</sup> Lindsay Andrado (formerly a Surveyor) and Beth Wilson (1933-2019) (Consultant Botanist)<sup>9</sup> were other early graduates. Wilson went on to develop a notable career in landscape architecture in Queensland. Elina Mottram (1903-1996),

6. David Hanger, "Untitled Notes," in *Landscape Architecture Education at QIT/QUT*, 26.

7. Malcolm Bunzli, "An Article in Two Parts," in *Landscape Architecture Education at QIT/QUT*, 15.

8. Malcolm Bunzli, "The Environment that Fostered the Impetus and Setting for Formal Introduction of Studies in Landscape Architecture in Queensland," in *Landscape Architecture Education at QIT/QUT*, 10-11.

9. Williams, *Landscape Architecture Education at QIT/QUT*, 7.

10. Williams, *Landscape Architecture Education at QIT/QUT*, 7.

11. Malcolm Bunzli, 'The Contribution of Inaugural Graduates', in *Landscape Architecture Education at QIT/QUT*, 312; Rena Archer, 'Talking with Barbara van den Broek', in *Constructive Times Newsletter of Constructive Women*, The Association of Women Architects, Landscape Architects, Planners and Women of the Building Industry, No. 26, December 1988, 14.

12. Catherine Brouwer, 'Stimulating and Demanding', in *Landscape Architecture Education at QIT/QUT*, 52; Catherine Brouwer, personal communication, 21 July 2021; Catherine Brouwer, "Work Resume Schedule of Projects in the office of Barbara van den Broek, Landscape Architects", courtesy of Catherine Brouwer.

13. Lawrie Smith, 'QIT Memories', in *Landscape Architecture Education at QIT/QUT*, 41.

14. The Australian Institute of Landscape Architects, *The Landscape Architect and the Australian Environment*, AILA, Canberra, 1970.

15. Roelof J Bentham, 'Foreward', in AILA, *Proceedings of the conference: The Landscape Architect and the Australian Environment conducted by the Australian Institute of Landscape Architects at the Prince Philip Theatre, the University of Melbourne, 30th August, 1969*, AILA, Canberra, v.

reputedly Queensland's first female registered architect, was another in the inaugural group.<sup>10</sup> George Williams (1940-), who had also studied under Brian Hackett, took over Bunzli's role in 1969 when Bunzli was transferred to Rockhampton to take a position as District Architect.

The solid ecological underpinning delivered to van den Broek via the QIT course permeated her consultancies, particularly the large-scale commissions that involved landscape design, planning and management. Her subsequent qualifications, a Master of Science (Environmental Studies) Griffith University (Griffith) in 1982 and a Graduate Diploma in Education (University of Sydney) in 1988 augmented her architecture, landscape architecture, and planning training and enabled her to translate practice experience into theoretical and educational settings when in the 1980s she taught at the Royal Melbourne Institute of Technology (RMIT) and full time at Sydney's horticulture school at Ryde TAFE in the 1980s and 1990s.<sup>11</sup> Through the 1970s she delivered lectures into the QIT course from which she had graduated. Queensland landscape architects such as Catherine Brouwer (graduated 1976) and Lawrence (Lawrie) Smith (graduated 1972) were inspired by van den Broek. Brouwer subsequently worked for van den Broek between 1975-77 when she managed landscape architecture in the office of DJ Dwyer and Associates, and also between 1977-79 in van den Broek's own practice working on landscapes for schools, tertiary institutions, private gardens and projects such as the Parliament House gardens and the museum in PNG.<sup>12</sup> Smith recounted:

Barbara van den Broek was a practical inspiration as she demonstrated and encouraged the detailed aspects of landscape planning and design in her lectures. One memory that has stayed with me is the absolute need to take detailed site information and photographs at the first visit for any project. She recounted how she did a less than adequate survey for a project in New Guinea and had to fly back at personal cost to fill in the blanks – some good cost planning advice not forgotten!<sup>13</sup>

The AILA's inaugural national conference in 1969 was titled: 'The Landscape Architect and the Australian Environment'.<sup>14</sup> The conference raised key issues over the quality of the Australian environment, its conservation and management and was opened by Dutch landscape planner, Roelof J. Bentham (1911-2003), Chairman of the Landscape Planning Commission of the International Union for Conservation of Nature and Natural Resources. The tenor of Bentham's opening address, which made an impassioned plea for the newly defined Australian professional landscape architect to take up key roles in environmental planning was an aim wholeheartedly supported by AILA initiatives. Bentham outlined the pathway to achieve proficiency in environmental planning, advocating:

The first step to be taken should be, in my opinion, the establishment without delay of a complete training of the highest professional standard in landscape architecture based on ecology. A second one could be the promotion of research in the broad field of the environmental sciences. A third one, the extension of the available legislative and financial equipment and planning machinery.<sup>15</sup>

van den Broek developed her professional practice in alignment with the directives laid out by Bentham. Although numbers were generally low in the landscape architecture profession at that time, it is significant that the profession enabled women practitioners such as Beryl Vivienne Mann (1914-1982) in Victoria and van den Broek to take up key roles in education, professionalisation and as sole practitioners. Their commissions included institutional landscapes, landscape reclamation, landscape planning, and conservation and heritage landscapes. All these fields were informed by the disciplines of ecology and conservation.

### **From Institutional Landscapes to Landscapes Reclaimed: Ecological Underpinnings**

The post-World War Two development boom was a catalyst for expansion in higher education. It saw the emergence of powerful new government initiatives under the Australian Universities Commission in the late 1950s and a corresponding push to expand university and college infrastructure to meet increasing demands. In catering for the push for new or redeveloped campuses, all built environment professions stood to gain, including the pioneers of the emerging profession of landscape architecture. Beyond the default position of employing horticulturalists and landscape managers within the Grounds Staff of individual campuses, architects often took the lead with new campus landscape designs. Whether employed directly as staff architects (architects Geoffrey Harrison and Walter Abrahams being cases in point) or external consultants, architect/planners often sought sub-consultants for advice on landscape. In Barbara van den Broek's capacity as a sub-consultant to DJ Dwyer and Associates, as well as in her own practice, she made contributions to the University of Queensland (UQ); Griffith Nathan Campus, Kelvin Grove College of Advanced Education (KGCAE); North Brisbane College of Advanced Education (NBCAE); and Ipswich College of Technical and Further Education (ICOTAFE).

16. 'Trees will Beautify University' *Courier-Mail* (Brisbane), December 31, 1940, 3.

17. Christopher McVinish and Susan Pechey, *Impressions of the University of Queensland, St Lucia*: University of Queensland Press, 1982, 19.

In 1963, prior to commencing with DJ Dwyer and Associates, van den Broek won a competition to landscape an area around the lagoon, between the Staff House and the Student's Union – formed by the damming of Carmody Creek on the flood plain of the Brisbane River (Meeanjin) – within the grounds of the St Lucia Campus of the UQ now known as UQ Lakes, that was implemented, while James Birrell was the UQ Staff Architect.<sup>16</sup> (Figure 2) The landscape proposal utilised Mt Cootha blue-stone retaining walls, paths, terraces and planting, and featured a curved retaining wall with timber seats adjacent a "stage area for impromptu games" next to the lagoon that referenced the circular figures of Birrell's Staff House (1966) adjacent. Blue-stone was used by Birrell for the landscape retaining walls at Union College (1963-1972). Much of the required planting was done on the weekends by James Birrell and his then nine-year-old daughter.<sup>17</sup>

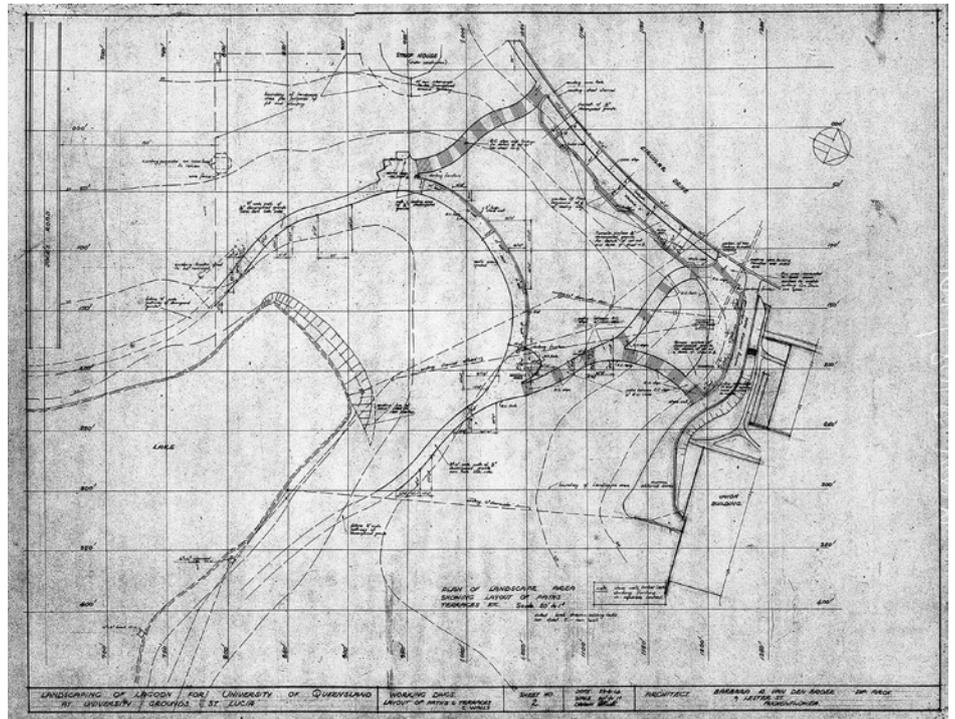


Figure 2: Landscaping of Lagoon for University of Queensland. Working Drawings, Layout of Paths and Terraces and Walls. Source: The University of Queensland, Properties and Facilities.

18. Unpublished findings stemming from research by Andrew Saniga and Susan Holden into the history of Griffith University's landscape, and specifically, the people, events and processes that contextualise the qualities of Griffith's landscape in the relationship to other Australian campuses inspired by endemic qualities of their sites.

19. D.J Dwyer and Associates Landscape Architects, *Griffith University Landscape Report*, Bowen Hills: QLD, 7.

20. *Griffith University Landscape Report*, 6-7.

Notwithstanding the significant in-house contributions at Griffith made by Roger Johnson and Neil Thyer and their well-organised team of grounds staff who worked under Griffith's Site and Buildings Division, the early landscape planning and design by van den Broek has contributed to Griffith's landscape becoming nationally recognised as a significant post-war landscape in the "bush campus" genre<sup>18</sup> (Figure 3). In all van den Broek's institutional commissions she sought to conserve and to promote Australian indigenous landscapes within campuses and their urban contexts. In the Griffith University Landscape Report by DJ Dwyer and Associates Landscape Architects the campus core was kept relatively compact rather than sprawling across the site, an approach that was thought to differ from Griffith's closest comparable post-war campus, that of the University of Newcastle, where the concept for the buildings involved, the report suggested, "losing the buildings in the bush".<sup>19</sup> The approach at Griffith was intended to achieve a stark contrast between the architecture and the indigenous bushland whilst also preserving untouched large portions of the site and restoring the landscape following construction.<sup>20</sup> The ultimate goal concerned the ecological, aesthetic and educational value of the site:

21. *Griffith University Landscape Report*, 4.

The presence of a large area of relatively untouched vegetation, particularly when it contains rare species is a valuable asset to the University and also to the city. Apart from its ecological significance the natural vegetation provides a living laboratory and study area for students of Botany and Biology.<sup>21</sup>



Figure 3: Griffith University Nathan Campus, Queensland showing the immediacy of Indigenous landscapes and institutional buildings. Source: Andrew Saniga, 2019.

22. Griffith University Landscape Report, 8.

23. Griffith University Landscape Report, 18.

24. See Griffith University, 'Family Groups' accessed 10 June 2021 at: <https://www.griffith.edu.au/about-griffith/first-peoples>.

In qualifying the ecological approach sought for Griffith it is also important to clarify how the ideas within the Griffith report were of their time in terms of the state-of-the-art in constructed ecologies. In recognising the special qualities of the Indigenous landscape and its ecology, the report proposed modification of landscape ecologies while deferring to the pragmatics of managing a functioning campus within the realm of landscape planning and design even if that meant altering, perhaps permanently, natural systems. It proposed that: "The exclusion of fire from the natural areas, if this proves possible, may have a long term effect on the vegetation which could usefully be studied on the site."<sup>22</sup> In a section of the report dedicated to "Bushfire Control" concern about the damage that fire can have on timbered sites was discussed along with the desirability of the establishment of fire breaks either by clearing or mowing or "in the last resort by 'control burning'".<sup>23</sup> These ideas reflect the belief that landscape is a resource for human use or scientific examination, rather than something to be wholly valued in its unmodified state or indeed more significantly, as a cultural landscape managed by the Nathan site's traditional owners, the Yugarabul, Yuggera, Jagera and Turrbal peoples.<sup>24</sup>

25. See: Ross Wissing, Andrew Saniga, and Robert Freestone, 'Australia's universities are on unceded land. Here's how they must reconcile with First Nations people', *The Conversation*, 29 June 2021, see: <https://theconversation.com/australias-universities-are-on-unceded-land-heres-how-they-must-reconcile-with-first-nations-people-155966>; Also, unpublished findings stemming from research by Andrew Saniga and Susan Holden into landscapes of modern Australian universities.

This is not to suggest that van den Broek was unaware of the significance of Australian Indigenous cultures' ownership of the land. Rather, that Australia in the 1970s and early 1980s had begun to emerge from colonial amnesia with respect to the alienation of Australia's Indigenous people from their own land. A settler mind-set nonetheless prevailed even in relatively enlightened designers such as van den Broek. The current upheaval in our understanding of campus landscapes as occupying Indigenous peoples' lands is one of the most significant shifts in planning and design to have occurred in the last two decades.<sup>25</sup>

26. Barbara van den Broek, 'North Brisbane College of Advanced Education' in Centre for Environmental Studies, Landscape Australia: *An Exhibition*, The University of Melbourne Archives, Parkville, 1982 [exhibition panel].

The tenor of van den Broek's proposals for Griffith were repeated in other campus work with the completion of pragmatic design and detailing that tended to reflect an efficiency that was linked to van den Broek's skills in architectural detailing and construction. For the NBCAE, completed 1979, she prepared a Landscape Master Plan in response to site planning by Heathwood, Cardillo and Wilson, and emphasised the preservation of valued qualities of the indigenous landscape along with the way the landscape could support institutional activities: "amphitheatre, outdoor teaching areas, shelter sheds, paths and outdoor seating."<sup>26</sup> In addition to the masterplan she designed and documented

27. Barbara van den Broek, 'North Brisbane College of Advanced Education'.

28. Barbara van den Broek and John Andrews International Pty Ltd, 'Landscape Works Kelvin Grove College of Advanced Education' in Centre for Environmental Studies, *Landscape Australia: An Exhibition*, The University of Melbourne Archives, Parkville, 1982 [exhibition panel].

29. Barbara van den Broek and John Andrews International Pty Ltd, 'Landscape Works Kelvin Grove College of Advanced Education'.

30. Catherine Brouwer, Interview with Andrew Saniga, 16 July 2021.

a number of parts of the campus including the Community Building, Specific Learning Spaces Building, General Spaces Building along with car parks and sports fields.<sup>27</sup>

At KGCAE, completed 1979, that van den Broek designed in association with architects John Andrews International, again she emphasised the natural resources of the site "for teaching and recreation purposes, in particular...appropriate sites for field study purposes, i.e. areas of biological and geological interest."<sup>28</sup> Among a number of functional and intermediate spaces she designed a courtyard associated with the Educational Resource Centre (Figure 4) which formed a focus for the site, providing seating, planting, ground form and aspect responsive to the microclimate in a solution that involved "a change of level, stepping down and opening out to the North-East breezes and the view of the city, with walls and planting creating opportunities for large gatherings or secluded seating."<sup>29</sup> The resultant robust landscape detailing was characteristic of van den Broek's approach across a range of her projects albeit with different configurations and materials palettes. Low-backed timber seats were angular to facilitate conversation and combined with red brick free-standing walls "to give structure and definition and to anchor different parts [of the site]", carefully interlaced with plant material for shade and comfort, all prioritising human use.<sup>30</sup>

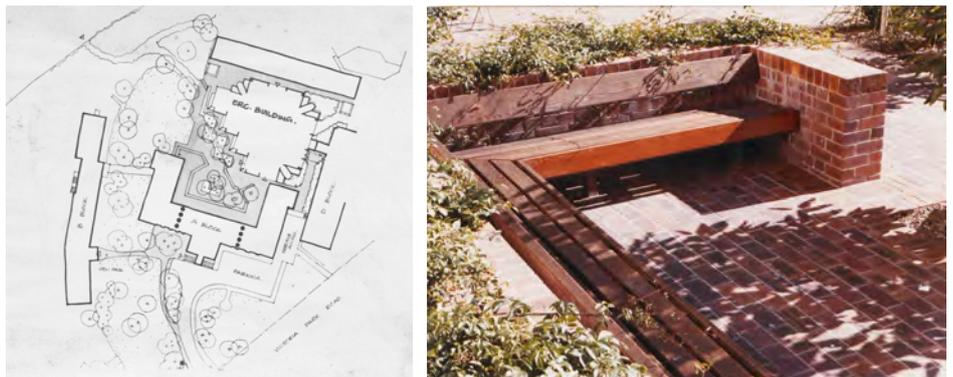


Figure 4: Kelvin Grove College of Advanced Education, Queensland, by Barbara van den Broek and John Andrews International drawn by Catherine Brouwer. Source: Centre for Environmental Studies, *Landscape Australia: An Exhibition*, 1982.

31. Loder and Bayly, Barbara van den Broek, 'Narangba Quarry' in Centre for Environmental Studies, *Landscape Australia: An Exhibition*, The University of Melbourne Archives, Parkville, 1982 [exhibition panel].

Two further projects, Narangba Quarry and the Ironbark Gully Picnic Area, help cast her practice as one closely aligned with reclaiming Australian indigenous landscapes and responsiveness to place. Landscape remediation at the time tended to accept the inevitability of infrastructure and that the role for landscape architecture was to soften the scars of progress rather than to oppose development outright. For Narangba Quarry, a project for which a rezoning application had been rejected by the Caboolture Shire Council partly on the basis of visual impact, van den Broek worked in association with planning, engineering and landscape consultants Loder and Bayly to complete a visual analysis aimed at identifying ways to reduce the visibility of the proposed quarry from key viewpoints along roads in the surrounding landscape. Her method for Narangba involved manual analysis techniques. Evidently the findings of their report were met with success as the Boral quarry operates on the site today albeit at the loss of a local prominent feature, "the central portion and approximately 40 metres from the top of Franz Mountain."<sup>31</sup>

32. Catherine Brouwer, Interview with Andrew Saniga, 16 July 2021.

The Ironbark Picnic Area which van den Broek completed in association with Environment Science & Services for the Brisbane Forest Park Authority in 1981 provided both site planning and detailed designs for the layout of picnic areas and car parks. The design detailing for the picnic area shelter was robust and open with diagonal slatted screen walls and a timber pergola. It is evident that van den Broek had a solid knowledge of plants and used plants creatively yet pragmatically in her designs – the shelter was designed to include indigenous climbing plants at each of its corners, probably the endemic *Pandorea jasminoides* or Bower of Beauty (Figure 5), that in time would partially cover the structure and envelop the visitor. Brouwer noted van den Broek's concern for facilitating congregation in sensitive ways, hence the screens as a form of partitioning for privacy when needed, that avoided awkward circulation if for example two independent families were picnicking at the same time, whilst also ensuring a sense of openness that connected visitors to the landscape setting.<sup>32</sup>



Figure 5: Ironbark Gully Picnic Area, Queensland, by Barbara van den Broek and Environment Science & Services for the Brisbane Forest Park Authority in 1981. Source: Centre for Environmental Studies, *Landscape Australia: An Exhibition*, 1982.

## Landscape Assessment, Planning and Conservation

33. For a detailed discussion of the impacts of USA-based VMS on the Australian professions see: Andrew Saniga, *Making Landscape Architecture in Australia*, UNSW Press: Sydney, 2012, 223-230.

34. 'Waigani "Prejudice" by 13 Architects *Papua New Guinea Post-Courier* (Port Moresby), January 9, 1976, 3.

35. Rena Archer, 'Talking with Barbara van den Broek', in *Constructive Times Newsletter of Constructive Women*, The Association of Women Architects, Landscape Architects, Planners and Women of the Building Industry, No. 26, December 1988, 14.

There is evidence to suggest that van den Broek was in-step with the emerging field of landscape assessment and land use planning utilising GIS-based applications that were being advanced via various public service bodies and academic research centres. van den Broek would have been aware of the emerging field of digitally-aided viewshed analysis from the US including Visual Management Systems (VMS) and later Geographic Information Systems (GIS), taken up in academies and public services across Australia, including in Queensland.<sup>33</sup> Her appreciation of landscape assessment principles is revealed by her research project for the Waigani City Centre (WCC) in PNG – based on the Waigani Town Centre Plan commissioned in 1971 designed by James Birrell (1928-2019), with whom she had collaborated at UQ, and who had established an office in PNG – which she submitted in May 1980.<sup>34</sup> Her work on Waigani led to a major commission for the gardens of the new Parliament House in Port Moresby a project she considered to be one of her most important works, despite some shortcomings due to her not supervising the project's construction.<sup>35</sup> She made site visits to PNG in November 1977, August 1978 and May 1979, that culminated in the research report *Developing a Land Use Plan for Waigani City Centre*, Port Moresby, Papua New Guinea prepared at the School of

36. Barbara van den Broek, *Developing a Land Use Plan for Waigani City Centre, Port Moresby, Papua New Guinea*, School of Australian Environmental Studies, Griffith University, 1980, 2.

37. van den Broek, *Developing a Land Use Plan for Waigani City Centre, Port Moresby, Papua New Guinea*, 103-104.

38. van den Broek, *Developing a Land Use Plan for Waigani City Centre, Port Moresby, Papua New Guinea*, 37.

39. R.G. Burton-Bradley, 'The Psychological Dimension' in P Sack (Ed) *The Problem of Choice*, Australian National University Press, 1973.

40. van den Broek, *Developing a Land Use Plan for Waigani City Centre, Port Moresby, Papua New Guinea*, 37.

41. Barbara van den Broek quoted by Rena Archer, 'Talking with Barbara van den Broek', in *Constructive Times Newsletter of Constructive Women*, The Association of Women Architects, Landscape Architects, Planners and Women of the Building Industry, No. 26, December 1988, 14.

42. van den Broek, *Developing a Land Use Plan for Waigani City Centre, Port Moresby, Papua New Guinea*, 92.

43. Pennicuiik, 'Obituary. Barbara Ruth van den Broek'.

Australian Environmental Studies at Griffith.<sup>36</sup> Her research project gave her the opportunity to be considered by WM Philips Architects for the Parliament House commission.

The main focus of van den Broek's proposals for WCC was the landscape and environment. She made fifteen recommendations that were highly specific and spanned ecological, aesthetic, functional and management aspects.<sup>37</sup> However, the WCC project also reveals van den Broek's emerging appreciation of the role that Indigenous cultures within PNG might play in establishing a landscape architectural response. This emerged throughout her analysis and when referring to state-of-the-art landscape assessment techniques noted:

Parametric tests have been devised to determine the validity of the ratings, and to remove, as far as possible, the element of subjectivity. Whether subjectivity can or should be removed is open to question. (Author's comment)

These problems, while significant in the Australian context, are much more difficult when considered in conjunction with a different culture, with different attitudes to land, to vegetation, and, presumably to aesthetics.

Attitudes to land have been considered in Section F.07-1 Land Tenure; attitudes to vegetation is Section H.02-3; aesthetics have not been considered from the viewpoint of the indigenous [sic] culture, all comments on aesthetics are the author's subjective judgements...<sup>38</sup>

In her report, van den Broek quoted R.G. Burton-Bradley who contributed a chapter entitled "The Psychological Dimension" in Peter Sack's (ed.) *The Problem of Choice* (1973)<sup>39</sup> and who gives an account of PNG cultures' artistic, recreational and traditional characteristics. She concluded her own study by declaring: "The discussion on aesthetics of the site: Landscape character and views in and out, is from a European viewpoint."<sup>40</sup> This cognisance of the designer's cultural values, which she subsequently brought to her practice was enlightened for the times. Later when interviewed she reflected: "I am aware that I cannot avoid impressing a personal value system while working and so I am sure that it must be coming through my teaching and design work."<sup>41</sup> Her report reviews aspects of PNG's Indigenous and migrant population and society in the context of the pragmatics of the consultant responding to the needs and demands for a new city centre. In her conclusions she states presciently:

The difficulties facing Europeans attempting to make plans for other cultures have been pointed out, with the additional difficulty of lack of information. However, development is taking place and decisions need to be made, based on the widest discussion possible, with the best information available.<sup>42</sup>

In these ways Barbara van den Broek contributed to a groundswell of change. This is expressed in the shift in her practice toward conservation activities from the late 1980s indicating a deep concern for ethics and sustainability.<sup>43</sup> In 1988 she became involved in a group called 'Constructive Women' at the invitation of landscape architect and academic Catherin Bull. When asked to reflect on her own professional

44. Archer, 'Talking with Barbara van den Broek', 14.

or personal 'credo' she stated: "CONSERVATION. [sic] Not only natural but also historic conservation. This is certainly my main interest."<sup>44</sup> When asked in 1988 what she wanted to get out of being in such a group she responded:

45. Archer, 'Talking with Barbara van den Broek', 15.

I would like to be more active and outspoken on environmental and public issues. This is because the Institute of Architects is not particularly active. But being not very active myself I accept that people have their time committed...[sic] An organisation can be only as active as its members are.<sup>45</sup>

van den Broek served on the National Trust Parks Committee and in response to Rena Archer recounting a story of taking the initiative to plant a tree in a public park (Watt Park, Lavender Bay, North Sydney) she observed:

46. Archer, 'Talking with Barbara van den Broek', 15.

The idea of planting trees is excellent. Getting kids, perhaps kindergartens or schools to plant and then to take care of them. It happens already but not to the extent it could. Coming back to the empowerment question I think that the clue is in listening to what people – clients – want.<sup>46</sup>

## Conclusion

Thoughtfulness, robustness, and forthrightness underscore the career and design expression of Barbara van den Broek. At the cusp of widespread change, she was a progenitor for a new landscape architectural culture with antecedents that span Indigenous landscapes, Indigenous cultures, conservation and heritage practice. van den Broek's contributions, only briefly touched on here, were sometimes tentative steps, but they build a picture of a pioneering landscape architect, a reflective practitioner who was not content to accept the status quo in a profession that in the 1960s and 70s was often 'needy' in terms of self-gratification and self-promotion. Her engagement with academia reflects her capacity to question and innovate in an emerging landscape architecture field. In the competitive world of professions within which Barbara van den Broek certainly weighed-in, but also in terms of the survival of her family, for which she was wholly dedicated, she managed to establish an independent practice built on respect for Indigenous cultures and the environment, qualities we aspire to today.

# Becoming Ultra-Civic: The Completion of Queen's Square, Sydney 1962-1978

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## Keywords

Architecture  
Modernism  
Modern urban design  
Civic ambition  
Queen's Square  
Sydney

## Abstract

Declaring in the late 1950s that Sydney City was in much need of a car free civic square, Professor Denis Winston, Australia's first chair in town and country planning at the University of Sydney, was echoing a commonly held view on how to reconfigure the city for a modern-day citizen.

Queen's Square, at the intersection of Macquarie Street and Hyde Park, first conceived in 1810 by Governor Lachlan Macquarie, remained incomplete until 1978 when it was developed as a pedestrian only plaza by the NSW Government Architect under a different set of urban intentions. By relocating the traffic bound statue of Queen Victoria (1888) onto the plaza and demolishing the old Supreme Court complex (1827), so that nearby St James' Church (1824) could become freestanding alongside a new multi-storey Commonwealth Supreme Court building (1975), by the Sydney-based practise of McConnel Smith and Johnson, the civic and social ambition of this pedestrian space was assured. Now somewhat overlooked in the history of Sydney's modern civic spaces, the adjustment in the design of this square during the 1960s translated the reformed urban design agenda communicated in *CIAM 8, the heart of the city (1952)*, a post-war treatise developed and promoted by the international architect and polemicist, Josep Lluís Sert.

This paper examines the completion of Queen's Square in 1978. Along with the symbolic role of the project, that is, to provide a plaza as a social instrument in humanising the modern-day city, this project also acknowledged the city's colonial settlement monuments beside a new law court complex; and in a curious twist in fate, involving curtailing the extent of the proposed plaza so that the colonial Supreme Court was retained, the completion of Queen's Square became ultra – civic.

## Introduction

1. Denis Winston, *Sydney's Great Experiment: The Progress of the Cumberland County Plan*, (Sydney: Angus and Robertson, 1957), 26.

2. Paul Zucker, *Town and Square: From the Agora to the Village Green*, (New York: Columbia University Press, 1959), 1.

3. Josep L Sert, Jacqueline Tyrwhitt and E. N. Rogers (eds), *The heart of the city: towards the humanisation of urban life*, (London: Lund Humphries, 1952).

4. Gordon Stephenson, *On a human Scale, a Life in City Design*, (South Fremantle: Fremantle Arts Centre Press, 1992), 200.

Having declared in the late 1950s that Sydney City was in much need of a civic square, the Professor of Town Planning at the University of Sydney, Denis Winston, was responding to a modern-day civic problem.<sup>1</sup> This observation was also shared by the international critic Paul Zucker, when he stated in the anthology *Town and Square* (1958), a text available in Sydney roughly at the same time as Winston's remark, that a modern city square was "a gathering place for people, capable of humanizing them by mutual contact, and providing them with a shelter against haphazard vehicle traffic."<sup>2</sup> In fact, both Winston and Zucker were echoing the reformed urban design agenda identified in the publication *CIAM 8, The heart of the city* (1952). Developed and promoted by the international urban design theorist Josep Lluís Sert, this urban design concept was simply described as "The Core".<sup>3</sup>

This paper examines the completion of Queen's Square. First conceived by Governor Lachlan Macquarie in 1810, this urban space was redeveloped during the 1960s by a joint planning committee, which included the Commonwealth and NSW government, to become a social instrument for humanising the government precinct of the city. Involving the realignment of Macquarie Street and closing a section of Kent Street, the urban design strategy entailed the demolition of Francis Greenway's Supreme Court building (1827) so that his St James' Church (1824) could become freestanding within a new urban core. The project also included the relocation of a statue of Queen Victoria and the construction of the Commonwealth Supreme Court (1967- 1975), a multi-storey tower designed by the Sydney-based practice McConnel Smith and Johnson in conjunction with the Commonwealth Department of Works to spatially define the northern edge of the plaza.<sup>4</sup>

By focusing on the morphological aspects of Queen's Square, the aim of this paper, therefore, is to examine the changes in civic ambition enabling the completion of Queen's Square. Amended at the "last minute" to retain the colonial Supreme Court, this project came to represent the intersection of two civic aims, that is, a need to make the city more humane through the provision of pedestrian only plazas while at the same time acknowledge the city's cultural traditions, including the retention of its colonial settlement monuments.

## Unrealised Town Making, Colonial Style

5. Isadore Brodsky, *The Streets of Sydney*, (Neutral Bay: Old Sydney Free Press, 1962), 92.

6. James Broadbent and Joy Hughes, *Francis Greenway Architect*, (Glebe: Historic Houses Trust of NSW, 1997), 14-15.

In the setting out of Macquarie Street by Governor Lachlan Macquarie, a new north-south street positioned on the eastern ridge of Sydney Town between Hunter Street and Hyde Park, was envisaged to terminate at Chancery Square.<sup>5</sup> (Fig. 1) With the construction of the colonnaded General "Rum" Hospital (1816), which incorporated naively detailed Doric Order columns<sup>6</sup> and occupying the eastern edge of Macquarie Street, the proposed town making experience was to conclude in the embellishment of a town square spatially defined by two temple fronted public buildings designed by Francis Greenway. While the buildings were constructed the space remained nameless until 1888 and incomplete until 1978.

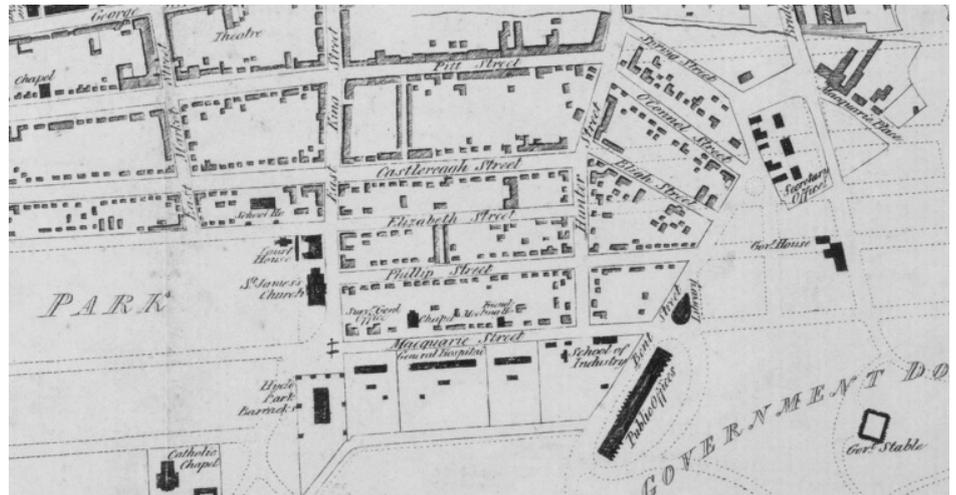


Figure 1: Macquarie and King Streets public buildings, 1837. Image: taken from Tegg's NSW Pocket Almanac, Carolyn Simpson Library, NSW

7. Michael Makeham, *The Macquarie Townships of the Cumberland Plain*, (Undergraduate Thesis, University of Sydney, 1985).

8. James Broadbent and Joy Hughes (eds), *The Age of Macquarie*, (Carlton Vic.: Melbourne University Press, 1992), 61.

9. Initially designed as a school, the Courthouse use was made under decree by Commissioner Briggs. The arcade was added in 1868 to a design by the NSW Colonial Architect, James Barnett.

10. Commissioner Briggs, sent from England to assess Governor Macquarie's ambitious building programme of works, chose to simply his Macquarie Street project, see Alasdair McGregor, *A forger's progress: the life of Francis Greenway*, (Sydney: NSW New South Publishing, 2014).

Promulgated by Governor Macquarie in 1810 were the proposed civic squares located within the five proposed Hawkesbury River towns.<sup>7</sup> Here, a courthouse, a church and a school were sited so that each antipodean township had "a moral function in the encouragement of a new society".<sup>8</sup> Meeting this civic ideal were also the Macquarie Street public buildings. Portraying law and order and the temporality of religion, these buildings, now an important landmark, were ornamented by colonnades and porticos to facilitate genteel circulation. With an arcade and ornamented parapet later added to the King Street elevation of the Supreme Court, a most unassuming and compromised building,<sup>9</sup> each of the Governor Macquarie town buildings were presented as a public symbol in a town without a civic square. The first of the temple fronted buildings was Hyde Park Barracks (1819), an enclosed Roman-like camp for convicts. This was formally balanced by a second building, St James' Church (1824), detailed to include two porticos and a west facing tower. Later, and compromising the composition, was the construction of the Supreme Court (1827), positioned immediately to the west of St James'.<sup>10</sup> With these ornamented buildings located within an incomplete square the precinct nevertheless proclaimed importance through use. Founded on public virtue, this detached group of public buildings, however, were separated by palisade fences and any civic engagement was by invitation through a lockable gate.

## Monumental Axes

11. See watercolour view of Hyde Park looking towards the Supreme Court, St James' Church, Sydney Hospital and Hyde Park Barracks, c.1844, artist unknown, Carolyn Simpson Library, NSW.

12. Sir John Kerr, *Matters for judgement: an autobiography*, (London: Macmillan, 1979), 205-207.

Completion of the town square at the southern end of Macquarie Street stalled after Governor Lachlan Macquarie left Sydney in 1822. When this area was illustrated in the 1840s it was shown finishing abruptly against Hyde Park.<sup>11</sup> Not until the later part of the nineteenth century, and after the northern edge of Hyde Park was replanned with a roadway detailed to intersect with Macquarie Street, the Banco Court (1896), an extension to the Supreme Court, and the Registrar-General's building (1913), were designed to address the park with no engagement with Macquarie Street. Now the centre of Sydney's legal activities<sup>12</sup> the civic importance of this area was amplified when a statue of Queen Victoria was installed in 1888 on a pedestal of Moruya granite on axis with the centre line of St

James' Church and Hyde Park Barracks. With the unveiling of the statue to celebrate the centenary of European settlement and the official naming of "Queen's Square" any commemorative and citizenry use required road closure.

13. Robert Freestone, "Preserving Sydney's Built Heritage in the Early Twentieth Century", *Australian Historical Studies* (29:112, 1999), 44-60, DOI:10.1080/10314619908596086.

14. Peter Webber (ed), *The design of Sydney: Three Decades of Change in the City Centre*, (Sydney: Law Book Company, 1988), 146.

15. Pamela Barnett-Spies, *The Early Years of the Preservation Movement in NSW, 1900-1939*, (Master's Thesis University of Sydney, 1987), 147.

16. Robert Freestone, "Preserving Sydney's Built Heritage in the Early Twentieth Century", *Australian Historical Studies*, (29: 112, 1999), 60. DOI:10.1080/10314619908596086.

A Royal Commission for the improvement of Sydney City and suburbs reported in 1909 that Macquarie Street be widened and extended into Hyde Park.<sup>13</sup> This civic axis, perhaps modelled on London Road Constitution Hill rather than Avenue Champs-Elysees and shown complete with a miniature version of Wellington Arch rather than Arc de Triomphe, adopted imperial planning strategies with little regard to Governor Macquarie's town making vision. Included in this unrealised project was the demolition of Hyde Park Barracks and the Supreme Court. This enabled St James' Church to be appreciated as a stand-alone city landmark. Another State Government study and dating to 1935 again reported on the demolition of Hyde Park Barracks and the Supreme Court but included a new Law Courts building in a stripped classical aesthetic. Described as "a worthy contribution to the architectural beauty and civic dignity of the city",<sup>14</sup> this building was shown positioned on the site of the Hyde Park Barracks. While concern was voiced on the proposed demolition of the barracks, there was no objection to the removal of the Supreme Court at a time when interest in the preservation of Sydney's colonial settlement buildings was emerging.<sup>15</sup> As Freestone pointed out, the retention of any colonial period building, however, owed to their continual use, a lack of public money and apathy, as to any organised preservation campaign.<sup>16</sup> (Fig. 2)



Figure 2: Queen's Square as a roadway intersection, 1969. Image: City of Sydney Archives, 023577

## A Civic Problem for a Modern-Day City

17. Florence Taylor, "Sydney's Need for a Civic Square – Martin Place Extension affords opportunity", *Building*, (August 12, 1933), 34b.

18. Judith O Callaghan, Paul Hogben, Robert Freestone, *Sydney's Martin Place: A cultural and design history*, (Sydney: Allen and Unwin, 2016).

19. Peter Webber, *The Design of Sydney*, 146.

20. The closure of King Street was made possible after the removal of Tram route 10. The statue of Queen Victoria was also relocated a third time.

21. Josep Luis Sert (International Congress for Modern Architecture), *Can our cities Survive?* (Cambridge Mass.: Harvard University Press, 1944), 232.

22. Michelle Arrow, *The Seventies: The Personal, the Political and the Making of Modern Australia*, (Sydney: New South Publishing), 14. Accessed June 30, 2021. ProQuest Ebook Central.

A civic square for the city was the subject of much discussion among commentators in Sydney during the 1930s.<sup>17</sup> By the time of Winston's remark in the late 1950s the discussion for a new city square had shifted from an aesthetic proposition to one about social and civic need. Prior to the completion of nearby Martin Place, under a local government initiative in 1968,<sup>18</sup> the completion of Queen's Square proceeded under a joint planning committee in 1962 to include a new civic plaza and law court building. This scheme was later modified in 1964 by the NSW Government Architect to encompass the government precinct along Macquarie Street.<sup>19</sup> The pedestrian only plaza, with relocated statue of Queen Victoria, was positioned to the west of Macquarie Street and extended across a section of King Street.<sup>20</sup> Acknowledging Sert's reformed urban design agenda,<sup>21</sup> Queen's Square was envisaged as the first stage of a public landscape, a symbol of liberal democracy, that extended across Macquarie Street to include a sequence of interlinked plazas with new public buildings detailed with a wrap-around colonnade alongside many of the city's remaining colonial settlement monuments.<sup>22</sup> (Fig 3)

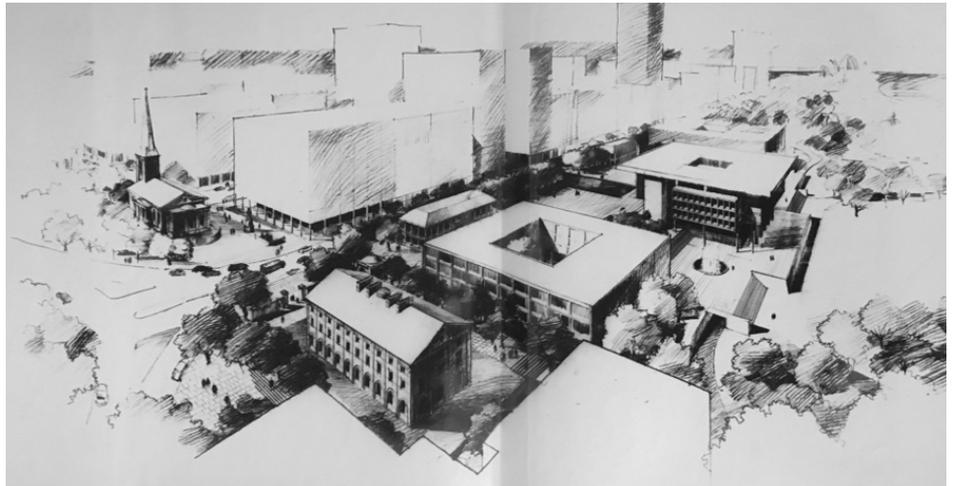


Figure 2: Queen's Square as a roadway intersection, 1969. Image: City of Sydney Archives, 023577

23. The Queen's Club, on the corner of Macquarie and King Street, was a female only club operating since 1906.

24. Jennifer Taylor, *Australian Architecture since 1960*, (Red Hill ACT: The Royal Australian Institute of Architects, 1990), 24 and 63.

25. The drum staircase of the Supreme Court was shown retained and adapted to provide an underground link to the nearby St James Railway Station.

26. Isadore Brodsky, *The Streets of Sydney*, (Neutral Bay: Old Sydney Free Press, 1962), 91.

A new multi-storey law court building was designed to house both the Commonwealth Court and the Supreme Court of NSW and positioned on the corner of Macquarie and King Streets, the site of the Queen's Club.<sup>23</sup> Incorporating an expressed structural grid clad in exposed aggregate precast concrete panels and coloured to match the stone on the nearby public buildings, was spaced to equal two column bays of St James' portico. Being six bays long and three bays wide the building was detailed to incorporate a double height colonnade. The plaza, now also edged by the recently completed University of Sydney School of Law (1969),<sup>24</sup> was detailed as an unencumbered plaza with large format concrete pavers, shade trees and low height retaining walls set out to follow the outline of the soon to be demolished Supreme Court.<sup>25</sup>

In the anthology *The Streets of Sydney* (1962), King Street was described as a street loved by all.<sup>26</sup> When the government led Queen's Square project, positioned at the eastern end of King Street, was discussed in the professional journals at the time, a celebratory tone

27. "Cities are for People", *Construction Review* 43.4 (November 1970): 44-45.

28. Hugh Streeton, *Ideas for Australian Cities*, (Melbourne: Georgian House, 1970), 237.

29. Paul Ashton, *The Accidental City, Planning Sydney since 1788*, (Sydney: Hale and Iremonger, 1993), 98.

30. *Constructional Review* 43.4 (November 1970): 42.

31. Ted Farmer, "St James' Place in the Queen's Square Plan", speech given at St James' Church Sesquicentenary Dinner, Wentworth Hotel, 7 October 1969, (SLNSW: MLMSS 7703).

was adopted.<sup>27</sup> As Hugh Stretton noted, Sydney during the early 1970s was a city with a public focus and had many architectural projects designed by government as well as private consortiums.<sup>28</sup> This observation correlated to the number of public focused city projects underway, including the pedestrianisation of Circular Quay (project 1962), the pedestrianisation of Martin Place (1968), Australia Square (1968), the Sydney Opera House forecourt (1973) and Sydney Square, beside Sydney Town Hall, (1975). Formalising this strategy was the City of Sydney Council town planning document, *The Sydney Strategic Plan* (1971). When commenting on the document, the Sydney based émigré architect, Harry Seidler, thought it did not properly "encourage a city full of pedestrian plazas associated with soaring development."<sup>29</sup> In a city congested by vehicular traffic, Seidler was arguing for the integration of the plaza with private development. But in contrast with this remark was the completion of Queen's Square, a government endorsed project enabling the eastern portion of the city to be publicly "reclaimed for the people."<sup>30</sup> In the lead up to the sesquicentenary celebrations of St James' in 1974, Ted Farmer, the seventeenth NSW Government Architect, reiterated the need for a public "plaza". Adopting the language of CIAM, he confirmed the civic ambition of the project, that is, to provide a civic space which not only embellished St James' Church through the demolition of the colonial Supreme Court but to provide a "great city place [where].. the dignity of the individual...will not be impaired and in which he [or she] will find an environment likely to enrich [them] spiritually."<sup>31</sup> (Fig 4)



Figure 4: Perspective of the Queen's Square project with the Sydney University School of Law (1969) and Law Courts (1975), both buildings by McConnel Smith and Johnson. Image: NSW Government Architect, 1973, SLNSW

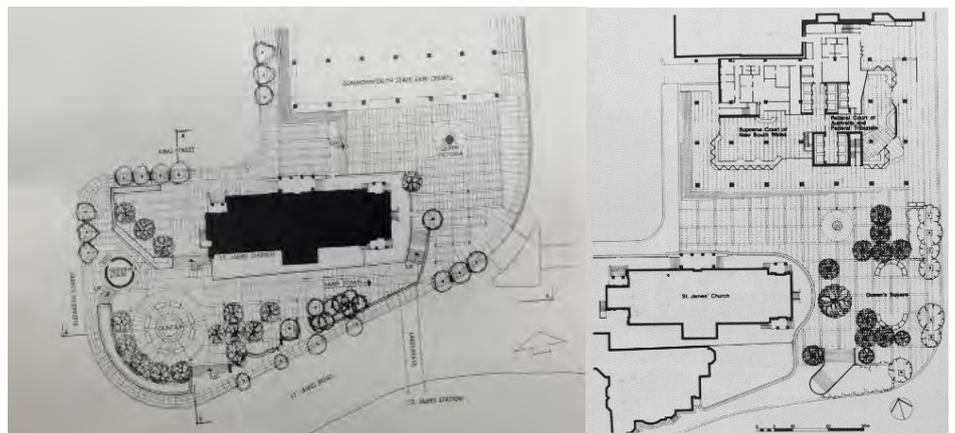
## A City with a Colonial Settlement Legacy

32. Leon Punch had himself photographed with a model of the project, see "New plaza for City", *Sydney Morning Herald* (June 13, 1975). The model included the Supreme Court and a smaller plaza.

33. See, John C Maddison, *J. C. Maddison - Papers, 1913-1982*, (SLNSW: MLMSS 4178). One study investigated relocating the colonial brick building by jacking it up and sliding it south and away from the western elevation of St James' Church.

34. Gordon Stephenson, *On a human Scale, a Life in City Design*, 201.

With funding provided by both the Commonwealth and State of NSW, the Ministers responsible for the completion of the project were the Federal Attorney General, Tom Hughes, and the NSW Minister for Justice, John Maddison, including the NSW Minister of Public Works, Leon Punch.<sup>32</sup> With the NSW Chief Justice replaced by Sir John Kerr in 1972, as judicial head of the NSW Supreme Court and thereby client, and with the retirement of Ted Farmer, the NSW Government Architect in 1973, a more conservative approach developed. With Kerr ruminating on the potential loss of Greenway's Supreme Court, which he recognised as an important NSW legal symbol, and with Maddison instructing the new NSW Government Architect to explore how the old Supreme Court could be relocated,<sup>33</sup> the Joint Planning Committee then decided to retain the colonial Supreme Court and reduce the size of the plaza. Heroically, Sir John Kerr, aided with a reassessment of the building's importance by the architectural historians J M Freeland and Morton Herman,<sup>34</sup> challenged the established view on the insignificance of colonial Supreme Court building, which in its removal would have expedited a government endorsed proposal to modernise the eastern part of the city with the first part of a dignified civic realm.



Figures 5a and 5b: The extent of Queen's Square, as first conceived in the late 1960s, then later revised in the mid-1970s. Images: *The Constructional Review*, November 1970 (left) and *The Architectural Review*, September 1978 (right)

35. "Sydney", *The Architectural Review* 564. 979 (September 1978), 143.

36. Sir John Kerr, *Matters for judgement*, 205-207.

In the retention of the Supreme Court, the civic agenda of the project became multi-dimensional. Interestingly, this shift in focus was not discussed in the print media at the time, and when information of the completed Queen's Square project was published, the relationship between the city's colonial settlement buildings and the new plaza was not elaborated. In the September 1978 issue of *The Architectural Review*, an edition devoted to Australian architecture, a published plan excluded most of the colonial Supreme Court.<sup>35</sup> (Fig 5) Even an image, which established a vital connection between Sydney's new civic realm and the city's colonial public landscape, looked east through the colonnade of the new Law Courts to Hyde Park Barracks and St Mary's Cathedral rather than west to St James' and the Supreme Court. It seems that any contemporary discussion on the completion of Queen's Square project avoided explaining how it was adjusted by political intervention as theoretical ideas about the city's cultural traditions were viewed with equal importance with the need for a civic square.<sup>36</sup> (Fig 6)



Figure 6: View looking south-east through the foyer of the new Law Courts to St Mary's Cathedral. Image: *The Architectural Review*, September 1978

## Conclusion

37. Hardy Wilson did not illustrate the Supreme Court, see Hardy Wilson, *Old Colonial Architecture in New South Wales and Tasmania*, (Sydney: Union House, 1924).

38. Morton Herman, *Early Colonial Architecture*, (Croydon, Vic.: Longmans, 1963). The Supreme Court was described but not drawn. Stacey did not publish any photographs on the Supreme Court.

39. Max Dupain, *Francis Greenway, a celebration*, (Sydney: Mead Beckett, 1980). Dupain photographed the Supreme Court after 1978.

As an interest in Sydney's colonial settlement monuments developed, first during the 1920s through the work of William Hardy Wilson,<sup>37</sup> and then during the 1960s and 1970s in the writings by Morton Herman and photographic essays by Philip Cox and Welsey Stacey,<sup>38</sup> the cultural importance of the Supreme Court was examined in more detail.<sup>39</sup> As a joint project by the Commonwealth and NSW Government, Queen's Square, first conceived as a Georgian Town Square in 1810, was later redesigned to become an inclusive civic realm representative of international urban design thinking. When completed, the plaza, edged by a colonnaded Law Courts building and a School of Law, and containing a historic monument to Queen Victoria, remained socially important although its civic character was altered by the retention of many colonial settlement buildings with their palisade fences. This curtailing of an ambitious project to pedestrianise Queen's Square demonstrates how the scope of Sydney's civic landscape was re-adjusted as the value of the city's colonial settlement architecture was acknowledged; and as an awareness of Sydney's culture expanded during the 1970s, which included an understanding of various local historic traditions, Queen's Square was reshaped transcendentally and thus became ultra-civic. (Fig 7)



Figure 7: Part view of Queen's Square showing the Commonwealth Supreme Courts. Image: WEB

# Tradition and Modern Ideas: Building Post-war Cathedrals in Queensland and Adjoining Territories

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## Keywords

Modern cathedral architecture  
Queensland  
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New Guinea  
A. Ian Ferrier  
Lund Hutton Newell  
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John Bayton

## Abstract

As recent as 1955, cathedrals were still unbuilt or incomplete in the young and developing dioceses of the Global South, including in Queensland, the Northern Territory and New Guinea. The lack of an adequate cathedral was considered a "reproach" over a diocese. To rectify this, the region's Bishops sought out the best architects for the task – as earlier Bishops had before them – engaging architects trained abroad and interstate, and with connections to Australia's renown ecclesiastical architects. They also progressed these projects remarkably fast, for cathedral building. Four significant cathedral projects were realised in Queensland during the 1960s: the completion of St James' Church of England, Townsville (1956-60); the extension of All Souls' Quetta Memorial Church of England, Thursday Island (1964-5); stage II of St John's Church of England, Brisbane (1953-68); and the new St Monica's Catholic, Cairns (1965-8). During this same era Queensland-based architects also designed new Catholic cathedrals for Darwin (1955-62) and Port Moresby (1967-69). Compared to most cathedrals elsewhere they are small, but for their communities these were sizable undertakings, representing the "successful" establishment of these dioceses and even the making of their city. However, these cathedral projects had their challenges. Redesigning, redocumenting and retendering was common as each project questioned how to adopt (or not) emergent ideas for modern cathedral design. Mid-1960s this questioning became divisive as the extension of Brisbane's St John's recommenced. Antagonists and the client employed theatrics and polemic words to incite national debate. However, since then these post-war cathedral projects have received limited attention within architectural historiography, even those where the first stage has been recognised. Based on interviews, archival research and fieldwork, this paper discusses these little-known post-war cathedrals projects – examining how regional tensions over tradition and modern ideas arose and played out.

## Introduction

1. Lisa Marie Daunt, "Communities of faith: Modern church architecture in Queensland, 1945-1977" (PhD thesis, UQ, 2021), 3, 736. <https://doi.org/10.14264/916e7f3> This paper is based on archival research collated from collections held in the University of Queensland's Fryer Library (henceforth UQFL); the Anglican Church's Diocese of North Queensland Archives and Research Centre, Townsville (henceforth ANQDA); the Anglican Southern Queensland Archdiocese Records and Archive Centre, Brisbane (henceforth ASQAA); and the Catholic Cairns Diocese archive (henceforth CCDA).

2. Daunt, "Communities of Faith," 258-593.

3. Peter Hammond, *Liturgy and Architecture* (London: Barrie and Rockliff, 1960), 6, 31-33, 91, 148 and 167. For example: Liverpool Catholic Cathedral, GB (1960-67) by Fredrick Gibbard; Bristol Catholic Cathedral, GB (1973), by Percy Thomas Partnership; San Francisco Cathedral, US (1963-1970) by Pietro Belluschi and Pier Luigi Nervi. A recent paper on two these is: Robert Proctor, "Uncertainty and The Modern Church: Two Roman Catholic Cathedrals in Britain," in Vladimir Kuli, Timothy Parker, Monica Penick and Frederick Steiner. *Sanctioning Modernism: Architecture and the Making of Postwar Identities*. Austin: University of Texas Press, 2014, 113-138. Project MUSE., <https://muse.jhu.edu/>.

4. Peter and Linda Murray, *The Oxford Companion to Christian Art and Architecture*, Oxford: Oxford University Press, 1998), 95.

5. The region's other denominations (mostly Protestant) do not appoint bishops nor consecrate the largest/principal church in a territory as a cathedral.

6. See: Brain Andrews, *Australian Gothic; The Gothic Revival in Australian Architecture from the 1840s to the 1950s* (Melbourne: The Miegunyah Press, Melbourne University Press), 2001.

7. There is now 5 Catholic and 3 Anglican Cathedrals, with the former missionary diocese of Carpentaria's cathedral now a church. In 1996 Carpentaria absorbed into the diocese of North Queensland. In Queensland there is also two Apostolic cathedrals and one Orthodox cathedral. In August 1981 the CofE in Australia was renamed the 'Anglican Church of Australia' – formalising the 1962 legal break from England. For this paper CofE is used.

8. For maps of see: Daunt, "Communities of Faith," 111 and 112.

9. Daunt, "Communities of Faith," 107, 125, 176, 272, 441.

During the post-war decades (1945-75) over 1350 churches were built in Queensland, with the 1960s witness to a genuine modern church building boom.<sup>1</sup> From the late-1950s church designs in the state increasingly adopted emergent ideas for modern church design.<sup>2</sup> Around this same time new cathedrals abroad (particularly the St Michael's Cathedral in Coventry (1951-61), Great Britain (GB), by Basil Spence) ignited much debate as to how cathedral design needed to assume modern architecture and liturgical renewal too.<sup>3</sup>

By definition a "cathedral is simply the church with the bishop's throne (cathedra) [...] A cathedral is normally, but not always, the largest church in the diocese".<sup>4</sup> The Church of England (CofE) and the Catholic Church both appointed Bishops to lead each diocese, building one cathedral per diocese, which was typically located in the prominent city of these Church defined territories.<sup>5</sup> During the nineteenth-century Australia's CofE and Catholic bishops commissioned landmark neo-gothic stone cathedrals, taking inspiration from those of GB.<sup>6</sup> However, while the dioceses of the country's southern states had substantially complete cathedrals by World War Two (WWII), this was not so in Queensland and the adjoining territories (nor Western Australia).

In 1955 Queensland had five small cathedrals, as well as three incomplete and one proposed.<sup>7</sup> The CofE's Province of Queensland was then divided into five dioceses, with Carpentaria including North Queensland, the Northern Territory (NT), and New Guinea was the fifth diocese. The Catholic Church in Queensland was also divided into five dioceses (as now).<sup>8</sup> From 1955 the Churches' building programmes gained momentum – with the most adherents belonging to the two most prolific builders, which were the CofE and Catholics<sup>9</sup> – and the region's Catholic and CofE Bishops initiated four significant cathedral projects, as well as others in NT and New Guinea. The Queensland-based architects engaged for these projects were Lund Hutton Newell, Black and Paulsen; A. Ian Ferrier (1928-2000); Reverend John Bayton (b.1930); and A.H. Conrad and T.B.F. Gargett Architects, who arguably took on the highest profile and most controversial (stage II of St John's Anglican, in Brisbane). As this paper details, these architects were commissioned as they were some the region's most prominent ecclesiastical architects. With training and connections both interstate and abroad, and an eagerness to engage with the region's climate and limited economic means, they were each also eager to rise to the challenges of "modern" cathedral design.

However, the region's post-war cathedral projects revealed tensions between long held tradition, and emergent ideas for both modern architecture and religious renewal. Cathedral design represented tradition and the desire to realise (or achieve) certain religious authority through their architectural design (through grand landmarks) was important to the region's Bishops. While the continuation of tradition persisted, there was also the call to build for the future and embrace emergent modern ideas. Invariably the region's post-war cathedrals had to find a balance between tradition and modern. How this balance was struck varied markedly. As this paper will reveal the region's ecclesiastical architecture could have been so much the poorer now,

had “modern” architectural ideas been assumed without question or nuance, and truly unique opportunities not been embraced.

### Progressing the Region’s Incomplete Cathedrals Post-WWII

In 1954, the newly appointed CofE North Queensland Bishop Ian Shevill (1917–1988, Bishop 1953–1970) arrived in Townsville to an incomplete cathedral. Soon after he launched a building crusade and a £100,000 War Memorial Appeal Fund for the completion of his cathedral and new permanent churches, under the banner “Builders for Christ”.<sup>10</sup> The success of this campaign saw £145,000 raised and many of the diocese’s building projects completed during the late-1950s and early-1960s.<sup>11</sup> In 1955 he convened the Cathedral Chapter, for the first time in the twentieth-century, setting the task of completing Townsville’s cathedral.<sup>12</sup>

The first stage of St James’ CofE Cathedral, Townsville (1887–1892) was designed by Arthur (1848–1929) and Cyril Blacket (1857–1937), continuing the practice of their father, Edmund Thomas Blacket (1817–1883) who was widely recognised as Australia’s main practitioner of “correct” Gothic. F<sup>13</sup> The initial scheme was stone – their preferred cathedral material – but to reduce cost it was significantly redesigned and pared-back to brickwork.<sup>14</sup>

In 1956 the Melbourne-based architect Louis Reginald Williams (1890–1980) – a known admirer of Blacket – was commissioned to design stage II of St James’ Cathedral. The architect for various inter-war CofE churches, as well as alterations and additions to several cathedrals, Williams was then “Australia’s most recognised Church of England architect.”<sup>15</sup> The diocesan architects, Ford Hutton Newell, Black and Paulsen, a Brisbane and Townsville-based practise, subsequently documented and supervised Williams’ design. The completed cathedral was opened for worship June 12, 1960 (Figure 1). This Queensland collaboration suited Williams. During the late-1930s the Melbourne-trained Peter Edward Newell (1916–2010) was Williams’ apprentice. Following Newell’s relocation to Brisbane, Williams referred his Queensland clients to Newell’s practice and recommended them to Shevill for the role of diocesan architects.<sup>16</sup>

St James’ stage II extended the cathedral’s nave, took its seating capacity to 769, provided a front façade and entry to the cathedral as well as a bell tower.<sup>17</sup> The details of the new nave bays largely replicated the Blacket design. However, various modern elements, in particular the lower-level windows with their cast ventilation grilles and the transepts exterior re-entrant corners provide discerning clues to identify the post-war from the nineteenth-century works.<sup>18</sup> The front façade and bell tower are clearly modern architectural statements, even though similar bricks were used as the first stage. Erwin Albert Guth’s (b.1926) sculpture “The statue of St James” is proudly mounted to the left side of this front façade. Mosaic tiles shimmer within the entry’s recessed archway. While the cathedral’s interior continued many of the Blacket details with only subtle modern adjustments, the front façade and statue express more modern architectural and artistic idioms. This approach was strongly supported by Shevill, who prioritised the completion of the

10. E.C. Rowland, *The Tropics for Christ: Being a history of the Diocese of North Queensland* (Townsville: Diocese of North Queensland, 1960), 83-4; *Centenary Book, The Diocese of North Queensland, 1878-1978* (Townsville: The Diocese of North Queensland, 1978), 44-57; Ian Shevill, *Half Time* (Brisbane: Jacaranda Press Pty Ltd, 1966), 68.

11. *Centenary Book*, 16.

12. “Cathedral,” *The Northern Churchman*, September 1, 1960, 5; “Saint James’ Cathedral, a portfolio of drawings photographs and notes on the occasion of the consecration of the cathedral. 24 June 1978,” unpaginated (ANQDA).

13. Hector Abrahams, “Blacket, Edmund,” in *The Encyclopedia of Australian Architecture*, eds. Philip Goad and Julie Willis (New York: Cambridge University Press, 2012), 87-9.

14. “Saint James’ Cathedral”.

15. Abrahams, “Blacket, Edmund,” 89; Gladys Marie Moore, “Louis Reginald Williams,” vol.1 (Master’s thesis, University of Melbourne, 2001), 22, 115-117. He would also design St Boniface Cathedral, Bunbury (WA, 1960-62) with Robert Blatchford; complete the third and final stage for Holy Trinity Cathedral, Wangaratta (VIC) in 1965; and design the replacement All Saints Cathedral, Bathurst (NSW, 1971).

16. Moore, “Louis Reginald Williams,” i, 16, 22, 117 and 149; John Maidment, “Williams, Louis R.,” in Goad and Willis, *Encyclopedia*, 765; Bruce Paulsen interviewed by Don Watson and Janina Gosseye, September 12, 2012 <https://qldarch.net/architect/interview/2561?architectId=132> accessed May 18, 2021). The two practices would also work together to complete St Andrew’s CofE, Lutwyche (1958-60). Williams likely recommended them for St John’s CofE, Carins (1960s works) and St Matthew’s CofE Mundingburra (1957) having himself previously worked with both these congregations.

17. Undated drawing “St James Cathedral Seating plan” (ANQDA).

18. Visit to the cathedral June 11, 2018, accompanied by Allan Bell; Allom Lovell Pty Ltd, “St James Cathedral Townsville a Conservation Plan for The Anglican Diocese of North Queensland,” 1998, 9-10.

19. "Dedication of the War Memorial church of S. Matthew's, Mundingburra," *The Northern Churchman*, April 1, 1957, 3.

cathedral over a slower and more costly build in keeping with the Blacket design. Indeed, Shevill was an advocate for modern architecture and art, expressing on various occasions his desire for twentieth-century churches for twentieth-century people.<sup>19</sup>



Figure 1: St James Church of England Cathedral, Townsville (1892 stage 1 and 1960 stage 2), designed by Louis R Williams, documented and supervised by Ford Hutton Newell, Black and Paulsen. Left: Exterior photograph of the front façade, by Lisa Daunt, 2018. Right: Interior photograph, looking back down the stage 2 nave to the front door, by Lisa Daunt, 2018.



Figure 2: All Souls' Quetta Memorial Cathedral, Thursday Island (1893 and 1965 extension), designed by Rev. John Bayton. Left: ca.1919 photographic postcard (Thursday Island postcard collection, PIC/8808/16 LOC Album 1055 <https://nla.gov.au/nla.obj-148874321/view> accessed April 4, 2020). Right: 2001 Exterior photograph (photographer: Heritage Branch, Queensland Government. QHR 602168, <https://apps.des.qld.gov.au/heritage-register/detail/?id=602168#> accessed May 3, 2019).

20. Known as All Souls and St Bartholomew's Cathedral Church and Quetta Memorial from 1965.

21. "Quetta Memorial Precinct," *Queensland Heritage Register* listing 602168 <https://apps.des.qld.gov.au/heritage-register/detail/?id=602168> accessed May 29, 2021; John Bayton, *Cross over Carpentaria: being a History of the Church of England in Northern Australia, From 1865-1965* (Brisbane: W.R. Smith & Patterson Pty. Ltd., 1965), 68, 114.

22. Paul and Mark Trotter interviewed May 20, 2019; Don Watson, "Fulton, Charles," in Goad and Willis, *Encyclopedia of Australian Architecture*, 264-5.

23. Bishop John Bayton interviewed March 13, 2019; April 18, 2019 email correspondence from Mark Trotter.

24. Bayton interviewed 2019. In the mid-1960s with Stephen Trotter he designed various churches for the Torres Strait Islands and mainland missions (*Fulton Trotter archive*). Bayton also designed St Luke's CofE, Kenilworth (1955); St Andrew's CofE, Longreach (1960), with Neville R Willis; and the octagonal-planned St John the Evangelist CofE in Parkhurst (the chapel for St George's Home for children, opened 1960, closed 1978).

Between 1964 and 1965 Thursday Island's All Souls' Quetta Memorial Cathedral (then the Bishop's seat in the CofE diocese of Carpentaria) was extended.<sup>20</sup> The first stage was designed by John Hingeston Buckeridge (1857-1934) in 1892, built of concrete and rendered to look like sandstone. It was opened in 1893 and became a cathedral in 1900 when the first Bishop was appointed for the newly formed diocese.<sup>21</sup> The 1960s extension designed by Bayton, added to the front and side of the cathedral, and increased its capacity from 110 to 200-seats (Figure 2). As an architectural student at Brisbane's Central Technical College (CTC) and then the University of Queensland (UQ), Bayton worked for Fulton Collin and Associates, a practice then led by Charles Fulton (1906-88), who was also the head of school at CTC.<sup>22</sup> Bayton graduated from the degree course in 1958. Concurrently he pursued his interests in theology and iconography, studying for the priesthood at St Francis Seminary (Milton, Brisbane), and was ordained as a CofE rector in 1957.<sup>23</sup> From 1954 Bayton designed various Queensland churches.<sup>24</sup> The extension of All Soul's was modest in design – in response to its remote tropical island location – it was easy to construct, used light-weight materials and incorporated operable windows for ventilation.

However, while modern these extensions gained little media attention and no mention in the Church's own Queensland periodical, *The Church Chronicle*.

25. Jonathan Holland, "The Past is a Foreign Country: A history of the Church of England in the Diocese of Brisbane, 1950-1970" (PhD Thesis, UQ, 2006), 363

In contrast the post-war extension of St John's CofE Cathedral, Brisbane, gained considerable media attention. Extended from 1955 to 1968 (stage II of three) the nave was increased in length and its capacity from 324 to 910-seats.<sup>25</sup>

26. *Yearbook of the Diocese of Brisbane, Province of Queensland, Anglican Church of Australia, 2016*, vol.II (Brisbane, Diocesan Registry, 2016), 12-13.

Stage I of St John's had started on site in 1906 and was consecrated in 1910 with only the first bay of the nave realised and a temporary brickwork wall constructed to secure the building. The highly regarded English architect John Loughborough Pearson (1817-1897) and his son Frank (1864-1947) received the commission in 1886, remaining in GB, preparing the drawings from their established office there (neither able to visit in person).<sup>26</sup>

27. Holland, "The Past," 52-3, 362-3, 367. The Wells Way was the coined phase for church building fundraising campaigns facilitated by the Wells Organisation, which operated in Queensland 1959-1974.

In 1954 Archbishop Reginald Charles Halse (1881-1962, Archbishop 1943-1962) initiated a fund-raising appeal following Queen Elizabeth's visit that same year. She also encouraged Archbishop Philip Nigel Strong (1899-1983; Archbishop 1963-70) to complete this next stage during her 1963 visit. Strong considered the incomplete cathedral a "reproach" over the archdiocese. In 1963 the diocese was in a strong financial position (free of debt), care of the diocese's adoption of the Wells Way. Inspired by both Coventry Cathedral and the Cathedral of Sts Peter and Paul at Dogura, New Guinea (1939), which he had already overseen, Strong progressed St John's next stage.<sup>27</sup>

28. Robert Riddel, ed., *Conrad Gargett: 1890-2015* (Brisbane: Conrad Gargett, 2017), 115.

Early-1953 Halse had commissioned the cathedral and diocesan architects, A.H. Conrad and T.B.F. Gargett Architects, to document the cathedral's next three bays.<sup>28</sup> The foundations and floor slabs were poured 1955-56 but works on site stop there.<sup>29</sup> Then in 1960 Peter Robertson Gargett (1932-2014), who joined the practice in 1957, travelled Europe for research, visiting at least twenty-seven cathedrals, including those of Durham, Exeter, Liverpool and Pearson's Truro Cathedral (1880-1910). In 1961 Gargett restructured the project's (already prepared) documentation, splitting them into five separate contracts: stonework; steelwork; electrical; roof tiling; building and miscellaneous.<sup>30</sup> Gargett subsequently led the project under the direction of Arnold Henry Conrad (1887-1979) and his father Thomas Brenan Femester (Bren) Gargett (1898-1975).

29. A.H. Conrad and T.B.F. Gargett, certificate certifying the completion of the foundations, September 4, 1956; Peter R Gargett, "Talk to the Fine Arts Group of the Brisbane Club," February 20, 1994, 7 (ASQAA, St John's Cathedral file). The SOD ceremony was held August 21, 1955.

30. Peter Gargett, October 9, 1988, Memo to Denis Fulcher, 1-2; Peter Gargett, February 20, 1992 letter to the Most Reverend Peter Hollingworth, 1 (ASQAA, St John's Cathedral file).

31. Holland, "The Past," 363-6.

However, debate surrounding Coventry Cathedral – and diocese's investment in new "modern" church-buildings like St Lucia's Christ Church (1962) by Ronald Voller (1915-2006) and Cunnamulla's St Alban's (1963) by Lund Hutton Newell, Black and Paulsen; and in Northern Queensland the completion of Townsville's St James' Cathedral in 1960 (discussed above) – begged the question: should the cathedral be completed as a modern extension, in response to contemporary times and to reduce costs? Within the diocesan synod many also thought funds should be given to missionary work in locations abroad, experiencing poverty and misery, not spent unduly on the cathedral.<sup>31</sup> These ideas were resisted by the project's team. Alongside Strong's rational the 1965 diocesan *Yearbook* also recorded Gargett's position:

32. "Extensions to St John's Cathedral, Brisbane," *Yearbook of the Diocese of Brisbane* 1965, 137.

the interior of this Cathedral has the reposed and dignified atmosphere of sacredness [...] and its qualities will be enhanced [...] by the proposed extensions. [...] It is more than likely that St John's will be the last Gothic style cathedral to be built in the world. If it is to be finished, it must be in accordance with Frank L. Pearson's design, of over sixty years ago, to which we are committed.<sup>32</sup>

33. *Cross-Section* no.146 (December 1964), 1.

However, their commitment had already gained criticism within the architectural profession at a national level. In December 1964 *Cross-Section* criticised the lack of endeavour, describing the tender process as a "protracted agony", concluding "The church architects have lost touch".<sup>33</sup> When *Cross-Section* published an image of the steel structure in December 1965, the periodical remained highly critical, particularly of the project's forecast cost:

34. *Cross-Section* no.158 (December 1964), 1.

The steel frame was almost entirely erected in one day. The stonework which will clad the frame in a manner to match the neo-Gothic existing sections of the cathedral is expected to take three years to complete. At a cost of £650,000 for 50 squares of nave, i.e. £12,000 per square, this surpasses even Sydney Opera House figures.<sup>34</sup>

The question of traditional versus modern architecture also gained the Australian media's attention. As Gargett shared, in 1994:

35. Gargett, "Brisbane Club," 5-6.

During the 50s & 60s there were many claiming that the cathedral should be completed in a modern style. [...] I recall an item on an ABC TV programme in which an architect advancing this theory, confronted the Diocesan Registrar, Rowland St John. The next segment was an interview with Barry Humphries and on being asked his opinion, he replied in a voice that only Barry Humphries could use, saying that maybe those who were of this opinion, would like to see a laminex altar so that it could be cleaned with a wettex and possibly plastic vases of foam rubber glads on the altar.<sup>35</sup>

36. Gargett, "Brisbane Club," 5-6.

Purportedly the Diocesan Dean, Bill Baddeley (1914-1998), had "worded up" Humphries and was also in contact with Sir John Betjeman – the English Poet Laureate, architectural author and admirer of Pearson's architecture – who was offering his support and ready to fly to Brisbane at his own expense.<sup>36</sup>

However, the media theatrics from both sides, belies the detailed assessments already undertaken by the consultancy team and client for numerous technical and aesthetic challenges, nearly a decade earlier. To the extent that if accepted unchecked the media narrative obscures for architectural historiography today what were highly considered design decisions that recognised what was at stake – the truly unique opportunity and the challenge to complete Pearson's design. Archival research reveals that this opportunity underpinned the team's decisions, and even the introduction of the steel frame. In fact, it would be naïve to suggest that the steel frame was a modern material and technology used for "modern" reasons.

37. A.H. Conrad and T.B.F. Gargett letter to The Registrar, "St. John's Cathedral – Completion," July 9, 1954, 1-2 (ASQAA, St John's Cathedral file); Gargett, Memo, 3; Denzil Scrivens, *A Queensland Masterpiece: St John's Cathedral Brisbane and architect John Loughborough Pearson RA* (Brisbane: St John's Cathedral, 2017), 148.

38. "Extensions to St. John's Cathedral, Brisbane," October 19, 1965, 2-3.

39. A.H. Conrad and T.B.F. Gargett letter to The Registrar, "St. John's Cathedral Completion," September 6, 1954, 1-4 (ASQAA, St John's Cathedral file)

40. Conrad, Gargett & Partners, "St. John's Cathedral Brisbane, Contracts for Extensions, Progress Report No. 4," October 13, 1965.

41. Gargett, "Brisbane Club," 6.

42. "Extensions to St. John's, Brisbane," 3; Gargett, "Brisbane Club," 7; report append to October 20, 1965 letter from A.H. Conrad T.B.F. Gargett letter to The Registrar, "Extensions to St. John's Cathedral, Brisbane," October 19, 1965, 1 (ASQAA, St John's Cathedral file).

43. Gargett, "Brisbane Club," 11. November 21, 1965 the Start-of-Building Service was held ("Historic Day at the Cathedral," *The Church Chronicle*, December 1, 1965, 10).

The project's structural engineer, Russell John (Jack) McWilliam (1894–1991) of McWilliam and Partners was sceptical of the self-supporting stone vaulting as built in the early-1900s (the East end) to Pearson's design. From July 1954, McWilliam insisted on a steel frame structure, to avoid increasing the size of the stone buttresses (determined to be undersized) and avoid visible changes to Pearson's design.<sup>37</sup> This hidden steel also incorporated steel trusses, concealed in the roof space, to overcome difficulties in sourcing the large sizes of timber used in the first stage and avoid issues of timber shrinkage.<sup>38</sup> The gravitas of the decision to introduce the "modern" steel frame was recognised by the team. McWilliam worked in consultation with the project's Geologist, Frederick William Whitehouse (1900-1973). Also, in 1954, Conrad and Gargett invited architectural advice from University of Queensland Professor and architect Robert Cummings (1900-1989).<sup>39</sup> The two-bay steel frame was fully erected early-October 1965.<sup>40</sup>

The lack of experienced stone masons and the projected cost of the work caused a reduction in the scope from three-bays to two – a potential reduction the team had actually factored into their 1950s documents.<sup>41</sup> This led to the stoneworks being tendered twice, with Lowther Portland Pty Ltd's subsequent bid only accepted after they organised a joint venture with The Stone Firms Ltd. to bring a team from Birmingham, GB, to Brisbane for the works.<sup>42</sup> November 8, 1965, the first stone was laid. As the works progressed, St John's stage II continued to receive criticism from various commentators, but the last stone was laid January 22, 1968 and the project consecrated November 22, later that same year.<sup>43</sup> A modern but temporary wall of light-weight construction was built to secure the cathedral (Figure 3). Finishing stage III would take even more time and determination – the use of steel framing as opposed to load bearing stone vaulting would again be questioned (with steel framing installed, but as the stonework progressed under new masons and new architectural supervision that steelwork was gradually removed). Starting in 1989 stage III was completed and consecrated October 29, 2009.

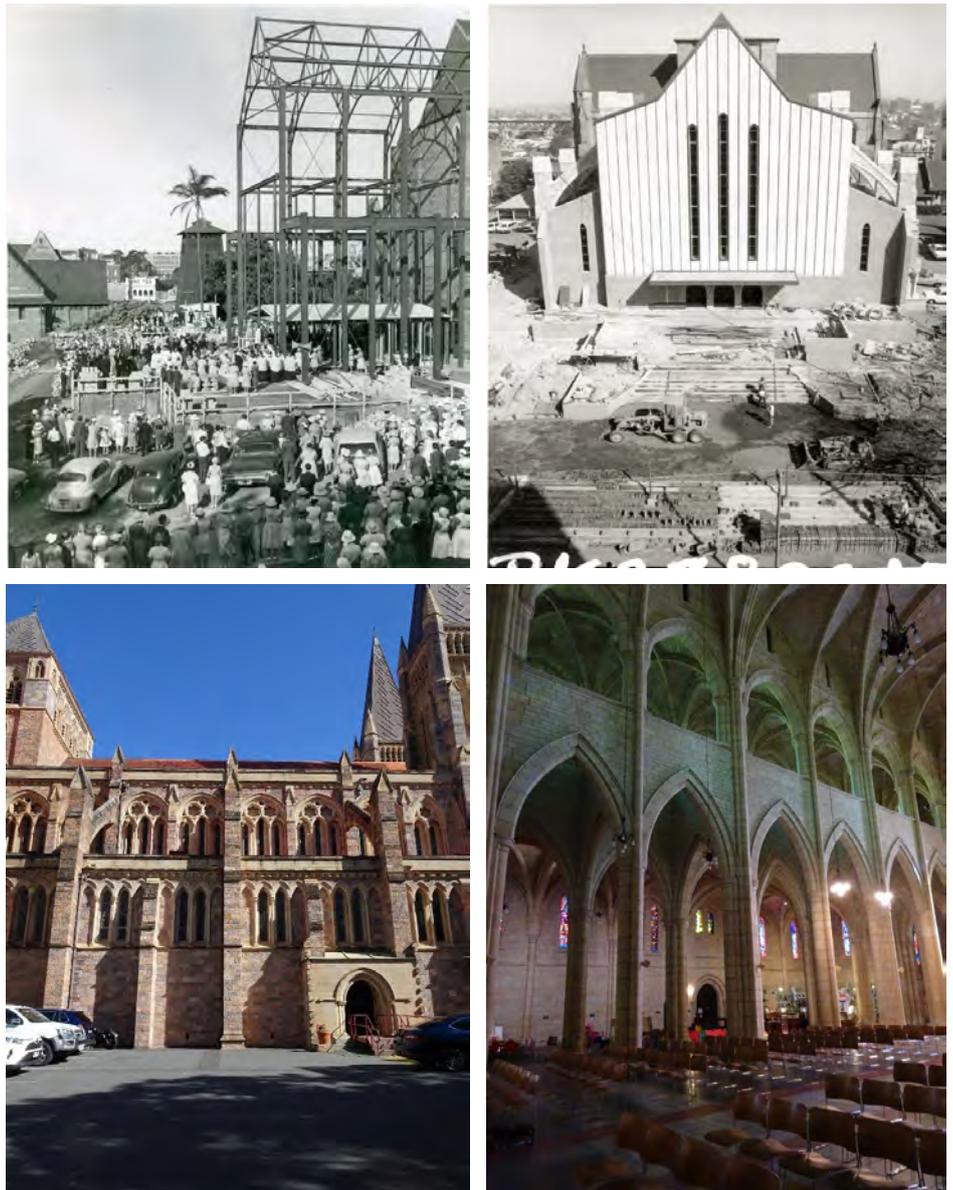


Figure 3: St John's Church of England Cathedral, Brisbane, War Memorial extension works (1910 stage I, 1968 stage II extension), by Conrad, Gargett and Partners. Top Left: November 21, 1965 photograph of steel framing, photographer unknown. Top Right: 1968 photograph of temporary west wall, photographer unknown. <https://www.anglicanchurchsq.org.au/archives/cathedral-exhibition> accessed June 26, 2021. *Reproduced with the permission of the Records and Archives Centre, Anglican Church Southern Queensland.* Bottom: Photographs of the stage II bays, by Lisa Daunt 2021.

### Progressing the Region's Unbuilt Cathedrals Post-WWII

While the post-war stages of the region's incomplete CoFE cathedrals revealed tensions between tradition and emergent ideas for modern architecture, architectural style drew less debate as three new Catholic cathedrals were constructed in the region (though St Patrick's Catholic Cathedral in Rockhampton remained incomplete until 1981-82). With no existing part cathedral, community and architectural opposition was negligible. Instead, these debates occurred privately, between architect and Bishop, with the latter's ambitions determining how modern both the architecture and liturgical arrangement of the final design became. Printed press at the time focused on the achievement of building a cathedral and fund-raising campaigns. This was in part due to the

singular authority delegated to the cathedral's Bishop by the Catholic Church (as typically given to a church's Priest), as opposed to the building committees set-up for CofE projects.

44. On Ferrer see: Lisa Daunt, "Quoting Ian Ferrier (1928-2000): Contributing to Queensland's post-war modern church architecture," in *Quotation, Quotation*, proceedings of SAHANZ 34 (Canberra: SAHANZ, 2017), 101-111.

The design architect for all three new cathedrals was Ferrier, who had studied architecture at McGill University in Canada (1946-52), before migrating to Australia mid-1953 and arriving in Brisbane February 1955.<sup>44</sup>

45. David Bridgman, "St Mary's Star of the Sea War Memorial Cathedral," in *Australian Modern: Architecture, landscape & design*, Hannah Lewi and Philip Goad, eds. (Port Melbourne: Thames & Hudson Australia Pty Ltd, 2019), 142-3.

Ferrier's first ecclesiastical design was St Mary of the Sea Catholic Cathedral, Darwin (1962, NT), which he designed and started the documentation of in 1956-57, while he was working for the Brisbane practice of J.P. Donoghue, Cusick and Edwards, a practice by then known for its ecclesiastical buildings.<sup>45</sup> This was one of the most adventurous modern buildings drafted on a Queensland drawing-board during the late-1950s with its expressive use of true parabola arches (Figure 4). When interviewed in 1999, Ferrier, fondly recalled:

46. Fiona Gardiner and Alice Hampson, *Interview with Ian Ferrier*, St Lucia: May 30, 1999.

I then got involved in the Darwin Cathedral, what happen there was that the Bishop came to see him [Donoghue], he wanted a new cathedral. And one day for fun I sketched something up and he liked it and said well develop that for me. So, I did. The Bishop liked it. And away we went. Did the full set of working drawings, but at that stage I moved on somewhere else. [...] whilst I designed it and I did all the drawings for it, I wasn't there, I wasn't the architect in strict terms.<sup>46</sup>

47. *Edwards Bisset collection* UQFL242, job 286, folder 2. Earlier sketch designs were dated: April 1955 signed by Alan Amos; July 1955; September 1955; October 1955 initialled PABE (Philip Arthur Bryce Edwards).

However, designing a cathedral was not as straight forward as Ferrier's word suggest. Ferrier's design was not the first scheme John Patrick Donoghue (1894-1960) presented to Bishop John Patrick O'Loughlin (1911-85; Bishop of Darwin 1949-85), in fact numerous rough sketches had been prepared, and at least four prior designs drawn up.<sup>47</sup> These varied in their adoption of tradition and modern architecture. The October 1955 scheme was Romanesque, while the April 1955 scheme used angular forms and deep vertical sun blades to blend neo-Gothic form with modern detailing. Ferrier's design, while still adopting a cruciform plan and a neo-Gothic volume, modernised the construction method, taking cues from emergent ideas abroad. Oscar Niemeyer, Felix Candela and Pier Luigi Nervi had by then each designed reinforced-concrete parabolic arch buildings that were widely published. What Ferrier achieved for Donoghue and O'Loughlin was an inspiring design, celebrating modern construction, an opportunity they embraced and took on the challenges that ensued for it to be realised.

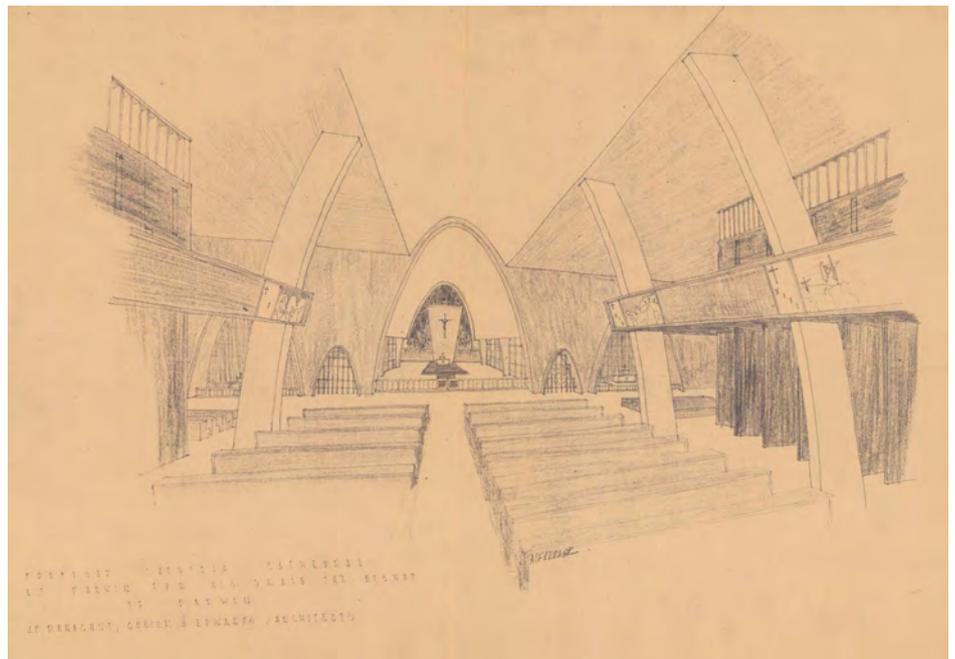
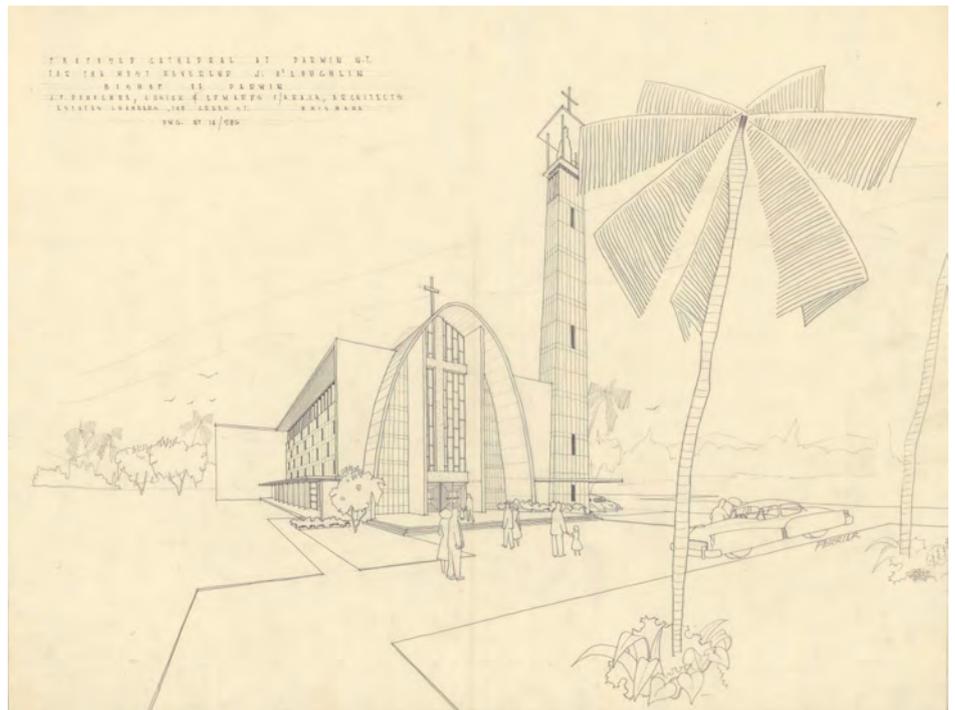


Figure 4: St Mary of the Sea Catholic Cathedral, Darwin, NT (1962) designed by A. Ian Ferrier of J.P. Donoghue, Cusick and Edwards. Left: Exterior perspective drawing (pencil on tracing), signed by by A. Ian Ferrier, undated. Right: Interior perspective drawing (paper print of pencil drawing), signed by A. Ian Ferrier, undated. *Edwards Bisset collection* UQFL242, job 286, folder 2

Ferrier's design was a challenging project to document, tender and build (though different to the challenge of St John's, discussed above). Ferrier produced 'revised' documents July 1957, before he left Donoghue to start his own practice. The documents were later redrawn, with some design changes, during the first half of 1958. Interestingly, during September 1958 the project's structural engineers – Woolacott, Hale, Bond & Corlett (North Sydney) – prepared an alternative scheme with reinforced-concrete parabolic walls and roof structure. However, the project's structural engineering was completed as documented

48. UQFL242, job 286 – superseded engineers' drawings in folder 1 of 2.

early-1958 with the parabolic arches fabricated as steel frames encased in concrete and the roof constructed with beams and purlins covered in corrugated copper sheeting. The rest of the structure is a combination of concrete slabs, beams and columns, steel frames, blockwork and local porcellanite stone-clad walls.<sup>48</sup> In response to Darwin's tropical climate, custom-designed concrete brise-soleils (sun-breakers) shade the high-level nave windows and the transept windows. The nave side walls open at low-level with glazed doors incorporated along the length of the nave for cross-ventilation (a recurrent feature of Ferrier's ecclesiastical designs). However, departing most from Ferrier's design was the tower, which was repeatedly redesigned and redocumented, with the built design finally drafted May 1961, during the construction phase.

49. On Holy Family see: Lisa Daunt, "Modernist Concrete: technologies of Brisbane church architecture in the 1960s," in *Historiographies of Technology and Architecture* proceedings of SAHANZ 35 (Wellington: SAHANZ, 2018), 78-92.

50. "Progress on the Darwin Memorial Cathedral," *The Catholic Leader*, April 23, 1959, 9.

No doubt St Mary's was a challenging build; however, the decision to proceed with a steel frame structure likely limited negative media during its construction (the Brisbane parish church of Holy Family, suggests how challenging a task a reinforced-concrete structure could have been).<sup>49</sup> Instead, the design was repeatedly celebrated. In a speech given on Australia Day 1959 – the occasion of Darwin formally becoming a capital city and shortly after cathedral's foundation stone ceremony of July 13, 1958 – Richard Charles Ward (1916-1977), the federal government member of Darwin, acknowledged the proposed cathedral for its contribution to this feat: "It is significant" he said "and perhaps not by accident, that a great Cathedral is going up in Smith Street. One established principle of right to city status is that of having a Bishop. Darwin has had one for some years and now it is soon to have a Cathedral."<sup>50</sup> April 1959 reporting on the Darwin cathedral's progress, Queensland's *The Catholic Leader* recognised its contemporary design as evidence of spiritual progress in the North:

51. "Darwin Memorial Cathedral," 9.

The inspiring contemporary design – in line with the best and most enduring in modern architecture – is an expression of faith in the great possibilities of the Territory of tomorrow. It is a guarantee for the future just as the Church as a whole has a vital role in shaping the modern world, so the Cathedral is a pledge that the Church in Darwin will be to the fore, guiding and directing development along lines in keeping with the best Christian traditions. The message from the majestic, uninterrupted sweep of the series parabolic arches will always be – Sursum corda! [Lift up your hearts!]<sup>51</sup>

St Mary's was blessed and opened August 19, 1962.

52. Bridgeman, "St Mary's Star of the Sea," 142-3; Philip Goad and Hannah Lewi, "Australian Modernism Top 10," *Pursuit*, The University of Melbourne, <https://pursuit.unimelb.edu.au/articles/australian-modernism-s-top-10-part-two> accessed May 21, 2021.

St Mary's remains one Darwin's most celebrated buildings. Recently, it was recognised as landmark modern design, gaining a 2-page entry in the 2019 compendia *Australia Modern* and its inclusion in Philip Goad and Hannah Lewi's top ten Australian modern buildings.<sup>52</sup>

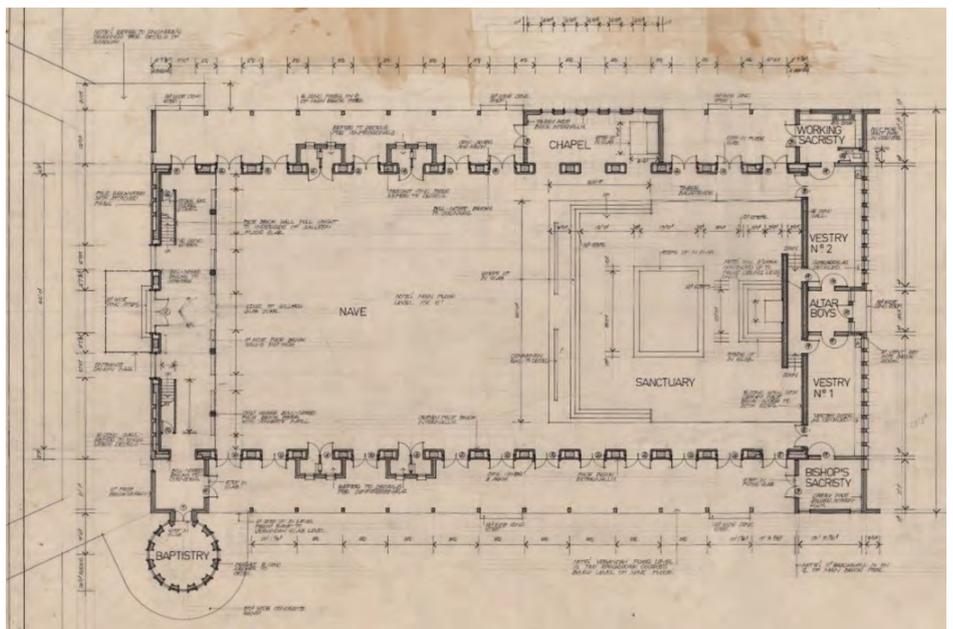


Figure 5: St Monica's War Memorial Catholic Cathedral, Cairns (1968), by A. Ian Ferrier. Top: Exterior photograph, by Lisa Daunt, 2018. Middle: The opening ceremony July 14, 1968, concelebrated mass (evening event), interior photograph. Ferrier Slide Collection, courtesy of Catherine Baudet. Bottom: The redocumented and built design, floor plan, December 1966 drawing. Ferrier Baudet Archive, courtesy of Catherine Baudet.

52. Bridgeman, "St Mary's Star of the Sea," 142-3; Philip Goad and Hannah Levi, "Australian Modernism Top 10," *Pursuit*, The University of Melbourne, <https://pursuit.unimelb.edu.au/articles/australian-modernism-s-top-10-part-two> accessed May 21, 2021.

53. "St Monica's War Memorial Cathedral," *Queensland Heritage Register* listing 601961 <https://apps.des.qld.gov.au/heritage-register/detail/?id=601961> accessed June 1, 2016.

54. Letters from Ferrier to Bishop Cahill, December 23, 1964; February 2, 1965; March 5, 1965 (CCDA, A300 St Monica's Cathedral Construction).

55. Archbishop O'Donnell's address August 9, 1966 (CCDA, Silver Jubilee of Diocese 1966 file A900 box 6 folder 1; and quoted in "Archbishop O'Donnell Officiates at Cairns Jubilee Ceremonies," *The Catholic Leader*, August 18, 1966).

56. "State News from all over Queensland," *The Courier-Mail*, July 28, 1966 (CCDA, A300).

57. Both visited by Ferrier. *Ferrier slide collection*.

58. August 1965 17, letter from Fr Lennon to Ferrier, Bishop's confirmation (CCDA, A300).

59. Cahill's review of May 6, 1966 working drawing set, sent to Ferrier with cover letter attached dated May 18, 1965 (CCDA, A300).

60. August and September correspondence between Ferrier and both Fr Lennon and Andrew L. Petrie Pty Ltd; then, April 11 and 24, 1968 letters Ferrier to Fr Lennon and Watkins (CCDA, A300).

During the mid-1960s Ferrier met the Bishop of Cairns and then the Archbishop of Port Moresby, leading to two cathedral commissions for his own practise. St Monica's Catholic Cathedral in Cairns was the first to open in 1968.<sup>53</sup> (Figure 5). Discussions between Bishop Thomas Vincent Cahill (1913-1978, Bishop of Cairns 1949-1967) and Ferrier commenced late-1964 and Ferrier produced initial sketch design early-1965.<sup>54</sup> With both Cahill and Ferrier collaborating for this project, the expectations of their peers were high – for instance, Patrick O'Donnell (1897-1980, Archbishop of Brisbane 1965-1973) spoke of Cahill at the twenty-five years Cairns diocese celebrations:

His opinions and judgements are valued and sought for in the councils of the Australian Hierarchy. His deep theological insights and his gift of languages proved a most valuable asset to the bishops of Australia during the recent Ecumenical Council. He was our liaison and contact with the hierarchies of Italy, Spain and central Europe. My Lord Bishop, that you have put your hand to the great work of erecting here a Cathedral worthy of the traditions of North Queensland, a monument to the pioneers who laid the foundations of the Church in this now prosperous region, is indeed typical of your zeal, your foresight, your faith in the future of the diocese over which you rule.<sup>55</sup>

During the tender period, *The Courier-Mail* published a photograph of the model with the caption: "The designer, Brisbane architect Mr A. Ian Ferrier has striven to relate contemporary architectural forms with the desired classical atmosphere for the building, which will provide for the requirements of the new liturgical forms."<sup>56</sup>

For this design, Ferrier took inspiration from a Canadian Synagogue (Holy Blossom Temple, Toronto (1938) by Jack Brenzel of John B. Perkins associates, and Coventry Cathedral's Unity Chapel.<sup>57</sup> In its final form, the cathedral's height is equivalent to a four-storey building, with tall pre-cast concrete arched windows containing ruby and amber coloured-glass to the front, sides and baptistry. Red (Mareeba) bricks were used externally contrasting the white concrete details and light cream (Brisbane) bricks internally to brighten the interior.<sup>58</sup> The wall behind the cathedra also used light cream brick, to not be a feature and therefore not distract from the altar.<sup>59</sup> In response to Cairns' tropical climate, verandahs ran the length of both sides, with doors off the nave at regular intervals for cross-ventilation, and the wall to roof junction was vented to realise heat. The cathedral's nave is wide and column free. The sanctuary measures approximately 50-feet (15.24 metres) square, taking up the front third of the worship space This generous sanctuary has an island altar for the Bishop to face the people and the cathedra on the back wall also facing the people. Ferrier designed the marble altar, and the majority of the liturgical furnishings.<sup>60</sup> However, Ferrier's proposals for commission artwork were dismissed. The stations of the cross and the wooden crucifix figure were purchased by the diocese from religious suppliers.

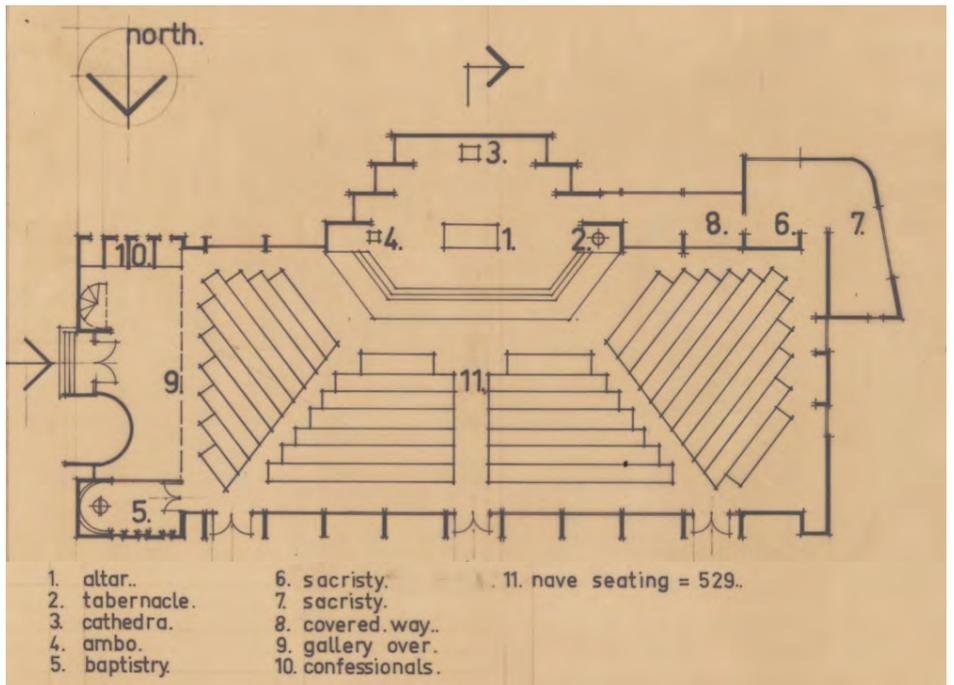
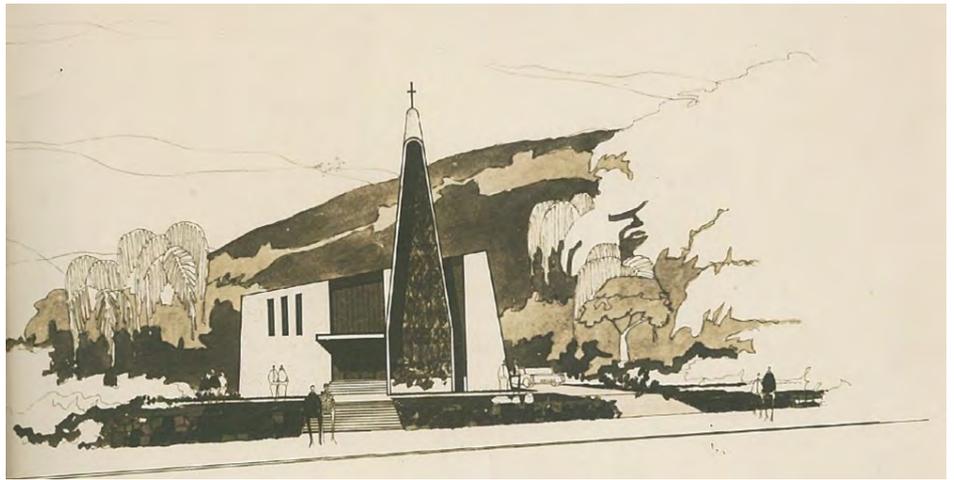


Figure 6: St Mary's Cathedral, Port Moresby, PNG (1969), by A. Ian Ferrier, in association with John R. Wild. Top and middle: The revised and built design's street elevation and floor plan, June 1968 drawings Ferrier Baudet Archive, courtesy of Catherine Baudet Bottom: Exterior photograph, by Dr. Stephen Long, 2016.

61. Gardiner and Hampson, *Interview with Ian Ferrier*.

In 1999, Ferrier's reflections on the building were mixed. He lamented the design features deleted due to budget constraints and Cahill's traditional preferences for art and architecture.<sup>61</sup> As a basilica-type and with a separate baptistry chapel, St Monica's does not show the same progressiveness evident in Ferrier's (smaller) church and chapel designs. Due to high first tender prices, Ferrier's office redocumented the 600-seat cathedral, without the transepts and with a simpler ceiling construction, amongst other adjustments.

The third cathedral that Ferrier designed was St Mary's Catholic Cathedral, Port Moresby, PNG, design in 1967 in association with John Ralston Wild (1928-2014) who was based in Port Moresby. It was opened in 1969. (Figure 6). This cathedral is a unique and expressive juxtaposition of western catholic and indigenous local (male ceremonial hut, Haus Tambaran) architectures. And with the sanctuary positioned along a long wall of the nave the seating fans around the sanctuary – the planning expresses modern liturgical renewal of a participating gathered parish community. However, Ferrier's office also documented this cathedral twice (as they did for St Monica's), but in this instance the opportunity was taken to adopt a progressive liturgical ordering (it was initially documented as a basilica-type), while also building a smaller scheme.

## Conclusion

Progressing the 1960s stages of Queensland's incomplete cathedrals revealed tensions over traditional and modern ideas. Each of these cathedral's first stages were designed by eminent ecclesiastical architects and for each it was a question of how "modern" the 1960s extensions should be? While at the same time, if and how to adhere to the original architect's design. St James' Cathedral in Townsville (1960) was completed with a new modern front façade, but its new nave blends tradition and modern, with the former the dominant. In contrast, the remote Thursday Island All Soul's Quetta Memorial Cathedral extension (1965) used economic light-weight construction in direct contrast to its masonry 1893 part. St John's Cathedral stage II (1968) in Brisbane choose what ended up being the more challenging approach, keeping with the intent of Pearson's design, but hiding "modern" steel-framing within the stonework. Today Pearson's design is considered the finest in Australia and with the privilege of hindsight it is readily apparent now that it did need respect.

Unmistakably modern with its expressive use of parabolic arches, St Mary's Star of the Sea Cathedral in Darwin (1962) was a bold shift away from Romanesque and Gothic architecture traditions in the region. However, St Mary's design responded little to emergent ideas for liturgical renewal, leaving this task for a later time (as can be also said for the CofE cathedrals discussed in this paper). In contrast the new cathedrals built in Cairns (1968) and Port Moresby (1969) responded to liturgical renewal, with the latter also departing from the processional basilica and gathering the congregation around the sanctuary. These three new post-war cathedrals, though all designed by Ferrier, each display a quite different balancing of tradition and modern, as ideas for regional cultural expression, tropical architecture, liturgical renewal and

which continuing traditions were “needed” for a cathedral were debated between architect and Bishop.

All these cathedral projects were achieved remarkably fast, due to their small size and economic constraints (a very different narrative to the modern, highly symbolic, landmark cathedrals that were built abroad post-war in the established dioceses of the Global North). A priority for the region’s Bishops was “completed” cathedrals, as these young dioceses strove to establish and develop a breath of ecclesiastical infrastructures across their territories. This highly development driven outlook, enabled the region’s Bishops to reduce their ambitions and accept realistic, “municipal” scaled projects that adopted the emergent ideas of modern architecture (as opposed to the expensive and time-consuming ecclesiastical architecture of neo-Gothic designs). Arguably, together with the remarkable number of churches built, the region’s completed post-war cathedrals are emblematic of an ambition different from that of the nineteenth-century. A comparison particularly apparent, when the extraordinary ambition of the CofE client and architects to realise Pearson’s nineteenth-century design of St John’s is given due recognition.

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# ULTRA

## **Positions and Polarities Beyond Crisis**

**SESSION 5: *Theory, Criticism and Historiography***

# The Role of Architectural History Research: Auckland's NZI Building as William Gummer's Attempt at Humanity

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## Keywords

William Gummer  
Guardian Trust Building  
"Architectural Research"  
Research project "Gummer  
and Ford"

## Abstract

In response to the third thematic sub-stream of the 38th Annual SAHANZ Conference, this paper will discuss the role of architectural research in the architecture of Gummer and Ford, the Auckland-based practice, often described as one of the most prolific bureaus in interwar New Zealand. The paper is a fraction of a three-staged project, "Gummer and Ford," developed by a team of researchers from the Unitec Institute of Technology in response to an event recognised as a milestone in the New Zealand architectural calendar – the 2023 centenary of the firm's establishment.

This paper explores the design principles of William Gummer, the principal designer of the firm. From 1914 to 1935, Gummer consistently published his view that the goal of the architect was to cater to humanity's highest instincts. He was unwavering but vague on how this is achieved; through composition, unity, contrast, proportion and scale, appropriate use of materials is all needed to produce buildings of good character. But what did he really mean by this? A close reading of three books Gummer considered invaluable to architectural students – *The Essentials of Composition as Applied to Art* by John Vredenburg Van Pelt, *Architectural Composition* by Nathaniel Cortlandt Curtis, and *The Mistress Art* by Reginald Bloomfield – offers a direct insight into the influences behind his thinking about architecture and his architectural production. Directly traceable to Gummer, the three titles include clear, precise instructions on both the functional and artistic nature of architectural design.

Interestingly, this paper employs a method not dissimilar to Gummer's design method. These books taken together, along with Gummer's own writing, a study of renderings and construction drawings, and close observation of the buildings, an architectural analysis of Gummer's work becomes possible – it is what Gummer himself referred to as Architectural Research. This historically focused study will bring a new perspective to understanding the value and contribution of traditional architects, not only in New Zealand but other English-speaking countries.

## Introduction: The NZI Headquarters, a 'Fine Modern Building'

1. "NZ Insurance Company. Fine Modern Building," *New Zealand Herald* 55, no. 16863, May 30, 1918, 7.

2. "NZ Insurance Company. Proposed New Buildings. A Seven-Storey Block. Steel Frame and Ferro Concrete," *Auckland Star* 44, no. 255, October 25, 1913, 10.

3. "Land and Buildings. Additions to Business Premises," *New Zealand Herald* 50, no. 15205, January 20, 1913, 4.

4. Peter Shaw, *A History of New Zealand Architecture*, 112; John Stacpoole and Peter Beaven, *New Zealand Art: Architecture 1820-1970*, 9; Hodgson, *Looking at the Architecture of New Zealand*, 48; Petry, "The Public Architecture of Gummer and Ford," 92; Errol Haarhoff, *Guide to the Architecture of Central Auckland*, 35.

5. William Gummer, 'The Threefold Application of Architectural Education,' *NZIA Proceedings*, March (1921): 42.

6. Gummer, "The Threefold Application of Architectural Education," 42.

The erection of the new NZI premises (1913-1917), (known since the early 1980s as the Guardian Trust Building), is widely considered as a significant accomplishment of early 20th-century Auckland architecture. It was designed by Hoggard, Prouse, & Gummer, who, as the period press proudly claimed, 'adopted the best principles of commercial structures and the most modern methods of construction.'<sup>1</sup> A true architectural 'celebrity,' the building was, by far, the most famous of the period commercial structures constructed in Queen Street, the teeming thoroughfare of Auckland's central business district. The decision by the board of directors to erect a new building on the site of an old city landmark – the 1870s NZI headquarters designed by Richard Keels – was described as 'one of the best evidences of the faith of business men in the future prosperity of Auckland is the splendid type of buildings that are replacing the structures of earlier days in Queen Street.'<sup>2</sup> The march of progress was unstoppable, and architecture was its most tangible embodiment.<sup>3</sup>

Listed by the Heritage New Zealand as Category 1 Historic Place, the NZI building is widely recognised for its architectural value in the country's architectural historiography.<sup>4</sup> However, although regularly included in overviews of New Zealand's early twentieth-century architectural history, the NZI building is, as a rule, concisely described and characterised as a valuable Queen Street commercial building – without contextualisation or deeper consideration. This paper aims to understand the design principles of William Gummer, the lead designer of the NZI building, who later became the principal designer of Gummer and Ford. Thus, the paper will explore in detail various aspects of the NZI Queen Street premises, Gummer's first major commission in Auckland. The paper will illustrate Gummer's creative motivation, ambitions and design mechanisms which informed his architecture. It will be shown that, like most of his contemporaries, Gummer was dedicated to accomplishing beauty in his designs and, ultimately, to impacting the public 'spirit' through architecture.

Gummer's own explanation of 'architectural research' presented at his 1920s paper 'The Threefold Application of Architectural Education' will guide the discussion.<sup>5</sup> The method employed will help study the NZI building 'from point of view of the architect, his purpose, opportunity, his limitations of material.' The research will attempt to follow Gummer's 'mind at work on the problem, evolving carefully the plan to meet all practical considerations, feeling and picturing his walls and piers, feeling in his mind's eye tenderly, yet strongly, lovingly, almost prayerfully, a sequence of forms which, at such instances in plan and heights in section form those magnificent interior spaces, magnificent before any decorative works is added, and blossom out in façade in a totality of silhouette, composition, rhythmic proportion, studied light and shade.'<sup>6</sup>

## The Beaux-Arts Tradition and Dual Understanding of Architecture: Challenging The 'Easier Paths of Financial Enterprise'

The early 20th century New Zealand architects who were educated abroad most often studied in the U.K. or the U.S.A., where they learned

7. More about the U.K. experiences of New Zealand architects: Ann McEwan, "Learning in London: The Architectural Association and Early 20th-Century New Zealand Architects," *Interstices. Auckland School Centenary Special Issue* (2018): 25-36.

8. Cameron Moore, "The Design Philosophy of Gummer and Ford" in *Proceedings of the Society of Architectural Historians, Australia and New Zealand: 30, Open*, edited by Alexandra Brown and Andrew Leach (Gold Coast, Qld: SAHANZ, 2013), vol. 2, p 487-497.

9. Moore, "The Design Philosophy of Gummer and Ford," 488-489.

10. *Ibid.*, 489.

11. Drexler, *The Architecture of the École des Beaux-Arts*, 129, 332.

12. Nathaniel C. Curtis, *Architectural Composition* (J. H. Hansen, Cleveland: 1935), 1.

13. Gummer, "The Threefold Application of Architectural Education" 47.

14. William Gummer, "The Study of Architecture," *Progress* 10, no. 8 (May 1915): 293.

15. Reginald Bloomfield, *The Mistress Art* (London, Edward Arnold, 1908), 9.

about the École des Beaux-Arts methodology.<sup>7</sup> In his paper presented at the 30th Annual SAHANZ Conference, Cameron Moore illustrated the exposure of William Gummer to the Beaux-Arts during the time he spent in London.<sup>8</sup> Moore noted that, having served articles under William Alfred Holman in Auckland from 1900 to 1907, Gummer travelled to London in 1908.<sup>9</sup> Arriving to London, Gummer immediately enrolled in lectures and evening classes, while working for Sir Leonard Stokes. A year later, in 1909, Gummer got accepted at the Royal Academy of Arts where he became familiar with the general teachings of the French Ecole des Beaux-Arts, and in particular, those of Sir Reginald Blomfield and his predecessor, Richard Phene Spiers. In 1911, while still at the Royal Academy, Gummer was presented with the opportunity to spend seven and a half months in the office of Edwin Lutyens, who also had a strong connection with the French method.<sup>10</sup>

Since Labrouste, who was the first to make a distinction between structural principle and decorative form, the latter was supposed to be rationally induced from the former – the materials, methods of construction, and from the specification of programme.<sup>11</sup> As a result, by the early 20th century, non-modernist architects conceived of architecture dually, as a unity of two distinct components – art and technology. In the words of Nathaniel Curtis, whose *Architectural Composition* Gummer recommended as essential reading to the aspiring architects, the dual 'nature of architecture is determined by two objects... the satisfaction of the requirements of use; the second is the satisfaction of the requirements of beauty.'<sup>12</sup>

Dual understanding of architecture informed the period distinction between the engineering and architectural professions. Gummer echoed these attitudes, noting that 'the engineer and contractor can build as far as strength, durability, and weathertightness go just as well as we [the architects] can.' He continues, 'if we have the creative instinct of design, then should the knowledge of the principles of architecture in plan, section and façade make our buildings not once removed from engineer or builder's effort (whose work in his own field I am not minimising), but so many times removed in its effect on the human mind that no considerations of comparison will be suggested.'<sup>13</sup> On a different occasion, in the address delivered to architectural students, Gummer stressed that technical knowledge is essential, yet explained that it alone is not sufficient for becoming an architect.<sup>14</sup>

If, then, architecture differed from engineering, requiring specific knowledge and skillset, what was its essence in the minds of the pre-Second World War non-modernist architects? According to Reginald Bloomfield, under whom Gummer studied, an architect's 'immediate concern is with the beauty of a beautiful building and the means by which that beauty is attained.'<sup>15</sup> To Bloomfield and his like-minded contemporaries, beauty was the central tope of architecture, its ultimate end and the essential tool. The Beaux-Arts teaching instilled the belief that without beauty – equated with the notions of art and meaning – architecture is reduced to a mere piece of construction which caters for physical needs, not much different than an animal shelter.

But, to which end was beauty of architecture used? Van Pelt's *Essentials of Composition* – another title which Gummer deemed the elementary

16. John Vredenburg Van Pelt, *The Essentials of Composition as Applied to Art* (New York: The Macmillan Company, 1930), 2-5.

17. Hvattum, *Gottfried Semper and the Problem of Historicism*, 154.

read of architects – helps with finding the answer. According to Van Pelt, architects should attempt at creating a work of art, which 'having been intentionally created, is capable of producing the sentiment or impression aimed at by the artist, and in all persons able to respond to such sentiments or impressions.'<sup>16</sup> Thus, for the early 20th century non-modernists, architecture was capable of touching the minds of the people who interacted with it. Ever since the 19th century, architecture was considered an essential tool for the betterment of the society. Consequently, the selection of a suitable architectural style was not simply a matter of aesthetic preference, rather, as Mari Hvattum explains, 'it was a vehicle for moral improvement as in Pugin, a symbol of national renewal as in Schinkel and Klenze, an expression of rationality and progress as in Hubsch, or the self-representation of a new social class as in the Vienna Ringstrasse.'<sup>17</sup>

18. Gummer, "The Study of Architecture," 295.

19. Gummer, "The Threefold Application of Architectural Education," 43.

20. *Ibid.*, 46.

21. *Ibid.*, 46.

For Gummer, (the art of) architecture 'a live thing, a thing we cannot do without. It caters to our noblest and highest instincts.'<sup>18</sup> Appealing at the humanity of his profession, Gummer asserted that architects had a responsibility towards the community, to express the 'intimate relationship existing between architectural and human progress... to turn dry bricks and mortar into things with a soul, the soul of the people.'<sup>19</sup> Gummer maintained that 'in a truly civilised State design should be as necessary to the mind as food is to the body, and art should not be regarded as one of the luxuries of life but as an instinct for beauty that every man and woman possess. The general need is for that instinct to be generously moulded, in other words, to educate it. ... The public should look to us for guidance and should get it. Only by this means can a culture of a country progress.'<sup>20</sup> Buildings were, according to Gummer, the chief means by which architects could educate the public and they, therefore, had to feature 'an element of the spiritual investing it with higher qualities than just those of mere creature comforts.'<sup>21</sup>

22. Bloomfield, *The Mistress Art*, 3.

23. Gummer, "The Threefold Application of Architectural Education," 46-47.

However, as Bloomfield warned, at the beginning of the twentieth century, architecture has strayed from the path of art into the 'easier paths of financial enterprise.'<sup>22</sup> According to Bloomfield, its essence and justification as 'the serious art of building' were in danger of being overlooked during the progress of Machine Age. Similarly, Gummer criticized 'Mr. Public,' who forced a firm grasp of misunderstanding on architects, preventing them from achieving architectural excellence in New Zealand. Making a comparison with the situation in the United States, he quoted a certain businessman who, allegedly, said to Sir Ashton Webb in New York, 'Do you know, I constantly go out of my way in order to see McKim's Library which he built for [J.P.] Morgan. Looking at that building always does me good.' Gummer concluded that 'when folk in New Zealand go out of their way to get good from buildings then will our cities possess not only commercial value, but aesthetic and moral values and that intimate connection with human effort and aspirations that may be called architecture.'<sup>23</sup> Thus, it could be argued that Gummer attempted humanity, wishing to design architecture which would inspire people and aspired not only to create buildings – and cities – which were economically feasible, but to imbue them with aesthetic and moral values.

According to period sources the NZI building compelled Aucklanders to stand in awe before it, reminiscent of the skyscrapers of New York. The

24. "The City's Buildings. Steady Expansions. Work on Major Structures," *New Zealand Herald* 67, no. 20732, November 27, 1930, 13.

25. Ibid.

26. This image allowed them to become one of the first insurance companies in New Zealand to be floated using exclusively local finance. "Search the List | New Zealand Guardian Trust Building | Heritage New Zealand."

27. Petry, "The Public Architecture of Gummer and Ford," 95.

28. John Vredenburg Van Pelt, *The Essentials of Composition as Applied to Art*, quoting John Ruskin, *Lectures On Architecture And Painting*, 20.

building can be considered one of Gummer's earliest efforts to make an imprint on the culture by educating the people through means of architectural art, while, at the same time, responding to the need of an office building to be functional.<sup>24</sup>

Designing NZI Building in Response to 'The Requirements of Use' Though, as discussed above, they favoured beauty as the essential trait which made the difference between building and architecture, the early 20th century non-modernists recognised functionality as the primary condition of 'good' architecture. To quote Curtis, 'the requirements of habitation and the satisfaction of material necessities are the first and earliest objects of architecture.'<sup>25</sup> So, what were the functional imperatives which informed the NZI design? The client, New Zealand Insurance Company, needed to expand their Auckland branch office, to include a public area, and to install the New Zealand head office with a boardroom and executive offices. Additionally, there was to be as much rentable office and retail space as possible. Architecturally, the client required the new building to promote an image of solidity and wealth to help enhance their image.<sup>26</sup> Bruce Petry notes that the desire to project strong architectural statements was an important period mechanism in establishing status among companies.<sup>27</sup> Indeed, there was a good budget to achieve this for the new NZI premises, but of course, not an unlimited one.

The client's requirements also needed to be balanced with the requirements of their future tenants. The clients required the building to show their wealth and stability to the New Zealand public, while the client's tenants necessarily did not. Gummer was certainly aware of this dichotomy and used it to be strategic about how to manage the resources allocated to him to realise the brief, but not necessarily at the disadvantage of the tenanted spaces. The building is a study in what John Ruskin wrote about the purpose of architecture, 'The first thing required of a building – not, observe, the highest thing – is that it shall answer its purpose, completely, permanently, and at the smallest expense.'<sup>28</sup>

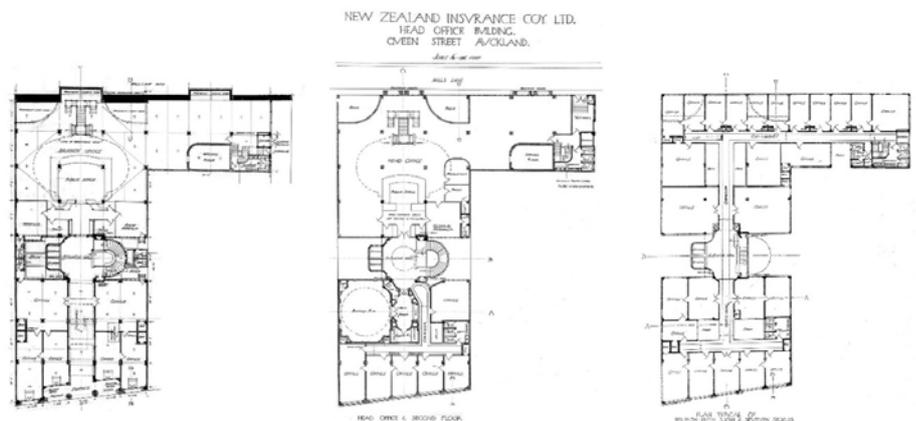


Figure 1: Floor Plans of the NZI Building by Hoggard, Prouse, and Gummer held by the Auckland Council Archives

The building was to be erected at an 'L' shaped site between Queen St to the east (20m site frontage), Mills Lane to the west (40m site frontage) and Exchange Lane to the north (20m site frontage). The other three

boundaries are without access to open space – the most impactful being the 50m boundary to the south and the 34m boundary to the north. The Mills Lane ground level is eight metres higher than the ground line on Queen Street. As a result, the ground and first floors have only a single aspect to Queen Street. The site conditions impacted the design response in two ways – it had to resolve the tension between allowing natural ventilation and light into the building and the need to maximise the rentable floor area (1) and to allow ease of access to all parts of the building (2).

How did Gummer respond to these challenges? The lessons Gummer offered in his 'The Study of Architecture,' can be considered a map of his design process – one that the paragraphs below will follow:

29. Gummer, "The Study of Architecture," 293.

When a building is being considered, the plan should instantly show the relative importance and use of the various apartments, access to these should be of the easiest, and a true architectonic feeling obtained in the whole by allowing the nature of the site and its position with regard to the compass, the character of the materials used in the building, and the habits of the people to use it, together with the personal temperament of the designer shown in his use of mass, line, proportion, light and shade, scale, etc., to express themselves fully. ... The above set of circumstances determines the style.<sup>29</sup>

### **Internal Composition and the Sequence of Spaces**

Inspired by the Beaux-Art tradition, the overall proportion and composition of the interior spaces is organised around the main axis, allowing for site and functional constraints. The floor plan is divided into two parts, the Mills Lane end at the back of the building that is almost entirely taken over by the client, and the Queen Street end with the grand entrance and smaller rentable office and retail units. The two parts are separated by the centre circulation space and two internal courtyards that allow light and ventilation into the middle of the building. After allowing for the main and cross axis, the spaces are then organised around the structural grid that divides the space equally in the rear area by approximately 6.5m x 5.5m, and in the front 3.8m x 5.9m. The average ceiling height is about 3.3m with the ground floor and second floor levels to be around 4m. In the area below the mezzanine space in the branch and head offices the head height jumps to approximately 7.3m. The floors are layered on top of each other in levels 5-8) for the efficient use of the circulation space.

30. Ibid, 298.

Gummer controlled the spatial experience of the building to unfold in three dimensions – height, breath, and depth, something he implored architecture students to in 'The Study of Architecture.'<sup>30</sup> This approach helped form overall impression on the visitor that the building is much bigger and more luxurious than it is by carefully controlling the visitor's attention on the sequences of spaces along the main axis as they pertain to both the insurance company, and the rentable offices. For example, if the visitor had an appointment in the board room in the head office he would ascend three flights of the marble and wrought iron stair off the circular cross axis, and land gracefully on the third floor to similar

31. "The N.Z. Insurance Coy. Ltd." *New Zealand Building Progress*, (August 1919), 286.

32. John Vredenburg Van Pelt, *The Essentials of Composition as Applied to Art*. 41.

circular vestibule, turn left on the main axis, through heavy rimu and oak double-doors with lead-glass highlights and into the 'handsomely appointed'<sup>31</sup> oak panelled anti-room and dome-ceiling boardroom. Gummer carefully developed the sequence of spaces to translate the visitor's spatial experience into a vision of progress and prosperity – from Queen Street façade and portico, through the internal vestibule, the cross axis with the bronze door elevators and staircase, to the oak and rimu panelled board room and the two double height public spaces in the branch and head offices.<sup>32</sup>

### Lighting, Ventilation, and Circulation

Gummer resolved allowing adequate natural light and ventilation into the building in several ways. By placing the stair as centrally as possible, at least diffused light and air can enter the centre of the building at all levels. The second response was Gummer's use of a steel frame structure to allow the walls to be much thinner, and the openings much wider than the traditional ferro-cement technique common at the time. A steel frame lets openable windows on the Mills Lane façade to be a far higher proportion of wall space than with ferro-cement construction. Additionally, on this façade pavement lights were designed to allow light eight meters down into the branch office on the ground and first mezzanine floor, although there is no indication that this made it past the design phase. Lastly, another technique Gummer employed on this façade was to scallop out the external wall approximately three metres into the building from the first to fourth floors to allow light both deeper into the building and to top-light the ground floor.

33. "The N.Z. Insurance Coy., Ltd." 289. Sadly these stairs along with the mezzanine floors are no longer in the building.

The circulation is efficient – comprising just 13 – 15% of the overall floor area, but is not cramped or pinched. Gummer gives ample width to the entrance corridor (4m wide). The vertical circulation is provided by a two-metre-wide circular interior stair and two elevator shafts in the centre of the building, and a secondary entrance area with stairs and a single elevator that services both Exchange Lane on the ground floor and Mills Lane on the first floor. This secondary entrance is more utilitarian and humbler than the main stair being for tenants only. The grand circular stair is marble with a wrought iron balustrade is wide with a shallow slope. It terminates on the third level where it stops servicing the New Zealand Insurance Company and is replaced by a narrower but elegantly humble stair for the building's tenants. Gummer places the primary stair off the main axis to keep the axis clear, to allow freer more direct access to the rest of the building. The primary axis is terminated inside both the branch and head offices with grand solid oak bifurcated stairs that *Building Progress* described as "massive, solid and substantial. They are not overburdened with enrichment and decoration; the beautiful grain of oak is shown off in the straight lines, plain faces and bold curves of the stair."<sup>33</sup>

What was written in *Building Progress* can well be ascribed to the rest of the internal treatment of the building. In the public and client spaces, Gummer mainly uses the grain, shine, and colour of the material pallet – marble and timber in the lower treatment of the walls to contrast against the white plaster of the upper walls. What ornamentation there is on the walls is restricted to the basic detailing of the base and the plaster

cornice. The ceiling is white plaster coffered to simply give an impression of the structure of the ceiling in simple geometric shapes. For the most part the floor is chequered tiles in the public areas with a mosaic in the lower circulation space. In the tenant spaces, he uses simple floor covering and plaster wall finishes with minimal decoration.

### **Designing NZI Building in Response to 'The Requirements of Beauty': The Queen Street Façade**

34. Curtis, *Architectural Composition*. 117.

Echoing the ideas of the Beaux-Arts tradition discussed above, Curtis maintained that a building's façade is resultant on its plan and structural system, also allowing 'ample latitude for the expression of character.'<sup>34</sup> In terms of the former, the NZI façade needed to accommodate retail and the building's entry way on the ground floor with seven storeys of offices above. The retail must have its own separate entries and the offices as much window area as possible. In terms of the latter, the composition of the façade is the starting point. There are six general design principles that Gummer follows that will be briefly discussed here.

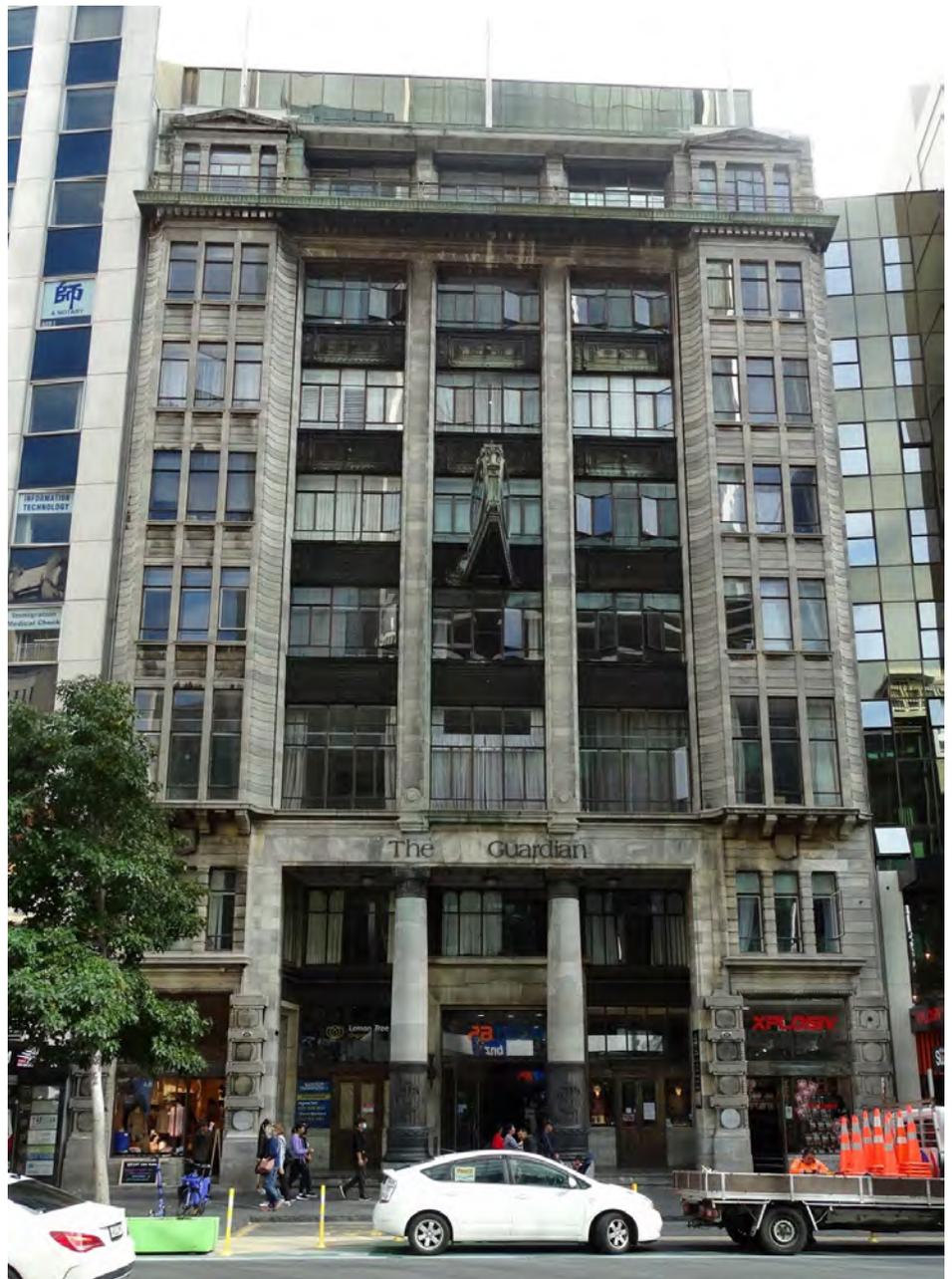


Figure 2: NZI Building Queen Street Facade, photo by Cameron Moore

35. John Vredenburg Van Pelt, *The Essentials of Composition as Applied to Art*. 78; Curtis, *Architectural Composition*. 123.

36. Curtis, *Architectural Composition*. 124.

The first is to achieve balance through symmetry. Not only is the composition of the NZI building's facade symmetrical, but each bay has a vertical line of symmetry, and the middle bay and the middle of the side bays also have a horizontal line of symmetry. The second is the tripartite groupings of elements.<sup>35</sup> The three-motive composition is seen in the base-middle-crown motif, the three vertical bays, the three spaces formed in the portico, and the number of windows in the side bays. The third is overlapping compositional elements. Gummer blurred the distinction between the portico, side bays and middle bays to ensure a more coherent façade, as advised by Curtis.<sup>36</sup>

37. John Vredenburg Van Pelt, *The Essentials of Composition as Applied to Art*. 70.

38. "Fine Marble Façade", *New Zealand Herald*, 8, no. 16254, June 13, 1916, 16.

The fourth principle is the establishment of a dominant focal point in the composition.<sup>37</sup> The entry portico is the façade's focal point. Standing 12m across and 8.2m high<sup>38</sup>, Gummer used canonised Corinthian Order proportions (900mm diameter wide, 9-diameter tall columns)

39. Vitruvius's Araeostyle intercolumniations from Chisholm, "Intercolumniation."

40. Curtis, *Architectural Composition*. 69.

to establish the height and width of the portico, the width being 4 four column spaces between the elements<sup>39</sup> - as far apart as possible and still conform to classical façade design. Gummer was surely influenced by Curtis in deciding on a Corinthian portico where Curtis states, "An entry portico may have little excuse for its existence except to create an impression – to give a monumental character and dignity to a façade. This use when justified by the program takes precedence over purely material necessities."<sup>40</sup> Gummer's portico sets the proportions and composition for the rest of the façade with the middle bay radiating from it, and the side bays framing it. The middle bay comprises levels 3 – 7, in the centre of the building, with rented offices behind. To allow as much light and air into these offices this part of the facade consists of deceptively large steel-framed operable windows divided vertically into three even parts. Horizontally, the windows are separated at the floor plates with bronze spandrel panels. The proportions of the middle bay are derived from the Corinthian order below but are not subject to the exacting nature of employing the full order. The lightness and openness of the portico and middle bays are visually supported by the heaviness and solidity of the bays on either side. At their base, two marble rusticated piers with alternating rectangle and disk motives frame the entrance into the retail spaces and support a stone lintel. Above, the bays protrude out forming a stronger shadow line on the middle bay. Finally, a Corinthian cornice without the entablature forms the bottom of the building's one-storey crown. Little entablatures finish off the side bays of the crown and 'hold' the roof.

41. Semes, *The Future of the Past, A Conservation Ethic for Architecture, Urbanism, and Historic Preservation*, (New York: W.W. Horton & Company) 51.

42. Curtis, *Architectural Composition*. 21.

43. John Vredenburg Van Pelt, *The Essentials of Composition as Applied to Art*. 214.

44. "The N.Z. Insurance Coy., Ltd." 279.

The fifth principle is the expression of the *apparent* vertical and lateral loads inherent in the building on the façade.<sup>41</sup> In reality the steel frame is supporting the roof and floors, but to rely on a steel structure to inform a building's character 'tend(s) to encourage excessive and vicious proportions,'<sup>42</sup> or, as Van Pelt more directly put, it is 'bad architecture.'<sup>43</sup> As discussed, the overall composition expresses these loads with a weightier portico, base and side bays predominately made up of Kairuru marble from the Nelson area,<sup>44</sup> a material with literal and instinctive impressive compressive qualities, while the middle bay consists of steel framed windows and bronze spandrels, materials with a perception of having strong tensile qualities.

45. "The N.Z. Insurance Coy., Ltd." 279.

46. Bronze being far easier to cast than marble is to carve. John Vredenburg Van Pelt, *The Essentials of Composition as Applied to Art*. 69.

47. Gummer, "The Study of Architecture." 293.

48. Gummer, "The Study of Architecture." 293.

The ornamentation reinforces this impression of structure. The stone is stacked in layers on the side bays, and the glass and bronze span the space between the stone facing in the middle bay. Aside from the stacking, there is little stone ornamentation, Gummer using both shadow lines and the coarse grain of the highly polished marble that gives a desirable, vibrant sheen.<sup>45</sup> Where more ornate ornamentation is required, bronze is used, as suggested by Van Pelt.<sup>46</sup> Gummer himself also implored students to 'use materials according to their natural possibilities and limitations.'<sup>47</sup> The ornamentation also highlights the proportions of the openings that in turn reflect the general proportions of the façade. Or as Gummer puts it, 'notice how frequently in good buildings the details such as doors and windows reflect the line of the general building.'<sup>48</sup>

These design principles help form building's character, imbuing the architecture with a meaning developed by Gummer's attention to the client's requirement of promoting wealth and solidity. He only applies

historical architectural canon in the formulation of the Corinthian portico, the rest of the façade is a rational response to the brief whilst not contradicting a tripartite composition or expressing apparent structural loads. Keeping within the client's budget, the NZI – Gummer's early attempt to imbue with humanity the Auckland architecture– was considered a major success, liked by the clients and the public alike.

## Conclusion

49. Van Pelt, *The Essentials of Composition as Applied to Art* (New York: The Macmillan Company, 1930), 2.

50. "Architectural Progress. New Standards Adopted. Modern Street Construction," *New Zealand Herald* 59, no 18105, June 1, 1922, 10.

51. "Architectural Progress. New Standards Adopted. Modern Street Construction"

52. Hodgson, *Looking at the Architecture of New Zealand*, 48.

53. Stacpoole and Beaven, *New Zealand Art: Architecture 1820-1970*, 43.

The discussion of the NZI building has shown that, accepting the premise of architecture's dual nature, like many of his contemporaries educated in the Beaux-Arts tradition, Gummer's design approach comprised dedication to functional planning, the use of most recent technologies, and careful selection of materials, finished with historically legitimised forms that communicated a specific meaning. Whether he managed to mould and educate the 'instinct for beauty' of the early 20th century New Zealanders is impossible to determine. However, it is possible to conclude that he produced architecture which qualifies as a work of art, according to the standards set by Van Pelt – without a doubt, the NZI is capable of 'making impressions' on most humans who interact with it.<sup>49</sup> A 1922 article notes that it was a common sight to see pedestrians pause outside the new building and gaze skywards, 'admiring a façade which, with its fine columns and suggestion of extra height, is still one of the best in Queen Street.'<sup>50</sup> Years after it was constructed, the public recognised it as a structure that 'set a new standard,'<sup>51</sup> and more than half a century later, Terence Hodgson described it as one of the landmark steel-frame buildings, featuring a tripartite composition, which provided a compositional basis for many subsequent tall New Zealand buildings.<sup>52</sup> Finally, one can observe that the NZI was indeed a lasting success, which, to quote Stacpoole and Beaven, 'confirmed the hard-won freedom architects had now gained from the 19th-century stylistic dilemma – the historical styles were still thought to provide the best solutions to particular problems, but architects were no longer bound by them.'<sup>53</sup>

# Two Conceptualisations of Change in Architectural History: Towards Driving Pro-sustainable Change in Architecture

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## Keywords

Johann Joachim  
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## Abstract

At the time when it is important to act on the Climate Emergency and other pro-sustainable efforts, the key question is how to drive change. This paper examines two conceptualisations of change in architectural history in an attempt to support a better understanding of architecture-specific conceptualisations of change itself. Such understanding could offer real value in articulating how to drive pro-sustainable change in architecture.

The paper identifies two conceptualisations of change which are easily found in existing writing on change in architectural history. One such conceptualisation considers architectural developments in terms of cyclical styles, or triads of early, high, and decadent stages of development of styles. Attributed to the 18th century writing of Johann Joachim Winckelmann on ancient Greek art, this conceptualisation presents one useful interpretation which links the change with natural growth. A simpler conceptualisation of two-point change is interpreted using the minor/major interpretations of change, as developed by Joan Ockman, based on the work of Gilles Deleuze and Félix Guattari.

The key proposition is that the selected historical examples of conceptualisation of change reveal useful aspects of the past patterns of change in architecture. These might help understand how to drive needed change now. One critical factor in the transition which is facing us now, is that in contrast to many past transitions which were driven by technological innovation, current transition requires development of technologies capable to support the change which is scientifically proven as needed and real. Therefore, some of the historical natural ease of the past transitions in the current contexts needs active driving of change.

Without an intention to propose a holistic new framework, the main value of this paper is that it identifies some of the key conceptualisations which are evident in architectural history and that could be useful in driving pro-sustainable change.

## Introduction

In recent years, world-wide recognition of the necessity of climate action has been steadily increasing to international declarations of Climate Emergency. This requires changes of a range of important aspects of human activities, especially in architecture and the built environment which present a significant impact on planetary systems. In addition, in the last couple of years it is possible to notice an increase in polarities in a few aspects of contemporary society. Calls for social justice have been gaining momentum through the Me-Too movement, Black Lives Matter protests and similar. In 2020 and 2021, the international response to the Covid-19 pandemic demonstrated effectiveness of collaboration and unified actions for the betterment of many. Yet, importantly, all of these transformations are taking place against the backdrop of accelerated shifts to digital and automated labour. These, and other transformative polarities, are likely to continue requiring change from many of the existing systems and equilibriums. Thus, it is conceivable that accelerated change could be one of the key constants in the coming decades. Furthermore, one critical factor in the transition which is facing us now is that in contrast to many past transitions which were driven by technological innovation, current transitions require development of technologies capable to support a change which is scientifically proven as needed and real. Therefore, some of the historical natural ease of the past transitions in the current contexts needs active driving of change. Unsurprisingly, such efforts are met with resistance to change and the emotional discomfort from losing perceived security or simplicity.

Within this context, the question is how to drive positive pro-sustainable change in architecture in response to the rapidly evolving polarities and pressures? More specifically, could logic offered by the past conceptualisations of change in architecture assist with such efforts? In order to answer these questions, it is important to identify past conceptualisations of change, to better understand contexts needed for past changes, to examine and test these from the relevant historiographical perspectives, and to situate findings in relation to contemporary scholarship in other disciplines. This paper focuses on starting the first step of this process by identifying and reviewing two different conceptualisations of change in architectural history and establishing some elements of the needed subsequent steps in order to sketch a novel evaluation of the strengths and shortcomings of these patterns within architecture when engaging with change.

1. Alina Payne, Wölfflin, architecture and the problem of *Stilwandlung*. *Journal of Art Historiography* (2012), 7: 1-20.

The assumption of this paper is that many disciplines, including architecture, might have their own discipline-specific interpretations of change. Thus, in order to understand how to drive change in architecture, it is important to understand how change has been already conceptualised in architectural history. Further to that, stylistic changes have been discussed in history of art and architecture almost interchangeably, with some even noting that art historians went to architectural history when developing frameworks to interpret stylistic changes.<sup>1</sup> While this paper does not focus on stylistic change per se, some learning is possible from such discussions.

## Winckelmann's Conceptualisation of Stages of Development

2. David Carter summarises a range of such interpretations in David Carter, Introduction, In Johann Joachim Winckelmann, *Johann Joachim Winckelmann on Art, Architecture, and Archaeology*, with an Introduction and notes by David Carter (Rochester, New York: Boydell & Brewer, Camden House, 2013), pp. 1-28; Alex Potts, Introduction, in *Johann Joachim Winckelmann, History of the art of antiquity* (Los Angeles: Getty Publications, 2006), pp. 1-53.

3. Katherine Harloe, *Winckelmann and the invention of antiquity: history and aesthetics in the age of alternumswissenschaft* (Oxford: Oxford Scholarship Online, 2013), see especially chapter 4, pp.105-130; Mari Hvattum, Zeitgeist, style, and Stimmung: historiography of architecture, in *The Companions to the History of Architecture*, edited by Harry Francis Mallgrave, Volume II: Eighteenth-century architecture, edited by Caroline van Eck and Sigrid de Jong (Chichester, UK: Wiley Blackwell, 2017), pp.691-714.

4. Johann Joachim Winckelmann, *Johann Joachim Winckelmann on Art, Architecture, and Archaeology*, Translated by Harry Francis Mallgrave (Rochester, New York: Boydell & Brewer, Camden House, 2013), p. 227.

5. Winckelmann, *Johann Joachim Winckelmann on Art, Architecture, and Archaeology*, p. 227.

6. Winckelmann, *Johann Joachim Winckelmann on Art, Architecture, and Archaeology*, p. 244.

7. Harloe, *Winckelmann and the invention of antiquity: history and aesthetics in the age of alternumswissenschaft*, p. 108.

8. Potts, Introduction, in *Johann Joachim Winckelmann, History of the art of antiquity*, p. 2.

9. Winckelmann, *Johann Joachim Winckelmann on Art, Architecture, and Archaeology*, pp. 231, 233-234, 240, 243, 244.

10. Winckelmann, *Johann Joachim Winckelmann on Art, Architecture, and Archaeology*, p. 71.

11. Carter, Introduction, In *Johann Joachim Winckelmann, Johann Joachim Winckelmann on Art, Architecture, and Archaeology*, p. 13. Similar sentiment is expressed by others, see: Harloe, *Winckelmann and the invention of antiquity*; Potts, Introduction, in *Johann Joachim Winckelmann, History of the art of antiquity*, pp. 1-53.

12. Harloe, *Winckelmann and the invention of antiquity*; Carter, Introduction, In *Johann Joachim Winckelmann, Johann Joachim Winckelmann on Art, Architecture, and Archaeology*, p. 12; Potts, Introduction, in *Johann Joachim Winckelmann, History of the art of antiquity*, pp. 1-53.

In art and architecture history, a frequently used interpretation when considering change is the idea that development occurs in a series of stages of development. Reviews of the literature in this area suggested that the origin of this conceptualisation in art history has been attributed to German art historian and archaeologist Johann Joachim Winckelmann (1717-1768) by a few researchers.<sup>2</sup> Although some more recent scholarship in this area notes that these ideas were developed within their own cultural and social milieu,<sup>3</sup> the historical impact of these conceptualisations are not actively challenged. In *History of art of antiquity* (1764), Winckelmann writes about four stylistic periods or stages of development of ancient Greek art: ancient style, grand or high style, beautiful style, and decline into imitation to a fall.<sup>4</sup> Winckelmann explains that similar periods can be found in poetry, especially in theatrical pieces, summarising five stages of chronological progression: 'beginning, development, plateau, waning, and end.'<sup>5</sup> Applied to Greek sculpture, Winckelmann describes these as 'four stylistic stages, namely, the straight and hard, the grand and angular, the beautiful and flowing, and the style of the imitators.'<sup>6</sup> These are sometimes interpreted as 'origin, growth, change and fall.'<sup>7</sup> Yet, in some parts of Winckelmann's own writing and in many subsequent interpretations, this has been simplified into three main periods: early, mature, and late.<sup>8</sup> The core pattern appears to be made out of three key stages, which can have more than one part within them. Thus, regardless of the number of stages, this conceptualisation of change provides a consistent interpretation.

References to the same core stages of development tend to be evident in the subsequent antiquity scholarship, but also in the interpretations of other subsequent developments in art and architectural history. This should not surprise, given that even as Winckelmann introduced this system in his *History of art of antiquity*, he mixed ancient with more modern examples, and art and architecture, and used comparisons of ancient Greek stages with artists such as Michelangelo, Raphael, Bernini and specific examples, like the Palazzo Barberini and Campidoglio, to make his points clearer to his readers.<sup>9</sup>

Some important propositions are imbedded in Winckelmann's conceptualisation, and it is relevant to make these explicit. From the opening of *History of art of antiquity*, Winckelmann declares the relevance of history 'in the wider sense,' and that his intention is to provide a system of interpretations of the art of antiquity within this broader context.<sup>10</sup> This has two significant implications. Firstly, Winckelmann asserts the importance of a broader social and cultural context, and since then a range of commentators have attributed to Winckelmann the development of 'what was essentially cultural history.'<sup>11</sup> Secondly, Winckelmann asserts that he will provide a systematic interpretation of change and development of ancient styles. This aspect of Winckelmann's work has been used by a range of scholars to explain not only the lasting influence of his ideas, but also his aspiration to identify universal patterns.<sup>12</sup> On these levels, it is appropriate to interpret his developmental stages as explicitly assuming that these patterns are universal, and as such, ready to be applied to any developments, but also that these are deeply grounded in their cultural context.

13. Mari Hvattum, *Zeitgeist, style, and Stimmung: historiography of architecture*, in *The Companions to the History of Architecture*, edited by Harry Francis Mallgrave, Volume II: Eighteenth-century architecture, edited by Caroline van Eck and Sigrid de Jong (Chichester, UK: Wiley Blackwell, 2017), pp.691-714, p.698.

14. Potts, Introduction, in *Johann Joachim Winckelmann, History of the art of antiquity*, pp. 21-22.

15. For definitions of evolution see Merriam-Webster Web Dictionary. Available from: <https://www.merriam-webster.com/dictionary/evolution> (accessed July 2021); Dictionary, Available from: <https://www.dictionary.com/browse/evolution> (accessed July 2021).

16. Harloe, *Winckelmann and the invention of antiquity*, pp.114-115, 119.

17. Hvattum, *Zeitgeist, style, and Stimmung*, pp.698, 701.

18. Hvattum, *Zeitgeist, style, and Stimmung*, p.694.

19. Hvattum, *Zeitgeist, style, and Stimmung*.

20. Alina Payne, Wölfflin, architecture and the problem of *Stilwandlung*. *Journal of Art Historiography* (2012), 7: 1-20; Lino Bianco, In defence of Baroque: the Wölfflin-Frankl-Giedion tradition, *The Journal of Baroque Studies* (2016), 1(4): 5-20.

Furthermore, Winckelmann's key stages of the development of art can be seen as similar or reflective of biological growth in general: early, mature, and late stages of development can be seen as reflective of childhood, adulthood and elderhood of an organism. This can be seen as a reference to 'a continuous cycle of birth, growth and decay.'<sup>13</sup> At times this progression was explained as an expression of evolution.<sup>14</sup> In the historical context of Winckelmann's work, evolution should be understood as signifying the movement of the unrolling of a papyrus scroll, which is the older Latin origin of the verb, rather than a reference to the subsequent Darwinian theory of evolution.<sup>15</sup> However, if one includes connotations of growth of an organism, the evolution of an individual could also be seen as implied in this progression. These characteristics of Winckelmann's system can be seen as 'naturalistic,' and at times reflective of the writing of his contemporary Jean-Jacques Rousseau.<sup>16</sup>

This 'naturalistic' connection with Winckelmann's contemporaries is not the only link which can be found with his own cultural and intellectual context. Mari Hvattum explains that while the stages introduced by Winckelmann were not really new, what was new was the idea that 'art and architectural history [can be] seen as a succession of epochs, each of which was the product of specific conditions and manifested through a distinct architectural expression, or style.'<sup>17</sup> Within the context of the mid 18th century critical aspect was the emancipation of individual histories from the older concepts of history as a record of 'the consistency and universal validity of the classical models.'<sup>18</sup> Winckelmann was not unique in contributing to these more individual understandings of history, which eventually culminated in the rise of the historicist styles of the 19th century. Nevertheless, Winckelmann's systematic interpretation of progressive change and emphasis on the social and cultural context which influence these, Hvattum attributes to have later served as a basis for the formation of the concept of the spirit of the time, *zeitgeist*.<sup>19</sup>

Unfortunately, one potential real shortcoming of Winckelmann's set of stages is that in order to accurately interpret the change in this way, it might be necessary to have a historical distance in order to see the full cycle. It could be argued that Winckelmann had such distance for his 18th century discussions of the ancient Greek developments. Lack of historical distance could be especially challenging when trying to interpret late stages of development as the cycle moves towards imitation and fall. Prolonged discussions of baroque as its own style illustrate this issue.<sup>20</sup> However, if Winckelmann's set of stages is applied to relatively recent developments, there is the potential to misread the stages as being newer and more developed than they truly are. Since early 20th century modern developments, possibly this tendency to overemphasise novelty as the outset of a major cycle has been prominent. Yet, Winckelmann's set of stages does not resolve what triggers the outset of change.

### **Ockman's Concept of Change Driven by the Minor/Major**

An alternative approach to change can be found in a simpler two-step interpretation, which can be seen as more specifically focused

21. Joan Ockman, 'Toward a Theory of Normative Architecture.' In Stephen Harris and Deborah Berke (Eds), *Architecture of the Everyday* (New York: Princeton Architectural Press, 1997), pp. 122-152.

22. Gilles Deleuze and Félix Guattari, 'What is a minor literature?', in Gilles Deleuze and Félix Guattari, *Kafka: Towards a Minor Literature* (Minneapolis: University of Minnesota Press, 1986; First published in French in 1975; Translated by Dana Polan).

23. Ockman, 'Toward a Theory of Normative Architecture', p. 122.

24. Deleuze and Guattari, 'What is a minor literature?', p. 16.

25. Deleuze and Guattari, 'What is a minor literature?', p. 26. In the translation by Robert Brinkley this reads as 'only the minor is great and revolutionary,' see Gilles Deleuze and Félix Guattari, 'What is a minor literature?', *Mississippi Review*, Winter/Spring, 1983, Vol. 11, No. 3, p. 26.

26. Ockman, 'Toward a Theory of Normative Architecture', p. 123.

27. Ockman, 'Toward a Theory of Normative Architecture', p. 123.

28. Ockman, 'Toward a Theory of Normative Architecture'.

29. Emina Petrović, 'Your new house – or would a flat suit you better?: development of housing preferences in England, Paris, Germany and New Zealand (Master of Architecture at Victoria University of Wellington, 2003), pp. 66-67, 83-87.

30. Ockman, 'Toward a Theory of Normative Architecture', p. 124.

31. Ockman, 'Toward a Theory of Normative Architecture', p. 131.

32. Ockman, 'Toward a Theory of Normative Architecture', p. 123.

on the onset of change. In 1997, architectural historian Joan Ockman discusses the dynamics of change examining the polarities between the 'minor' and the 'normative.'<sup>21</sup> Ockman bases her conceptualisation on core ideas discussed by Gilles Deleuze and Félix Guattari in 'What is a minor literature?' (1975).<sup>22</sup> Deleuze and Guattari note three core characteristics of a minor literature : 1) a deterritorialized language which reflects the minority status, 2) the political nature of such a language, and 3) the fact that minority writing in a deterritorialized language is not only political, but also represents the experience of the outsider.<sup>23</sup> Deleuze and Guattari explore these dynamics using the writing of Franz Kafka, and explain that '[a] minor literature doesn't come from a minor language, it is rather that which a minority constructs within a major language.'<sup>24</sup> They also establish that 'there is nothing major or revolutionary except the minor.'<sup>25</sup> Based on these propositions, Ockman asks if the reverse could be used to 'derive the reciprocal definition: that is, the opposite, counterrevolutionary process of transformation?'<sup>26</sup> And further to that, could the definitions offered by Deleuze and Guattari when defining a minor language also help in defining the 'major'? Ockman asks if such 'major' would be 'defined as territorial, apolitical, and conservative of the status quo, or normative?'<sup>27</sup>

Based on these propositions, Ockman moves to review developments of modern architecture in the United States to trace the transition from the 'minor' to 'normative.' The proposed argument is that while the development of modern architecture in Europe can be seen as 'minor,' upon arrival to the United States this influence shifts to 'major' or 'normative.' To illustrate this, Ockman gives attention to Walter Gropius, Marcel Breuer, Ludwig Mies van der Rohe, and Laszlo Moholy-Nagy, as a group of German protagonists of modern developments in Europe, who emigrated to the United States and were influential through reputable United States educational organisations like the Harvard Graduate School of Design, the Illinois Institute of Technology and the New Bauhaus in Chicago.<sup>28</sup> (The move of Sigfried Giedion to the Harvard University and later the Massachusetts Institute of Technology illustrates the same trend.) While in Germany social transformation was frequently discussed in relation to early modern architecture,<sup>29</sup> Ockman refers to comments made by Colin Rowe and Catherine Bauer who, respectively, described the shift upon the arrival to the United States as making modern architecture 'safe for capitalism' and 'safe for millionaires.'<sup>30</sup> From Hendy-Russell Hitchcock and Philip Johnson's exhibition of the International Style at the Museum of Modern Art in 1932, and especially with the development of abstract expressionism, Ockman interprets modern architecture as discussed in the United States predominantly as apolitical, in service of the state, an 'expression of advanced capitalism, corporate bureaucracy, and big business.'<sup>31</sup>

Importantly, Ockman also emphasises that 'the relationship between minor and major architecture that is being proposed is to be understood as a historical condition in which that which is major is constantly redefining itself in relation to that which is minor, and that which is minor is always potentially challenging or hybridising that which is major.'<sup>32</sup> Furthermore, Ockman concludes the text by asserting the importance of a critical practice to continually challenge the establishment of the normative, and stating that 'so many of the most critically minded architects today end up by remaining deterritorialized, homeless,

33. Ockman, *Toward a Theory of Normative Architecture*, p. 150.

34. Deleuze and Guattari, *What is a minor literature?*, p. 27.

“minor.”<sup>33</sup> This proposition is in line with the Deleuze and Guattari’s text which, towards the end, sets a challenge to the reader: ‘Create the opposite dream: know how to create a becoming-minor.’<sup>34</sup> However, Ockman’s conceptualisation also offers the subtle but relevant shift from major to normative, suggesting a further shift away from minor.

From the perspective of this paper, this minor/normative conceptualisation of change establishes a two-point interpretation of shifts which drive change. In many situations, this takes the format of an action, followed by a reaction. The emergence of the minor can also be seen as a reaction to the established normative. Therefore, by definition it is always the minor identifying and reacting to the shortcomings of the established normative, and as such the objective of the change can be seen as an improvement, refinement of the existing, without necessarily requiring the revolutionary aspect. This conceptualisation can be useful when explaining less polarised changes where reactions are subtle and modest in scale. On that level, the change created by the minor might have only a subtle impact on the existing normative. Changes of this nature are also easier to observe even when historical distance is more modest.

35. Gilles Deleuze and Félix Guattari, *A thousand plateaus: capitalism and schizophrenia* (London, New York: Continuum, 1988).

Within the context of the body of work by Deleuze and Guattari, the discussion of the minor can be seen as part of their larger project which sought to supersede existing concepts of hierarchy, calling for articulation of alternative forms of order.<sup>35</sup> On that level, this minor/normative dynamic becomes one possible ahierarchical organisation, which can provide useful clarity and organisation of ideas. On this level, the minor/normative concept belongs to post-structuralism and, as such, similarities with other post-structuralist works are possible. From the position of this paper, post-structuralist connotations are less relevant than the core realities and opportunities of the two-step interpretation of change.

Just as Winckelmann’s conceptualisation assumes a clear progression in a single direction, minor/normative conceptualisation also assumes a clear directionality with the minor disrupting the normative and thus stimulating innovation necessary for the development of the new, which may or may not become the subsequent normative. However, in contrast to Winckelmann’s conceptualisation of the stages of development which imply growth, the interpretation of minor/normative dynamics appears to imply undergrowth, or emergence of roots of the new from the shortcomings of the established. Thus, theoretically minor/normative interpretation of change can be incorporated into the explanation of the reasons for the onset of transitions in Winckelmann’s stages, although it is unable to offer a holistic interpretation of broader periods in the way Winckelmann’s stages can.

## **Two Conceptualisations in Historiographical Texts**

The primary purpose of this paper is to introduce the two conceptualisations of change, rather than to provide a proper historiographical analysis of these. Still, a modest set of examples of other historiographical texts discussing similar models of change can help illustrate the use of the same core conceptualisations of change.

36. Sokratis Georgiadis, *Sigfried Giedion: an intellectual biography* (Edinburgh: Edinburgh University Press, 1993), p. 73.

37. Panayotis Tournikiotis, *The historiography of modern architecture* (Cambridge, Massachusetts, The MIT Press, 1999), p. 41.

38. Anthony Vidler, *Histories of the immediate present: inventing architectural modernism* (Cambridge, Massachusetts, The MIT Press, 2008), p. 1.

39. Tournikiotis, *The historiography of modern architecture*, p. 88.

40. Dana Arnold, Reading architectural herstories: the discourse of gender, in Dana Arnold, *Reading architectural history* (London, New York: Routledge, 2002), pp. 199-204; Dana Arnold, Beyond a boundary: towards an architectural history of the non-east, in Dana Arnold, Elvan Altan Ergut and Belgin Turan Özkaya (eds), *Rethinking architectural historiography* (London, New York: Routledge, 2006), pp. 229-245.

41. Cindi Katz, Towards minor theory, *Environment and Planning D: Society and Space* (1996), vol.14. pp.487-499; Cindi Katz, Revisiting minor theory, *Environment and Planning D: Society and Space* (2017), vol.35(4) pp.596-599; Thomas Jellis and Joe Gerlach, Micropolitics and the minor, *Environment and Planning D: Society and Space* (2017), vol.35(4) pp.563-567.

42. Deleuze and Guattari, What is a minor literature?, p. 27.

43. Tournikiotis, *The historiography of modern architecture*, p. 224.

Winckelmann's conceptualisation of 3-4 stages of development can be found in a range of architectural history texts. For example, Sokratis Georgiadis in his analysis of the writing of Sigfried Giedion explains that already in 1934 Giedion summarised the development of modern architecture using the four stage conceptualisation: '[the first stage] was distinguished by the mastery and utilisation of the new materials, especially reinforced concrete [Frank Lloyd Wright, Auguste Perret, and Tony Garnier]. . . . The second stage was distinguished by the change which had taken place in the area of aesthetics [Gropius, Le Corbusier, Oud, and influence of Cubism]. . . . The third stage "completed the purification" and "emphasised the social element in the housing problem" [Mart Stam and Hans Schmidt]. . . . Finally, the fourth stage concerned itself principally with questions of urban and regional planning.'<sup>36</sup> Similarly, Panayotis Tournikiotis summarises Giedion's *Space, Time and Architecture* (1941) as a three-stage genealogy with a 'view of the evolution of periods from their genesis to their zenith and then their decline.'<sup>37</sup> Other authors have used the same conceptualisation. In fact, referring to the stages of development is so prevalent in architectural history that it is not uncommon for even recent sources to open their discussion with this notion.<sup>38</sup>

The two-step minor/normative conceptualisation of change is also easily found in architectural history. Tournikiotis attributes to Leonardo Benevolo the use of a two-step approach to explain change through 'a conceptual dichotomy and shows us a narrative of failure followed by a narrative of success.'<sup>39</sup> This can be seen as a reasonably mild version of the minor/normative conceptualisation of change. On the more radical side of the spectrum, ideas reflective of the minor/normative dominate historiographical interpretations of the positioning of gender and the colonial/post-colonial in architectural histories.<sup>40</sup> Similar interpretations were developed in neighbouring disciplines and used for similar purposes.<sup>41</sup> Central to these more radical approaches to the two-step change is the challenge issued by Deleuze and Guattari of 'becoming-minor,'<sup>42</sup> which might have overstimulated aspirations of the minor. Contrasting these, the relevance of Ockman's work is the use of the same concepts to understand the emergence of a normative, and the understanding that normative developments can be, and perhaps are always, founded on the minor, initially revolutionary, challenges. Nevertheless, this two-step minor/normative conceptualisation can be useful when developing broader, overarching 'metanarratives' to explain change. A good example of one such metanarrative is the repeating assertion of the importance of modern architecture as breaking away from the historicist architectures of the past.

While this is a very brief overview, it shows that both conceptualisations are evident in the existing historiography of architecture, which justifies an examination of potentials they offer for pro-sustainable change.

## Discussion and Conclusion

One of the issues with both the discussed conceptualisations of change is that they appear to approach change from favouring the new. This was also one of the frequently found features of the history of modern architecture.<sup>43</sup> The last one hundred years of architectural history and

theory can be summarised as a search for the new. This has led to often premature declarations of various ends, and introductions of systems of three-four stages to give credibility to the new. The two-step minor/normative (or major) interpretation of change would have been truer and easier to assert in many such discussions. On the other hand, the question is if these self-professed changes were as complete as declared. High level of reliance on self-professed swift moving to the new could be used as an avoidance strategy.

44. Kerri S. Kearney and Kayla D. Siegman, The emotions of change: a case study, *Organization Management Journal*, Vol. 10, No. 2, pp. 110-119; Kerri Shultz Kearney, A study of the emotional effects on employees who remain through organizational change: a view through Kulber-Ross (1969) in an educational institution (PhD in Education at Oklahoma State University, 2002).

Some of the current models for understanding change in other disciplines have established that when organisational or personal change is undertaken, psychological processes reflective of grief are an unavoidable part of the process.<sup>44</sup> The process of grieving is often organised into five stages: denial, anger, bargaining, depression, acceptance. Translated to understanding change, this means moving through: denial, anger, depression, experimentation, decision and integration. Importantly these change stages do not align directly with Winckelmann's stages, which essentially start with experimentation, progress into a developed integrated system, which subsequently disintegrates leading to likely emotions of denial, anger and depression. Thus, it is possible that the prolonged architectural search for the new has not only contributed to prolonged periods of focus on experimentation and the novel aspects, but also provided an effective shared strategy for avoiding acknowledgement of the disappointment and emotional discomfort associated by disintegration and decay. However, because the process of having to move away from what was familiar and loved would always create some grief, the grief patterns probably apply to all changes in style. Thus, it seems possible that Winckelmann's stages have been instrumental in the architectural history of the 20th century to avoid acknowledging later stages of the conceptualisation or even denial.

These are important features when facing the changes necessary due to the Climate Emergency, because in the world which is currently facing denial, anger, bargaining and depression when considering Climate Emergency, this emotional discomfort might be received in architecture with a tradition of avoidance and denial, through the use of emphasis on the developing new self-professed re-starts. Such strategies can be effective in decreasing the focus on complexity, refinement and possibly less obvious solutions which are all necessary for the pro-sustainable change to profoundly re-shape architecture.

Even this introductory examination of the two conceptualisations of change suggests that some ongoing implicit biases can be observed in architectural writing and possibly architecture as a profession, which could be playing an underrecognized covert role in shaping the pro-sustainable change in architecture. The dominant favouring of the new, readiness to declare the new, and prematurely anticipate major changes, might be an obstacle to accurate recognition of the importance of reasonably minor shifts which become part of refinement of established systems. The main value of this paper is that it starts to interrogate some potential implicit biases within the profession of architecture, which could be playing an underrecognized covert role. More work is still needed to refine the understanding of these historical patterns, and to develop strategies to actively use these insights to support pro-sustainable change in architecture.

# A Conceptual Framework for Architectural Historiography

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## Keywords

Architectural historiography  
Conceptual framework  
The existential  
The constructive  
The interactive

## Abstract

Architectural history used to be part of art history, but has been gradually distanced from the latter as architecture develops as an independent modern discipline. Despite debates on architectural historiography in recent decades, architecture as a unique type of historically situated aesthetic objects and design products has not been adequately addressed. To further an independence from art history, and to re-center architecture itself in historical analysis, this article highlights three essential natures of architecture which differentiate it from other types of aesthetic objects (such as painting and sculpture) and design products (such as cars and furniture), while asserting its situated materiality: architecture orders bodily activities and conditions human existence; it necessitates the integration of *techne*, technology, materials, and labor in construction; and it is a collective expressive medium which is shaped by and contributes to the interaction between different social forces. Based on the above propositions, this article provides an upgraded version of the Vitruvian Triad, with the existential replacing *utilitatis* (utility), the constructive replacing *firmitatis* (stability), and the interactive replacing *venustatis* (beauty).

1. For example, Payne, Alina (1999) "Architectural History and the History of Art: A Suspended Dialogue", *Journal of the Society of Architectural Historians*, Special Millennium Issue 59/60: 292-99; Crinson, Mark and Richard J. Williams (2018) *The Architecture of Art History: A Historiography*. London: Bloomsbury Visual Arts.

2. For example, Borden, Iain and Jane Rendell (eds) (2000) *Intersections: Architectural Histories and Critical Theories*, London: Routledge; Arnold, Dana, Elvan Altan Ergut and Belgin Turan Özkaya (eds.) (2006) *Rethinking Architectural Historiography*, New York: Routledge.

3. Lu, Duanfang (2012) "Entangled Modernities in Architecture," in Greg Crysler, Stephen Cairns and Hilde Heynen (eds) *The Sage Handbook of Architectural Theory*, London: Sage, pp. 233-248.

4. Hays, K. Michael (1984) "Critical Architecture: Between Culture and Form", *Perspecta* 21: 16. The quotation is from p. 16.

5. Aragüez, José (2016) "Introduction: The Building's Discursive Building", in José Aragüez (ed.) *The Building*, Zürich: Lars Muller Publishers, pp. 10-23.

Architectural history used to be part of art history, but has gradually been distanced from the latter as architecture develops as an independent modern discipline.<sup>1</sup> Despite debates on architectural historiography in recent decades,<sup>2</sup> architecture as a unique type of historically situated aesthetic objects and design products has not been adequately addressed. As such, architectural historians either remain trapped in the methods and techniques used in art history, or drift away towards approaches and frameworks of semantic analysis and social history developed in the humanities and social sciences. Mainstream architectural historiography is still marked by the codification of aesthetically exemplary buildings into stylistic categories, and the ordering of heterogeneous design practices into progressive movements.<sup>3</sup> This creates some awkward dilemmas in the attempts to write global histories of architecture, as the usual categories of styles and movements do not apply to regions outside the Euro-American world, nor do they capture the diverse directions of architectural development evolving in parallel. Narratives developed so far remain fragmented and lack interpretive clarity. Meanwhile, frameworks of semantic analysis and social history have led to two polarized positions in the past few decades. On the one hand, the formalist approach stresses the autonomy of architecture as spontaneous and internalized operations, while "the way in which a building as a cultural object in time is possessed, rejected, or achieved is not addressed".<sup>4</sup> On the other hand, emerging discourses using theories and methods from other disciplines tend to treat architecture as discursive or social space with its physical or aesthetic dimension largely ignored.<sup>5</sup>

To further an independence from art history, and to re-center architecture itself in historical analysis, I highlight three essential attributes of architecture which differentiate it from other types of aesthetic objects (such as painting and sculpture) and design products (such as cars and furniture), while asserting its situated materiality:

- (1) Architecture orders bodily activities and conditions human existence;
- (2) Architecture necessitates the integration of *techne*, technology, material, and labor in construction; and
- (3) Architecture is a collective expressive medium which is shaped by and contributes to the interaction between different social forces.

Based on the above propositions, I provide an upgraded version of the Vitruvian Triad, with the existential replacing *utilitatis* (utility), the constructive replacing *firmitatis* (stability), and the interactive replacing *venustatis* (beauty). I shall discuss each of the dimensions in turn in the following.

### **The Existential: Ordering and Reordering Human Existence through Architecture**

Architecture, like sculpture and painting, is a making of substance into art. Unlike the latter, however, architecture is a making into a massive object in whose voids humans act and live. As Lao Tzu wrote in his *Tao Teh King* 2,600 years ago:

Thirty spokes converge upon a single hub;  
It is on the hole in the center that the use of the car hinges.

We make a vessel from a lump of clay;  
It is the empty space within the vessel that makes it useful.

We make doors and windows for a room;  
But it is these empty spaces that make the room livable.

Thus while the tangible has advantages;  
It is the intangible that makes it useful.<sup>6</sup>

6. Lao Tzu, *Tao Teh Ching*, translated by J.C.H. Wu (New York: St. John University, 1961), chapter 11.

7. Heidegger, Martin (1962) *Being and Time*, New York: Harper & Row.

Architectural space is “worlded”: it is inscribed with meanings and norms of a society. Members of a certain community at a given time have shared social aspirations and systems of signification, which predetermine what sorts of architecture they invest in. Both the patron and the architect are embedded in this already-existing-network-of-relations in time – what Martin Heidegger calls “care.”<sup>7</sup> The desires of the patron and the innovations of the architect may appear idiosyncratic. Yet even when they stretch the rules, their resistance is necessarily informed by a collective understanding of human existence and the dilemmas of its time. Different societies may “world” their built environment differently, and that worldhood is nonessential and subjected to changes over time. Hagia Sophia in Istanbul, Turkey, for instance, has been re-worlded multiple times in history, from being a cathedral to a mosque and to a museum.

8. Pallasmaa, Juhani (2005) *The Eyes of the Skin*, London: Wiley.

Architectural space orders bodily activities and conditions the ways in which human subjects experience their existence through its very spatiality and systems of signification inscribed in it. It is differentiated into a series of zones following a spatial hierarchy and sequence, through which activities and experiences are to some extent pre-programmed. Certain activities are expected to take place at certain locations; to reach the latter one may need to go through a process of thresholding, proceeding, stopping, turning, and entering. Some zones are made more important, set in contrast to minor ones which both serve and prepare people for the former. Their form, size, height, light, shade, materiality, texture, decoration, tectonics, and the resulting overall atmosphere create varied sensual experiences and incite different aesthetic responses, suggesting what is valued and honored. This may involve more than one sensory modality, working on the body’s visual, olfactory, tactile, auditory, haptic, and proprioceptive systems.<sup>8</sup> One’s sentiments may continue to shift during the progression of movements. Through these mechanisms, buildings (e.g., a Gothic cathedral and a neoclassical town hall) are programmed differently not only to support distinct activities but also to enact different understandings of what humans are and should be.

Architecture is embedded in a system of tangible entities (surrounding buildings and neighborhoods, landscape, infrastructure, urban fabric, topography, ecology, etc.) and nontangible forces (cultural beliefs, aesthetic tastes, epistemologies, ideologies, political systems, policies, regulations, etc.). Buildings occupy different levels of symbolic weightiness in this system where things are classified according to relative importance or inclusiveness. In ancient China, for example,

many lived in courtyard houses whose layout embodied the hierarchical Confucian ethics. Scholars created gardens as a temporary escape from that world, following the Taoist philosophy of the man-nature relationship. Buddhist temples were often set away and high up in mountains, constituting heterotopias for worship, reflection, and transformation. By differentiating what were near and far, this spatial system conditioned the workings of different worldly forces, forming the unique existential constitution of the ancient Han Chinese.

9. Heidegger, *Being and Time*.

10. *Ibid.*

11. *Ibid.*, p. 155.

People habitually use space transparently, which Heidegger would categorize as "ready-to-hand."<sup>9</sup> In Division I of *Being and Time* Heidegger seeks to show that much of the human way of being can be described without recourse to deliberate, self-referential consciousness, but rather as mindless everyday coping in the background of a shared understanding of being.<sup>10</sup> He proposes that a human being must be understood "in what it does, uses, expects, avoids – in the environmentally ready-to-hand with which it is primarily concerned".<sup>11</sup> Being members of a certain society, we grow up in norms and practices inscribed in us. As a result, we deal with architectural elements often in an unreflective human way. While one is using a staircase, for example, one does not need to consciously think of the stairs in order to climb them; one's body naturally knows how to proceed.

12. Bourdieu, Pierre (1977) *Outline of a Theory of Practice*, Cambridge: Cambridge University Press.

13. *Ibid.*, pp. 133-53.

Here lies both the very danger and the very strength of architecture in terms of its place in politics. On the one hand, power relations often insinuated themselves in architectural space in such a way that social members take them as a natural matter-of-fact rather than a contestable human construct. Take Pierre Bourdieu's account of the Kabyle house in Algeria as an example.<sup>12</sup> The main door of the Kabyle house, to the east, is male while opposite is the smaller female entrance. The woman's loom is placed against this west wall. The attached stable, a dark place associated with sex, death and birth, is a female space, while the higher, lighter, living space is associated with the nobility and honor of the patrilineal head of the household.<sup>13</sup> Although the architectural space of the Kabyle house expresses and reinforces unequal gender roles, it is experienced by locals as a way of being-in-the-world rather than an institutionally enforced patriarchal system.

14. Jameson, Fredric (1997) "Is Space Political?" in Neil Leach (ed.) *Rethinking Architecture*, New York: Routledge, pp. 266-67. Cited from p. 262.

15. *Ibid.*

On the other hand, it is also the very materiality of architecture that enables certain socio-spatial innovations to consolidate their concreteness in space. The corridor is a case in point: the modern shape of our buildings came into being only as a consequence of the invention of the corridor in the seventeenth century.<sup>14</sup> Before this, "a person used to negotiate by passing through a rat's nest of other rooms and stepping over sleeping bodies".<sup>15</sup> The significance of such innovation not only lies in the modernist types of rooms it shaped, but lies in a set of new social relationships it helped generate, such as the notions of privacy and the nuclear family. Even a piece of bread demands a glance before we decide to eat it, whereas an architectural space can be lived in, be moved around in, and totally ignored all the time. It is through people's shared, unreflective way of using the newly introduced spatial element that architecture hardened the fluid moments of social innovations into durable apparatuses, where new subjectivity is formed and human activities are re-ordered without further contestation.

## The Constructive: *Techne*, Technology, Materials, and Labor

16. Porphyrrios, Demetri (2002) "From *Techne* to Tectonics," in Andrew Ballantyne (ed.) *What is Architecture?* London: Routledge, pp. 129–37.

17. Hartoonian, Gevork (1994) *Ontology of Construction: On Nihilism of Technology in Theories of Modern Architecture*, Cambridge: Cambridge University Press.

18. *Ibid.*

19. Frampton, Kenneth (1995) *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture*, Cambridge, MA: The MIT Press.

20. Semper, Gottfried ([1851]1989) *The Four Elements of Architecture and Other Writings*, tr. Harry F. Mallgrave, Cambridge: Cambridge University Press.  
Semper, Gottfried (2004) *Style in the Technical and Tectonic Arts, or, Practical Aesthetics*, tr. Harry Francis Mallgrave and Michael Robinson, Los Angeles: Getty Research Institute.

21. Frampton, Kenneth ([1990]1996) "Rappel à L'ordre, the Case for the Tectonic", republished in Kate Nesbitt (ed) *Theorizing a New Agenda for Architecture*, New York: Princeton Architecture Press. Cited from p. 521.

22. Leatherbarrow, David and Mohsen Mostafavi (2002) *Surface Architecture*, Cambridge, MA: The MIT Press; Brownell, Blaine (2011) *Matter in the Floating World*, New York: Princeton Architectural Press; Forty, Adrian (2012) *Concrete and Culture: A Material History*, London: Reaktion Books.

23. Zhai, Lilin (1955) "Lun jianzhu yishu yu mei ji minzu xingshi" [On the Art of Architecture, Beauty, and National Forms], *Jianzhu xuebao* [The Architectural Journal], no.1: 46–68.

24. *Ibid.*

*Techne* is defined here as intelligence and craft put into the practice of construction, which is the artistic side of technics. According to Demetri Porphyrrios, *techne* in Greek was used as a concept opposite to nature (*physis*), which formulated knowledge into specialized procedures and methods.<sup>16</sup> Their execution transforms raw material into products in such a way that the latter's appearance reveals the way in which they are made in contrast to natural things. Gevork Hartoonian traces the use of the term by Vitruvius and Palladio, stressing "the ontological bond between art and science."<sup>17</sup> From the end of the 17th century, he argues, due to the rise of the Cartesian logic and other tools that measured the natural world, people began to pay more attention to the inner structure of architecture beyond the outer appearance. As a result, *techne*, in its classical sense, was replaced by technology or technique.<sup>18</sup>

The renewed interest in *techne* was associated with the late-20th-century attempts to advance the art of architectural making by privileging tectonics over stereotomics in response to the scenographic approach of postmodernism.<sup>19</sup> The taxonomy can be traced to Gottfried Semper's writings, which distinguished the critical elements of architecture in terms of the tectonic, associated with lightweight framing components, and the stereotomic, as a form of earthwork construction with the stacking of heavy-weight units.<sup>20</sup> Relating to these are two technical skills of masonry and carpentry: while solid mass is piled up in the masonry system, carpentry represents a different constructional method with linear, lightweight elements connected through joints. While Semper conceptualized the tectonic to develop a new architectural reasoning to move beyond the stylistic focus of his time, the late 20th-century theorists sought to break with the postmodernist fever that occupied their contemporaries by forming new theories that stressed tectonic sensitivity and material integrity. Kenneth Frampton, for instance, identifies the dual quality in the *tectonic object* as being simultaneously ontological and representational, which differentiated it from the *technological object* that "arises directly out of meeting an instrumental need," and the *scenographic object* that "may be used equally to allude to an absent or hidden element."<sup>21</sup>

It is widely agreed that choices and treatments of building materials are essential in making and construction.<sup>22</sup> What I would like to stress here is the dynamic and sometimes incompatible relationship between building materials and *techne* in history. The transformation of pagodas in China is an interesting example. When pagodas were initially introduced from ancient India, the Chinese considered that the form did not fit their aesthetic taste, nor did it go well with their timber constructive system.<sup>23</sup> Gradually, timber pagodas in Chinese style were developed based on local aesthetic preferences and ways of building. After Six Dynasties (220–280), bricks were used for pagoda construction to prevent fire damage. The forms of brick pagodas, however, kept some features of the timber ones, and the formal incongruity continued for many generations before proper stereotomic forms were invented.<sup>24</sup> This example shows that changes in building materials and in *techne* do not always occur simultaneously. It may take many experiments to reach a suitable tectonic/technological solution; hybrid forms emerge during the transition from one material to another.

25. For example, Deamer, Peggy and Phillip G. Bernstein (eds) (2010) *Building (in) the Future: Recasting Labor in Architecture*, New York: Princeton Architectural Press; Arantes, Pedro Fiori (2019) *The Rent of Form: Architecture and Labor in the Digital Age*, trans. Adriana Kauffmann, Minneapolis: University of Minnesota Press; Deamer, Peggy (2020) *Architecture and Labor*, New York: Routledge; Stephenson, Judy Z. (2020) *Contracts and Pay Work in London Construction 1660–1785*, Cham: Springer.

26. Ruskin, John (1960) *The Stones of Venice*, New York: Da Capo.

27. Frampton, Kenneth (1987) "The Work of Tadao Ando", in Yukio Futagawa (ed.) *GA Architect: Tadao Ando*, Tokyo: A.D.A. Edita. Cited on p. 21.

28. For example, Kolarevic, Branko (ed.) (2003) *Architecture in the Digital Age: Design and Manufacturing*, New York: Taylor & Francis; Picon, Antoine (2010) *Digital Culture in Architecture*, Basel: Birkhäuser; Marble, Scott (2012) *Digital Workflows in Architecture: Design, Assembly, Industry*, Basel: Birkhäuser; Bañón, Carlos and Félix Raspall (2020) *3D Printing Architecture: Workflows, Applications, and Trends*, Singapore: Springer Singapore.

Labor is another important dimension of construction but remains under-studied until recent years. The effects of labor costs, labor availability, labor organization, and modes of workflow and collaboration upon architectural development are significant and sometimes decisive.<sup>25</sup> Despite the durability, strength, and visual attractiveness of natural stone, for example, stonemasonry was labor-intensive. As the Industrial Revolution disrupted the old labor system and new building materials arose, many handicraft workers lost their livelihood and the traditional craft of stonemasonry died out. Thus, when John Ruskin exalted the exquisiteness of sculptures in the stones of Venice to his 19th-century audience, he understood well that he seemed born to recommend what he could not obtain.<sup>26</sup> By the mid-20th century, while a less sterile built environment was demanded by the consumer society, the latter could no longer afford to ornament a building in ways matching the tastes of former times, due to the elevated salary of craftsmen. Irony and parody in architectural postmodernism, though usually considered a common symptom of the time, may be read as a grudging reaction to the dilemma. The resulting postmodernist architecture was, more often than not, kitschy, flat, and pseudo-historical. Signaling a deep dissatisfaction with this scenographic effect, the tectonic discourse in the 1990s introduced a new education of desire for craft-like detailing in architecture. The new Arabian Nights phantasm that tectonics theorists presented is no longer the one created by delicate stone reliefs bustling in the Venetian sun under Ruskin's pen. Instead, students of architecture are instilled with a new desire for "the effect of a mass dematerialized by light" in Tadao Ando's concrete, whose materiality is "denied by the apparent lightness of its slightly undulating tactile surface".<sup>27</sup> The craft of making and detailing often means more time investment from architects, turning the latter into contemporary craftsmen. Some delicate projects by Peter Zumthor, for example, took years of work.

The technological has replaced the tectonic to be the new focus of attention since the late 1990s. A range of developments in digital architecture have radically changed the relationship between designing and making: algorithmic design generates architectural outputs based on numeric inputs; digital fabrication links architects directly to manufacturing processes and provides them opportunities to engage with materials in new ways; artificial intelligence and machine learning facilitates the design process; and some labor-intensive tasks in construction are now the target of automation.<sup>28</sup> We are closer to the Bauhaus dream of unifying methods of mass production with artistic vision than ever before.

### **The Interactive: Aesthetic Character vs. Style, Assemblage vs. Movement**

A building is a collective expressive medium situated in place. Once constructed, it is subject to judgments from all walks of life; even a private house possesses a public face. While most people do not have specialized knowledge about styles and forms, like many other creatures on earth, they all have an innate capacity of forming their own aesthetic response. Good architecture has long been appreciated for the sensuous pleasure it incites; certain aesthetic characters are recognized as more agreeable than others by the general public at

a given time. Many Chinese, for example, dislike CCTV Headquarters in Beijing designed by OMA (2013), while almost all love the Canton Tower in Guangzhou by IBA in collaboration with Arup (2010). The former is dubbed “Large Boxer Shorts” (*da kucha*) and the latter “The Slender Waist of a Dancing Beauty” (*xiaoman yao*). It is widely agreed among anthropologists that naming is a key method people use to sort their experience into a system of categorization. While CCTV Headquarters was conceived by designers as a closed loop, the lower horizontal section, however, is often missing from street views, making the building look like an enlarged version of Tony Smith’s sculpture “For Marjorie” (1961). The mighty composition of elementary forms following early modernist creeds also reminds one of the work of Russian Constructivists. Despite acclaims received from architectural critics, the building’s nick name “Large Boxer Shorts” summarized the feelings of the general public in their encounter with it: working-class manliness in its resemblance to men’s shorts, absurdity due to lack of a credible structural logic, and repressiveness for being giant and heavy – a set of negative traits of the past era that should be shaken off today. In contrast, the naming “The Slender Waist of a Dancing Beauty” communicates the aesthetic character that common people experience in the Canton Town: delicacy in its concave curvaceous silhouette, dynamism in its twist form, and elegance in its deftly textured structure. These perceived attributes reflect new societal desires for playfulness, innovation, and classiness in the digital age. This explains why Zaha Hadid was favored for key public projects in China in the past decade. The choice was less about individual virtuosity; it had more to do with organic dynamism featured in her later work, the aesthetic character considered best epitomizing the desirable attributes of contemporary cities. As such, her death has not changed the tendency of the continuous proliferation of similar products in China, provided by Zaha Hadid Architects, MAD, and other firms.

29. Hume, David (1896) *A Treatise of Human Nature*, Oxford: Clarendon, p. 586.

By using this example I would like to highlight the importance of aesthetic character in historical explanations, defined here as the disposition of architecture as it is perceived. Following David Hume,<sup>29</sup> I consider the attributes of being beautiful and ugly not inherent in objects themselves, but rather the feeling incited by the latter in a human subject. An aesthetic response is formed when one sees the character of an architectural object as a whole while comprehending the detailed treatments of its parts simultaneously. Societal consensus may be formed when people interact and share their architectural feelings. Although specific stylistic details, visual proportions, and physical properties are important for architects’ manoeuvre, what matters more for society is this collective discretion. As the existential constitution shifts, desirable characters may change radically; the same architectural object may no longer be aesthetically appealing to the general public or to certain social groups. It is architects’ responsibility to discern such changes and needs of different social groups, and to develop new formal and spatial repertoires accordingly. Only forms which match the societal aspirations of the time will be widely adopted; similar forms may reappear again and again under favorable circumstances. To develop accurate historical explanations on why certain choices were favored or unfavored in history, I argue, it is important to go beyond mere referential materiality to examine how architectural forms were perceived at the time.

The concept of aesthetic character stresses social members' interaction with architectural objects. In contrast, the notion of style addresses constant physical elements and ways of expression in architectural objects of a particular historical period, region, or individual architect. While the usefulness of style in categorization is not to be denied, stylistic details themselves do not explain the changes from one style to another. With its focus on style, mainstream architectural history often reads like an incomplete post-mortem report of the dead bodies of styles, depicting a linear progression of stylistic developments without including an adequate analysis regarding the cause of their death.

30. Boyer, M. Christine (1996) *CyberCities: Visual Perception in the Age of Electronic Communication*, New York: Princeton Architectural Press, p. 33.

31. Macarthur, John and Naomi Stead (2012) "Introduction: Architecture and Aesthetics", in Greg Crysler, Stephen Cairns and Hilde Heynen (eds) *The Sage Handbook of Architectural Theory*, London: Sage, 123-35. Cited from p. 125.

32. *Ibid.*, p. 129.

33. For example, Kusno, Abidin (2000) *Behind the Postcolonial: Architecture, Urban Space, and Political Cultures in Indonesia*, London: Routledge; Bozdogan, Sibel (2001) *Modernism and National Building: Turkish Architectural Culture in the Early Republic*, Seattle: University of Washington Press; Prakash, Vikramaditya (2002) *Chandigarh's Le Corbusier: The Struggle for Modernity in Postcolonial India*, Seattle: University of Washington Press; Rowe, Peter G. and Seng Kuan (2002) *Architectural Encounters with Essence and Form in Modern China*, Cambridge, Massachusetts: MIT Press; Crinson, Mark (2003) *Modern Architecture and the End of Empire*, London: Ashgate; Noobanjong, Koompong (2003) *Power, Identity, and the Rise of Modern Architecture: From Siam to Thailand*, Florida: Universal Publishers; Andreoli, Elisabetta and Adrian Forty (eds) (2004) *Brazil's Modern Architecture*, London: Phaidon; Lu, Duanfang (ed.) (2010) *Third World Modernism: Architecture, Development and Identity*, London: Routledge; Isenstadt, Sandy and Kishwar Rizvi (2008) *Modern Architecture and the Middle East: Architecture and Politics in the Twentieth Century*, Seattle: University of Washington Press; Karim, Farhan (2019) *Modernism of Austerity: Designing an Ideal Home for the Poor*, Pittsburgh: University of Pittsburgh Press.

34. For example, Deleuze, Gilles and Felix Guattari (1987) *A Thousand Plateaus: Capitalism and Schizophrenia*, Minneapolis: University of Minnesota Press; DeLanda, Manuel (2006) *A New Philosophy of Society: Assemblage Theory and Social Complexity*, London: Continuum; Healey, Patsy (2006) *Urban Complexity and Spatial Strategies: Towards a Relational Planning for Our Times*, London: Routledge; McFarlane, Colin (2011) *Learning the City*, Chichester: John Wiley & Sons.

Architecture communicates not only through its very physicality, but also through its ability to generate discourses. A major piece of architectural work can give rise to a vigorous discussion around itself, causing discourses to be distributed, consumed, and transformed: "with weekly if not daily coverage in the printed media, documentary films on television, and a consistent presence as background in advertisements for style-of-life consumer items".<sup>30</sup> It is through this participation in discursive processes that architecture is shaped by and contributes to the interaction between different social forces, through which its collective value is achieved. Notably, following modern art, stories of modern architecture have often been told in the form of movement, in which a small number of avant-gardists articulate a new legitimacy while denigrating the existing. Unlike style, the concept of the movement focuses on the role of avant-gardists as thought leaders in boundaries-pushing changes. It stresses the discursive, critical, and intellectual dimension of architectural development, hence the naming of movements often uses the -ism suffix. The transition from style to movement in architectural historiography signals the attempt to go beyond the aesthetic and champion the "space of critical potential", highlighting the agency and autonomy of architects.<sup>31</sup> This is aligned with the approach to modern art, where "an interest in beauty and pleasure was understood as anti-intellectual, and aesthetics as the attempt by reactionaries to normalize an uncritical account of art".<sup>32</sup>

The development of modern architecture has been portrayed as a progression of movements from modernism, postmodernism, to deconstructivism in mainstream architectural history. The concept of the movement, however, is inadequate to capture the complexity, fluidity, and multiplicity of global architectural development. In the past few decades, for example, a new generation of architectural historians have shown how modern architecture was developed, interpreted, transformed, and contested in different cultural, national, regional and local contexts.<sup>33</sup> These processes involve the interaction between diverse social forces whose mechanisms are far more complicated than what the style or the movement paradigm could capture. In response to the analytic dilemma, I consider that an alternative conceptualization based on assemblage theory can help provide a more accurate mapping of the ontological nature of architectural development. The concept of assemblage has emerged in connection with a series of new concepts addressing the problems of instability, complexity, and indeterminacy in both natural and social phenomena.<sup>34</sup> Many of them originated from developments in natural sciences and mathematics: emergence and becoming in ontogeny and phylogeny, adaptation and

35. Prigogine, Ilya and Isabelle Stengers (1984) *Order out of Chaos*. New York: Bantam Books; DeLanda, Manuel (2002) *Intensive Science and Virtual Philosophy*. London: Continuum; Venn, Couze (2006) "A Note on Assemblage," *Theory, Culture and Society* 23 (2–3): 107–8.

36. Gilles and Felix Guattari (1987) *A Thousand Plateaus: Capitalism and Schizophrenia*, Minneapolis: University of Minnesota Press.

37. Venn, Couze (2006) "A Note on Assemblage," *Theory, Culture and Society* 23 (2–3): 107–8.

38. Anderson, Benedict (1983) *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, London: Verso.

autopoiesis in biology, and chaos and complexity in mathematics, to name just a few.<sup>35</sup> In humanities and social sciences, the discussion of assemblage is often associated with the work of Gilles Deleuze and Félix Guattari, in particular their book *A Thousand Plateaus*.<sup>36</sup> In comparison with the notion of structure which grounds causal determination within a singular logic, as in the work of modernist thinkers such as Karl Marx, Max Weber, and Émile Durkheim, assemblage offers an alternative approach by stressing the multiplicity of determinations and the relational, nonlinear, and contingent character of the inter-relationships between heterogeneous elements.<sup>37</sup>

Despite wide discussion in various disciplines, the properties of the concept of assemblage remain suggestive and its applications experimental. Instead of going deep into these debates, for the purpose of discussion here, I shall briefly illustrate my conceptualization of the differences between movement and assemblage by drawing some parallels with anthropologist Benedict Anderson's comparison of two textual genres essential for the making of national subjectivity: the novel and the newspaper.<sup>38</sup> The novel has a consistent plot, through which characters are linked and recognized by the omniscient reader as existing in the same construed world. Contrastingly, Anderson suggests, without a linear plot, newspaper links disparate events together purely due to their coincidence on a given calendar date; it is the experience of reading the identical day-by-day clocked history that connects anonymous people together. Like in a novel, narratives on an architectural movement follow a coherent storyline with identifiable composition of characters, in which the avant-garde are given a prominent role. Inhabiting in different national spaces, avant-gardists may not agree with each other, but they are nonetheless described as actors contributing to the rise of a new paradigm. In contrast, like newspaper, assemblage does not assume a consistent plot; it stresses the contingent co-presence of heterogeneous elements in a temporarily fixed configuration.

Based on the concept of assemblage, I propose a methodological approach to architectural historiography that further moves away from its singular, linear, teleological, reductionist, Eurocentric, racialized, ethnicized, gendered, and heteronormative grounds that have been contested by new generations of scholarship in recent decades, but nonetheless remains dominant in mainstream historical texts adopted in architectural history survey courses. This approach has a few analytic characteristics. First, it goes beyond the epistemological grid of mainstream architectural historiography centering on the linear developments of styles and movements by exploring a multiplicity of determinations involved in architectural development. These may include, but are not limited to: power, desire, subject making, history making, design talents, artistic tastes, local traditions, religious orders, political ideologies, economy, trade, finance, cultural exchange, knowledge transfer, wars, building methods, technological advancements, intellectual development, everyday practice, colonialism, race, ethnicity, class, gender, and sexuality. Second, the proposed approach highlights *fluidity* in the ongoing stabilizing and destabilizing of architectural forms, discourses, and practices as contingent, unpredictable, and open-ended processes. With disparate social forces at work, there is no certainty of their next movement; instead,

the temporary fixings may continually dissolve and mutate into something else. Third, this approach also stresses the entanglement of heterogeneous endogenous and external elements in architectural actualizations. Some elements might play a more prominent role than others at a given time, new ones might emerge, and existing ones might disappear and reappear over time. When elements from other positions/locations are brought in and tangled with existing ones through complex material and discursive processes, the configuration may be radically changed, leading to the emergence of new social formations.

# ULTRA

## **Positions and Polarities Beyond Crisis**

**SESSION 5: *Design, Education, Practice and Theory***

# Untimely Meditations: Decomposition and Timelessness in Select Writings of Peter Eisenman

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## Keywords

Architecture  
Decomposition  
History  
Temperament  
Time  
Peter Eisenman

## Abstract

This paper investigates one aspect in the work of architect, educator and theorist Peter Eisenman (b 1932) through the filter of select writings from the mid 1980s. It does this by examining two texts published in 1984, a period characterised as one of rupture if not emphatically in crisis. The writings considered are "The Futility of Objects: Decomposition and the Processes of Difference" and "The End of the Classical: the End of the Beginning, the End of the End". Secondary authors referenced include Robin Evans, Kenneth Frampton and Raphael Moneo. The paper conjectures that certain approaches such as Eisenman's to materials and phenomena from architecture's past can open new conditions of possibility for architecture today. A number of questions are asked: By what means and in what forms are Eisenman's thinking about architecture in a moment of crisis revealed in these essays? Which architectural qualities and form generation devices does Eisenman discern in the past? How might the processes for interrogating architecture's past as displayed in the two essays inform an approach to architecture today? The paper adds to scholarship on Eisenman, examining a little studied facet of his work in a period marked by swerves in his thinking. In a conference that seeks to identify a spectrum of disciplinary positions, the paper contributes to discussions around conference thematic sub-stream Design Practice and Education in its consideration of one stance vis-à-vis architecture's past.

## Introduction

1. The conference call for papers suggests a number of possible areas marked by crisis today. These include a 'loss of a distinctive regional architecture or construction tradition' and the failure of 'once dominant narratives ... to sustain belief or explanatory power'. Equally provocative is the suggested need for the architect historian to adopt a stance in front of the object of study that critically considers the limits and biases of acts such as commemoration as well as celebration, not to forget if not specifically called out, eulogisation. "Ultra: Positions and Polarities beyond Crisis. Call for Papers," Society of Architectural Historians Australia New Zealand, accessed: 24-12-2020, <https://www.sahanz2021.com/cfp>.

2. Kenneth Frampton, "Formation and Transformation," in *De Stijl: 1917-1931, Visions of Utopia*, ed. Mildred Friedman (Oxford: Phaidon, 1982), 99-123, 120. *Cambridge Dictionary* provides the following definition for deliquescence: *noun*. 1 the process of becoming liquid as a result of absorbing moisture from the air; 2 The process of melting or turning liquid. Accessed 02-07-2021, <https://dictionary.cambridge.org/dictionary/english/deliquescence>.

3. Frampton cites at length an essay of Eisenman's from 1980 and refers to the contemporaneous House X1a in support of his assessments. Frampton references the following essay: Peter Eisenman, "Sandboxes: House X1a," *A+U (Architecture and Urbanism): Special Issue Peter Eisenman 112* (January 1980): 223-227. In this essay, see in particular Eisenman's statement suggesting that it is no longer possible to return to a belief in any 'original totality' or 'unity'. Rather the present age is for Eisenman one of partial fragments, that is fragments that have no trace or hope an original whole (Eisenman, "Sandboxes," 223). The idea of partial objects continues to accompany Eisenman for the next twenty years, finding one manifestation around the question of the partial figure.

4. Frampton, "Formation and Transformation," 123.

In an essay published in 1982, Kenneth Frampton transcribes a sentiment not only in the air but also revealed in architecture schools and in work on the boards in offices at the time. This is a period that describes itself as in crisis or at best outside the comforts of disciplinary and professional stabilities. Accepting that conceit, one can hypothesise that an investigation into work from the period may provide some sign posts and lessons for moving beyond the crises that have accompanied or at minimum provoked certain ambitions behind this conference.<sup>1</sup>

Ruminating on what he characterises as a lost or vitiated vitality, Frampton arrives at a turn of phrase resonate at this distance of some forty years, a brooding reflection that captures a mood of disenchantment with modern architecture's ability to deliver on the goods. To deliver, that is, on its social and technological premises, themselves gathered about ideas and devices that convention - according to one trajectory -, locates in the wake of movements such as avant-gardism, neoplasticism, and rationalism. Other trends or temperaments that preoccupied architecture culture and which Frampton will address more directly a year or so later fall loosely in postmodernist and deconstructivist camps.

In developing his argument, Frampton turns to the work of Peter Eisenman as providing a singular response to this state of affairs, discerning in the latter's period projects and writing a stance that is able to resist - at the level of the building as well as at the level of city ideas therein revealed -, or at minimum repel the pull of a decomposing modernity. A modernity, for a despondent Frampton, that is literally becoming limp and eventually turning liquid. Frampton writes of double lines accompanying Eisenman's work. Not at all theoretical, for Frampton what stands out is Eisenman's ability to simultaneously repel 'to an equal degree, the deliquescence of a vulgar modernity and [at the same time] the recurrent, naïve nostalgia'<sup>2</sup> for a supposed ideal future.

To state differently Frampton's suggestion, Eisenman's project is distinctive in its capacity to deny stable architectures in favour of those that demand multiple readings. And at the same time for Frampton, Eisenman's work favours an equally ambiguous urban realm, without claiming that Eisenman has an idea of the city per se. Eisenman allows, that is, for the possibility of an urban scale proposition never achieving let alone even wanting to imagine the possibility of, an urban totality. Specifically referencing Eisenman's contemporary projects and writing at this key point of his argument,<sup>3</sup> Frampton finds therein 'a kind of perpetual "emancipation of dissonance" executed within the fissures of history.'<sup>4</sup> This emancipation, this freedom found in instabilities and positive ambiguities will a few years later see Frampton sidling up to and siding with Eisenman's call for what the latter characterises as a not-classical architecture.

The temperament discerned by Frampton can serve as a preface to the following reflections. With Frampton, whom one senses is particularly close to those fading lines of early 20th century avant-gardism, there is a feeling of being betrayed and in crisis, already unmoored and awash, abandoned to the dangers opened up in the gapping ground rent by a

history no longer linear, and with no hope of retreat or recovery. Perhaps to counter this state, Frampton appeals to Eisenman as a contemporary witness, one uniquely placed to take up a different stance, and perhaps – returning to an underlying conjecture in this paper – provide elements of a response to certain perceived crises in architecture.

5. Peter Eisenman, "The Futility of Objects: Decomposition and the Processes of Difference," *Harvard Architecture Review* 3 (Winter 1984), 64-81. The essay is reprised in Peter Eisenman, *Inside Out Selected Writings 1964-1988* (New Haven: Yale University Press, 2004), 169-187.

6. Peter Eisenman, "The End of the Classical: The End of the Beginning, the End of the End," *Perspecta. The Yale Architectural Journal* 21 (1984), 154-173. The essay is reprinted in a slightly different format and without the original illustrations in Peter Eisenman, *Inside Out Selected Writings 1964-1988* (New Haven: Yale University Press, 2004), 152-168.

7. It can be argued that Eisenman uses the phrase 'the act of architecture' to signal a whole program of activity including a critical re-reading of the past, and an engagement with the ruptures that come with the different 'sensibility' announced in "The Futility of Objects" (Eisenman, 65): the realization around 1945 of the 'potential extinction of the entire civilisation' which shatters for Eisenman 'the classical and triadic condition of past, present, and future time (Eisenman, "The Futility of Objects," 65-66).

8. Eisenman, "The Futility of Objects," see page 81, note 8 for a discussion of a rupture in sensibility that has occurred relative to the presumed continuity embracing classicism and modernism from the sixteenth to the twentieth century.

9. Eisenman, "The Futility of Objects," 67.

10. Frampton, "Formation and Transformation," 123.

Taking Frampton at his word, let us examine two contemporary essays by Eisenman and see what if any evidence there is of this stancer. Both published in 1984, the essays are "The Futility of Objects: Decomposition and the Processes of Difference"<sup>5</sup> and "The End of the Classical: the End of the Beginning, the End of the End"<sup>6</sup>.

While different points of view could be adopted, for the purposes of this paper two hypotheses can organise the analysis. First hypothesis: that there are elements in the two essays that support Frampton's claim to see at play in Eisenman an architectural stance that effectively and perpetually resists the crutch of beginnings and ends, of a logic of a before and an after as symptoms of that vulgar modernity. As we'll see, Eisenman acknowledges the difficulty of maintaining such a stance, referring to the tidal pull of ruptures in his own thinking and work and for the discipline more generally. Second hypothesis: that this stance is predicated on a certain relationship to the past.

In order to approach these hypotheses, the following questions provide a further lens for the analysis: By what means and in what forms are Eisenman's thinking about architecture's past rendered in these essays? How might such processes for interrogating works from architecture's past and that of history specifically, and adoption of a position of what will be characterised as one of perpetual resistance, contribute to how one might think about the act of architecture today?<sup>7</sup> Are there lessons found in a close reading of these two essays that may contribute to better positioning the teaching and thinking of architecture when again in a state of crisis?

For Eisenman in these years, if one can claim a state of crisis, it is one marked by ruptures: ruptures that Eisenman links to history and changing sensibilities.<sup>8</sup> History, he asserts, is no longer continuous. In other words, writes Eisenman, 'the objects and processes of the classical/modern continuity are no longer sustained by the present sensibility.'<sup>9</sup> The fiction of stable histories is disrupted and architecture is thus asked to seek out techniques appropriate to that condition: formal-spatial devices, and stances that embrace the conditions of possibility opened in those self-same ruptures. Such acts connote a condition of impossible return, as much for what they demarcate as to what they 'invent' to use Eisenman's term: to invent a space for architecture when confronted with the end of history. This includes hypothesising architecture as a system of differences - this is architecture as text -, distinct from architecture as image.

Different from a position that springs from a logic of moving beyond, and thus of beginnings and ends, Eisenman offers a counter practice outside of or different from such a beginnings and ends-dependent position. This is to adopt a state of perpetual freedom characterised by what Frampton describes, as noted earlier, an 'emancipation [generated out] of dissonance.'<sup>10</sup> This is a kind of freedom from those biases that

11. Peter Eisenman, "End of the Classical," 169.

Eisenman claims create limits in the classical/modernist sensibility, limits that rely on a fiction of a time beyond, and of a system of differences dependent on a logic of linear time that progresses or regresses relative to ends or beginnings. By way of difference, Eisenman advocates for a logic situated in what he called a 'time beyond history'.<sup>11</sup>

Before starting to unpack the two essays, it is worth a further note on what this paper is not doing. The paper is not taking the analysis to works built or projected by Eisenman in any material way. Nor is it contextualising in any depth Eisenman's position in relation to key protagonists such as Colin Rowe. Both moves, while important and relevant, are outside the scope of the present effort.

### **Decomposition. Or Techniques of Form Finding**

12. Eisenman, "The Futility of Objects," 70.

"The Futility of Objects", published in *Harvard Architecture Review*, is cast in the shadows of a period of crisis, or to use Eisenman's term as noted above, of rupture.<sup>12</sup> What is at work behind or underneath the formulation of decomposition and the launch of a polemic toward a not-classical/not-modern architecture? What characterises such an architecture and what might that say about Eisenman's attitude toward history?

13. Raphael Moneo, *Theoretical Anxiety and Design Strategies in the Work of Eight Contemporary Architects*, trans. Gina Carino (Cambridge, Mass.: The MIT Press, 2004), 174.

Raphael Moneo, in addition to the challenge of elaborating on Frampton's claims, provides another motivation to reading "The Futility of Objects" today. Moneo saw at the time in Eisenman's text an 'ambitious, brilliant, attractive program'.<sup>13</sup> The comments are made in Moneo's chapter on Eisenman in the former's *Theoretical Anxiety* and specifically concern the notion of decomposition.

14. Eisenman, "Futility of Objects," 67.

15. Eisenman, "Futility of Objects," 67.

Decomposition, according to Eisenman, sets out, or is offered as a mode of reading the past that opens the conditions of possibility for new relationships of objects and processes more congruent with 'the present ... sensibility'.<sup>14</sup> Eisenman describes the key aim of the essay as 'an attempt to sketch certain aspects of the negative of classical composition by deconstructing a series of buildings which are used as heuristic approximations of [the current] sensibility'.<sup>15</sup> This in turn leads Eisenman to propose architectural categories that he associates with the not-classical, and describe and provide examples of architectures that manifest this or that category. The categories are the pre-compositional, the composite, and the extra-compositional. Within the limits of this paper, I will focus on this latter category, which occupies along with a set of diagrammatic analyses the key parts of Eisenman's essay.

The extra-compositional is distinguished for Eisenman by a number of qualities. These include the following six qualities or aspects that together can be claimed to contribute to bracketing techniques of what Moneo saw as decomposition's ambitious program. (a.) There is no recourse to an originating type (see Eisenman's reading of the plans of Palazzo Surian and Fabbrica Fino); (b.) There is no stable hierarchy of formal-spatial relationships (see again his analysis of Palazzo Surian); (c.) There is no logic of fragments that might imply an ideal but absent whole or an originary 'completeness', rather there is a condition

16. Eisenman, "Futility of Objects," 70.

17. Eisenman, "Futility of Objects," 71-72.

18. Eisenman, "Futility of Objects," 73.

19. Eisenman, "Futility of Objects," 74. See also: *Blurred Zones: Investigations of the Interstitial. Eisenman Architects, 1988-1998* (New York: Monacelli Press, 2003).

of partial fragments<sup>16</sup>; (d.) This not-classical order encourages the simply sequential (one after the other) or successional conditions that suspend or resist progressive time (see Eisenman's analysis of the plan of Scamozzi's *Fabrica Fino* compared to Palladio's plan for *Palazzo della Torre*)<sup>17</sup>; (e.) Certain architectural works are multivalent, creating fluctuations in reading of implied and actual volume such that no single reading dominates (see for example Eisenman's reading of the north façade of Giuseppe Terragni's *Giuliani Figerio Apartment Block* and variances between planar and volumetric qualities;<sup>18</sup> (f.) There are other qualities described by Eisenman, ones whose interpretation cannot be reconciled by recourse to stable polarities such as symmetry/asymmetry or plane/volume. These qualities are distinguished by an oscillation native to the work, ones that Eisenman will later in his career refer to as states of blurring.<sup>19</sup>

20. Peter Eisenman, "Preface," in *Palladio Virtuel*, eds. Peter Eisenman with Matt Roman (New Haven: Yale University Press, 2015). Accessed 02-07-2021, <https://eisenmanarchitects.com/Palladio-Virtuel>.

The ambition throughout the essay, to take up a more recent phrase by Eisenman and propose a provisional shorthand, is to 'reawaken history'.<sup>20</sup> It is to reawaken architecture's past with the intent specifically not to arrive at any stable interpretation but instead to accompany what he calls the act of architecture as one of perpetual resistance to temptations of hierarchy, centrality, and closure, all with an aim to introduce instability, multivalence, and openness.

### **Timeless, Objectless, Arbitrary: Conditions of a Not-Classical Architecture**

In the same year as "The Futility of Objects" appears, Eisenman publishes "The End of the Classical" in *Perspecta. The Yale Architectural Journal*. The title of the essay says it all: or does it? The sub-title does tell a bit more: "the End of the Beginning, the End of the End". The resistance to what Eisenman at the time calls centrism preoccupies him in these years and this essay works through a group of centrism or fictions.

21. Eisenman, "End of the Classical," 156, n. 5.

In a similar manner but different from "The Futility of Objects" essay, "The End of the Classical" also starts off with remarks about the problem of continuity, another sign of the predicament at hand. Eisenman suggests that there are three continuities that together demarcate the state of what he calls 'the classical' and that a specific stance to each other in relation to thinking architecture differently needs to be adopted. By the classical, he refers to an abstract system of relations in place since the sixteenth century and demarcated by three continuities or fictions. According to Eisenman, the three fictions are representation, reason, and history. He further characterises the classical as that which is distinguished by several conditions, including a logic of origins, of ends, and 'the process of composition'.<sup>21</sup>

22. Eisenman, "End of the Classical," 155.

Eisenman then goes on to refer to the qualities that might distinguish a 'not-classical' architecture. The dialectic being staged calls for a temperament different from a succession of styles such as 'classicism, neoclassicism, romanticism, modernism, postmodernism'<sup>22</sup>. An underlying proposition is that beyond stylistic differences, one is better off thinking about architectural culture as 'a system of relations' that are beyond style.

23. Eisenman, "End of the Classical," 170.

24. Eisenman, "End of the Classical," 171.

25. Eisenman, "End of the Classical," 171, n. 22.

26. Eisenman, "End of the Classical," 168-169, n. 19.

Key aspects of a not-classical architecture include the following: (a.) Modification replaces composition and transformation<sup>23</sup>; (b.) Invention of a 'non-dialectical, non-directional, non-goal oriented process' such that architectural form is imagined such that it is not 'a strictly practical device' but by some means is itself a 'a "place of invention"; (c.) The architect-historian is positioned to read the architectural object as text.<sup>24</sup> Eisenman in this essay, in other words, proposes to conceptualise as well as set out markers for work on 'the act of architecture' per se. Within the act of architecture, he continues, 'Architecture becomes text rather than object when it is conceived and presented as a system of differences rather than as an image or a dialectical presence.'<sup>25</sup>; (d.) Finally, Eisenman claims the purpose of the essay includes to transpose a number of ideas – graft, motivation, decomposition – 'from a purely analytic framework to a program for work'.<sup>26</sup>

27. Eisenman, "End of the Classical," 172.

Eisenman concludes by suggesting that the architect's aim is to invent the conditions for a perpetual present, one without obligation or burden toward either an 'idealised past' nor one maintaining endless naïve hope in a never-to-arrive future. In this, Eisenman falls into Frampton's positive trap of resisting repeating what the latter identified as that naïve nostalgia discussed earlier. In their place, Eisenman's project aims to open what he characterises as 'an *other* "timeless" space of invention'.<sup>27</sup> The space of invention to be opened is one that contains a relation to certain past architectures. Needing to find forms and spaces, however, calls up the problem of design technique. In an essay discussed below, Eisenman will suggest a not-classical architecture as one that no longer manifests history, reason, or the present/the contemporary and rather may appropriately be described as an 'architecture as *is*'. I will return to this below.

28. Eisenman, "End of the Classical," 163.

29. Eisenman, "End of the Classical," 163, emphasis in the original.

From a certain point of view, then, Eisenman's position, radically opposed to 'the ideology of the zeitgeist'<sup>28</sup> adds a terrible burden on the architect that is also a terrible freedom: the luxury of believing one released from the past as well as a future time. For Eisenman, the classical/moderns were '*trapped in the illusion of the eternity of their own time*'.<sup>29</sup>

Eisenman's attitude, whether leading or following Frampton, is exactly one of resistance to the 'illusion' of being trapped in one's own time thus the essay can also be claimed to perform ultimately a kind of work on 'the ideology of the zeitgeist'.

## Concluding Remarks

Let us return to the opening hypotheses, and this idea of taking a position, and see what if any approximate findings can be made. To the first hypothesis that Eisenman provides a point of resistance to the crutch of history and to beginnings and ends: there does appear evidence of a practice of resistance in how Eisenman situates his thinking about the architect's position relative to the classical/modern trajectory. This occurs in relation to, for example, a logic of the new and of the contemporary. He intentionally, even provocatively, claims to abandon any pretext or pretence of a new and the continuity that would imply.

To the second hypothesis, and the claim that such a stance is made always already in relation to architecture's past: further elaboration is required to more critically consider the use of materials from architecture's past as heuristic devices. Aren't they simply providing theoretical support to his built and projected work? So additional research to tease out and further open these provisional considerations to an expanded field is required. Such additional research would include following a number of lines of inquiry. Three lines stand out and concern relationships to Eisenman's teaching, to period work of his office, and to Aldo Rossi.

30. A selection of student work, opening remarks by Henry Cobb, then Chair of Architecture, Graduate School of Design at the time of Eisenman's appointment, and essays by those who assisted Eisenman in delivery of the studios was published in 1986 as *Investigations in Architecture: Eisenman Studios at the GSD*, ed. Jonathan Jova Marvel (Cambridge, Mass.: Harvard University Graduate School of Design, 1986).

31. Eisenman, "The End of the Classical," 172.

32. Robin Evans, "Not to be Used for Wrapping Purposes," *AA Files* 10 (Autumn 1985), 68-78, 74.

Relationship to teaching: While Eisenman is writing and publishing the "Decomposition" article, he is in the middle of a three-year visiting professorship at Harvard's Graduate School of Design (1983-1985).<sup>30</sup> Some student work arising out of period studios are the object of a public exhibition and included in a monograph. Is there evidence of the preoccupations discussed above in the teaching materials and student work?

Relationship to the office: While the two essays that have been the target of reflections are under development and eventual publication, a number of projects are in parallel underway in the office. These include Wexner Center for the Visual Arts and Fine Arts Library (Columbus, 1983-1989), Fin d'Ou T Hou S (1983), Romeo and Juliet (1984-1985), University Art Museum (Long Beach, 1985), Tokyo Opera House (Tokyo, 1985-1986), and Progressive Corporation Office Building (Cleveland, 1986). Is there evidence of Eisenman's conceptual preoccupations on display in period projects, completed variously by Eisenman/Robertson or Eisenman Architects? To get it started, two projects could be examined to see if there is any relation – complimentary, antagonistic, neutral - to the preoccupations discussed above. Tokyo Opera House and Fin D'Ou T Hou S in their claimed resistance to stabilities might lead this inquiry: the former via its deployment of scaling and tracing as form-space generation techniques; the latter via vew elaborations of the cube/not cube investigations. A number of factors might inform such a review: (a.) a consideration of his use of partial figures; (b.) the emphatic or unapologetic embrace of discontinuities (is that what he was thinking in "The End of the Classical" essay by the term 'arbitrary'<sup>31</sup>? (c.) Robin Evans in a contemporary essay provides another clue to what it all might mean. In his investigation of Fin d'Ou T Hou S, Evans believes he finds evidence that Eisenman has insinuated ideas of movement 'into the speechless immobility of the object ... [and that such ideas of movement] give it an unworldly animation that takes the place of the meaning he [Eisenman] made such efforts to evict all those years ago.'<sup>32</sup> The suggestion that animation supplants meaning is only one of several ideas worth tracking here.

33. Peter Eisenman, "Editor's Introduction. The Houses of Memory: The Texts of Analogue," in Aldo Rossi, *The Architecture of the City* (Cambridge, Mass.: The MIT Press, 1982), 2-11.

Relationship to Aldo Rossi: Evidence both circumstantial and direct suggest it is appropriate to explore Eisenman's relation to Rossi to further understand what is at stake. In these same years, for example, Eisenman publishes his Editor's Introduction to the English language version of Rossi's, *The Architecture of the City*. Under the title "The Houses of Memory: The Text of Analogue", Eisenman's essay is at least on the surface worth a close reading it its own right.<sup>33</sup> Topics fall more or less on the side of the autobiographical, of temperament and

sensibility, and of the architect-historian's stance. What is the nature of the influence and/or impact of Rossi on Eisenman at this moment of swerves in his office and his teaching? Is there any?

34. The Alberta Association of Architects has hosted since 1956 a conference called the Banff Session. In the mid 1980s, Banff Session '84 included presentations by Bofill, Eisenman, Frampton and Jones and a portion of discussions was published as "The Transcripts," *Section a* (September 1984), 20-26, 21.

To wrap this up, let's consider another episode in that eventful year. It's still 1984 and Ricardo Bofill, Peter Eisenman, Kenneth Frampton, and Edward Jones are brought together at a conference in Canada. The conference is Banff Session '84, a meeting that itself sought to confront different positions to see what might be created. In addition to separate presentations, an abbreviated transcript of discussions between the four along with audience comments is published as "The Transcripts". Echoing sentiments Frampton already made in 1982 referenced at the opening of this paper, in "The Transcripts" Frampton refers to the time as 'a dark period' with specific reference to the shadows cast in the prospect of nuclear conflict. Describing his own mood as 'pessimistic', Frampton states that what he thinks is needed in such a context 'is to create sensibility and strong nerves [in order] to continue with the possibility of cultivating the species [referring here to the profession of architecture] under very adverse conditions.'<sup>34</sup>

35. "The Transcripts," 22.

Frampton goes on to articulate a difference which might be useful for providing another point of clarification to close off these meditations. Discussing the 'Ohio State building' – Eisenman's office has recently been announced as the 1983 competition winners for what will become the Wexner Center -, Frampton states: 'I often feel that one of the differences that divides Peter and myself is the degree to which I am concerned or I have become more concerned with the capacity of certain architects to build in a significant way, whereas Peter is more concerned with the conceptual ground of the act [of architecture] in the first place.'<sup>35</sup>

The architect's stance rendered in "The Futility of Objects" and "The End of the Classical" essays might be heralded as containing a program of perpetual resistance in order, that is, to recognise in Eisenman's position one specifically always focused on the side of conceptual grounds, perhaps a not unreasonable place to position oneself in times of rupture. That this program is marked by a desirable or at minimum intentional indeterminacy is provisionally found in at least two planes of activity that correspond to the key terms that can be taken as abbreviations of the conceptual/formal preoccupations in the two essays that have been the focus of this paper: decomposition, timelessness. On the one hand, a plane of form generation or space discovery; on the other hand, a plane positioning one's thinking outside of, and different to, ideas of beginnings and ends, outside or different from time as continuous. The one can be claimed to be revealed through an open process of decomposition. The other plane of activity might be rendered by a state of perpetual resistance that is intended to maintain a "timeless" space of invention or discovery, one that requires a radical engagement with the present. This is to contribute to opening up the conditions of possibility for architecture's capacity to resist that state of dissipation that so shook Frampton: a capacity which favours the multivalent, the blurred, the positively ambivalent.

At that moment in the mid 1980s, and perhaps still today, Eisenman's activity can be claimed to provide one version of a practice of

resistance, one capable of repelling architecture's vulgar capacity to imagine something like a linear time. Instead, we are left with an insistent plea for the present, and an architecture as is, a rare and perhaps one of the few viable acts of architecture that remains.

36. "The Transcripts", 26, emphasis in the original.

In "The Transcripts", the following is attributed to Eisenman as a summary of a not-classical architecture, and can serve appropriately as the last word: "It is no longer a certification of experience, a simulation of history, reason or reality in the present. Instead it [a not-classical architecture] may more appropriately be described as an architecture as is - ... a representation of itself... [an] architecture as a process of inventing an artificial past and futureless present."<sup>36</sup>

# Explicitly Tacit: Polanyi's "Tacit Knowledge" in the Architectural Theory of Charney and Rowe

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## Keywords

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## Abstract

The scientist and philosopher Michael Polanyi coined the term "tacit knowledge" in 1958 to describe a type of unconscious, embodied and social knowledge that could not be explicitly taught through rules or rote-learning. He argued, instead, that some knowledge relied on practice, critique, socialisation and personal biography. In this sense, something like tacit knowledge has long played an important role in architectural education — where skill is acquired through (re)drawing, writing and model-making, reviewed by teachers and peers — even before Polanyi named it. Yet, for all the affinities between design education and tacit knowledge, Polanyi's epistemology has rarely been directly addressed in architectural theory. This paper considers two exceptions in the writing and pedagogy of Melvin Charney and Colin Rowe in the 1970s. Both figures used Polanyi's philosophy to propose alternatives to the "ultra" positions of Modernism. Charney argued that Quebecois vernacular architecture reflected a tacit, collective building culture that was inseparable from the embodied construction practices of craftspeople. This could not be made explicit in construction manuals or histories; students had to discover it through drawing and building themselves. Meanwhile, Rowe credited Polanyi's *Beyond Nihilism* (1960) in the gestation of *Collage City* (1978, with Fred Koetter). Polanyi's essay argued that individual freedom was important in making new discoveries, but that individuals still had a responsibility to go beyond themselves by conforming to collective norms and standards. This, too, found a parallel in Rowe and Koetter's rejection of Modernist utopianism. At the same time, a close reading of these minor encounters reveals certain continuities and misalignments between Rowe and Charney's interpretation and Polanyi's own position as a prominent anti-Communist and contributor to early neoliberalism. Ultimately, this paper aims to clarify the role of tacit knowledge in the theory of these two architect/educators and, in doing so, simultaneously clarify the relationship between tacit knowledge and architectural pedagogy more broadly.

1. Michael Polanyi, *Personal Knowledge : Towards a Post-Critical Philosophy*, (London: Routledge, 1958). See also: Michael Polanyi, *The Tacit Dimension* (Chicago, Ill: The University of Chicago Press, 1966).

2. Gilbert Ryle, "Knowing How and Knowing That: The Presidential Address," *Proceedings of the Aristotelian Society* 46 (February 20, 1945): 1–16.

3. Frank Adloff, Katharina Gerund, and David Kaldewey, eds., *Revealing Tacit Knowledge : Embodiment and Explication* (Bielefeld: Transcript, 2015).

4. Claudia Mareis, "The Epistemology of the Unspoken: On the Concept of Tacit Knowledge in Contemporary Design Research," *Design Issues* 28, no. 2 (May 5, 2012): 61–71.

5. Philosopher and urban planning professor Donald Schön also referenced Polanyi in his closely observed study of reflexivity in the teacher-student dynamics of architectural design studios at MIT. Lara Schrijver, ed., *The Tacit Dimension : Architecture Knowledge and Scientific Research*. (Leuven: Leuven University Press, 2021); Donald A Schön, *Reflective Practitioner* (Taylor and Francis, 1983).

There is relatively little writing on the notion of "tacit knowledge" in architecture. The term was coined by the Hungarian scientist-turned-philosopher Michael Polanyi to describe the way "*we can know more than we can tell*".<sup>1</sup> Drawn, in part, from British philosopher Gilbert Ryle's earlier conception of "knowing-how," tacit knowledge referred to a kind of knowledge that was difficult to explain to other: that resided—often subconsciously—in bodily actions and cultural norms, as opposed to "knowing-that" which could be taught through rules and rote-learning.<sup>2</sup>

This dearth of writing on the tacit dimension of architecture—from practitioners, historians and theorists alike—is surprising for at least two reasons. First, because architecture is out of step with a growing body of scholarship in other fields. One recent publication posited a "tacit knowledge turn" to rival previous interdisciplinary turns to language and performance, part of a wider reappraisal of the importance of practical, rather than theoretical, knowledge in a range of fields from sociology to management studies.<sup>3</sup> Second, because tacit knowledge seems to share a particular affinity with the way architecture has traditionally been taught and practiced, as the small body of architectural writing on the subject does attest. Claudia Mareis has written that tacit knowledge is particularly relevant in the area of "practice-led research," involving non-verbal and intuitive activities such as drawing.<sup>4</sup> Yet these are subject to a type of social and collective tacit knowledge, which Mareis likens to Bourdieu's concept of habitus: ingrained dispositions reflecting membership of a social group or class. Lara Schrijver, meanwhile, has suggested that architectural education had long grasped that something like tacit knowledge was embedded in the skills and practices of doing and making—in studio, where design is taught through supervised drawing, redrawing, model-making and discussion—long before Polanyi named it.<sup>5</sup>

This paper departs from this limited existing literature in architecture—which has applied Polanyi's theory from the outside to issues within the discipline—by instead exploring direct, if minor, references to Polanyi and tacit knowledge in the writing of two prominent architectural educators in the 1970s: Melvin Charney and Colin Rowe. In doing so, we can draw out the qualities of Polanyi's tacit knowledge theory which architectural educators have found relevant and productive: particularly the role of communities and embodiment, and the relationship between the collective and individuals. At the same time, these entanglements between tacit knowledge and architecture prompt us to remain critical of any operative, architectural application of this theory of scientific epistemology, with its own political implications. The aim in this paper, then, is not to offer a substantially new reading of the work of these two figures, both of which are the focus of extensive existing scholarship. Instead, it is to clarify their relationship to tacit knowledge and, in doing so, simultaneously clarify the relationship between tacit knowledge, architecture and education more broadly, from within the discipline itself.

## Reading Polanyi

The first figure I consider here is the Canadian artist, architect and educator Melvin Charney, who grounded his influential defence of Quebec's vernacular architectural tradition, "Pour une Définition de

6. Here Charney quotes from the 1966 book *Building Canada: An Architectural History of Canadian Life* by the art historian Alan Gowans. Melvin Charney, "Towards a Definition of Architecture in Quebec," in *On Architecture: Melvin Charney, a critical anthology*, trans. and ed. Louis Martin, (Montreal & Kingston: McGill-Queen's University Press, 2013), 247.

7. See: Beatriz Colomina, "Learning from Levittown: A Conversation with Robert Venturi and Denise Scott Brown," in *Worlds Away, New Suburban Landscapes*, ed. Andrew Blauvelt (Minneapolis: Walker Art Center, 2008), 49–69.

8. Charney writes "It is interesting to note the analogous theme studied by Michael Polanyi, which supports in large measure the success of the later work about the idea of 'tacit knowledge' which is required in practice and cannot be expressed otherwise." Charney, "Towards a Definition of Architecture in Quebec," 264.

9. Polanyi, *Personal Knowledge*, 56.

10. Elsewhere in the same essay, Martin also emphasises the role of tacit knowledge in Charney's thought. Louis Martin, "Thinking Architecture, Its Theory and History," in *The Figure of Knowledge: Conditioning Architectural Theory, 1960s - 1990s*, ed. Sebastiaan Loosen, Rajesh Heynickx, and Hilde Heynen (Leuven University Press, 2020), 161–80. See also, Louis Martin, "Building Myths, or How to Preserve the Social Content of Architecture," *Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism* 11, no. 2 (June 22, 2014): 65–75.

*l'Architecture au Quebec*" (1971), partly in Polanyi's tacit knowledge. This connection provides a particularly rich source for understanding the relationship and application of tacit knowledge in architecture. In the first part of this essay, Charney argued that the piecemeal vernacular typical of the region—what one contemporaneous publication criticised by the author called "a hideous assemblage of structures that belong to no conceivable architectural tradition whatever"—could provide the basis for a new, endemic Modernism, furnishing an alternative to the white-cubes of the International Style, imported from elsewhere.<sup>6</sup> At the same time, he insisted these houses and simple commercial buildings not be analysed through the semiotics popular in architectural discourse at the time. It was not, in other words, the expression of the individual taste of the owner. Here, Charney seems to take an implicit swipe at the semiological studies conducted by Venturi and Scott Brown with students at Yale several years earlier, which framed the decorative choices of the residents of places such as Levittown as a radical manifestation of each family's identity.<sup>7</sup>

Instead, Charney argued that, while this tradition moved through individuals—such as artisans, labourers and master builders—the Quebecois were doing something different: people were expressing their relationship to a tacit and collective building culture. This culture preserved a certain knowledge of appropriate spatial organisation and how materials fit together, irrespective of whether the materials selected were the traditional stone and wood or whatever other resources were available, such as inexpensive corrugated roofing and bitumen panels. Polanyi's text provided the crucial insight that the "innate sense" that perpetuated this building culture was inseparable from the practices of construction and craft—passed on from one generation to the next through example and supervised repetition—in a way that could not be made entirely explicit in construction manuals or the sorts of books on Quebecois architecture that were the subject of Charney's critique.<sup>8</sup> In this sense, these vernacular buildings were related to each other, not through a regressive move towards historical purism, but instead by freely incorporating contemporary, eclectic materials into known models—whether housing or urban, multi-story construction—through an application of embodied tacit knowledge.

Charney never references the specific parts of Polanyi's tacit knowledge that he draws from, but there are clear hints in the essay itself. In *Personal Knowledge* (1958), Polanyi devotes a section to traditionalism, arguing that "the principle of all traditionalism [is] that practical wisdom is more truly embodied in action than expressed in rules of action."<sup>9</sup> As Charney also recognised, craft of this sort is a living tradition, passed on from masters to apprentices. For this reason, Louis Martin—a prominent scholar of the architect's work—compares this "innate sense" to Rossi's collective memory in that, despite approaching the issue from distinct perspectives, both architects "saw in popular architecture a repository of experience, a reified memory of the heroic struggle for a place realized by people increasingly deprived of their legitimate means of cultural expression".<sup>10</sup>

It is important to remember, however, that Polanyi's tacit knowledge was tangible and embodied, relating individual actions to the collective. Understood in this way, the essay reveals a more complex reading of

Polanyi, recognising that it was just as important for craftspeople to pass on a personal, tacit knowledge of materials. In one crucial passage, Charney writes that:

11. Charney, "Towards a Definition of Architecture in Quebec," 249.

The aesthetic significance of the exterior cladding merits a detailed semantic analysis: a 3/8" [10 mm] thickness of bitumen imitates a 2" [50 mm] thickness of concrete "stone" which in turn imitates a natural stone cladding typically used in single-family homes in the American midwest.<sup>11</sup>

12. In the later essay, "The Logic of Tacit Inference," Polanyi acknowledges his obvious debt to phenomenology and, like Ryle before him, insists that an essential unity between mind and body is the only way to avoid Cartesian dualism. Michael Polanyi, "The Logic of Tacit Inference," *Philosophy* 41, no. 155 (July 11, 1966): 10.

Here we can recognise an embodied understanding of particular materials and how they fit together—eschewing an explicit, and proprietary, set of details typical of product information sheets—producing innovations within an evolving tradition through the sensation of handling those new materials themselves. That Charney specifies a precise thickness here hardly seems accidental, indicating a tacit understanding of what can be replaced with what, and how these new materials relate as part of an existing construction system. Polanyi places the individual's body at the heart of such innovations, with a tangible feel for these differences of dimension and materiality: "Every time we make sense of the world, we rely on our tacit knowledge of impacts made by the world on our body and the complex responses of our body to these impacts."<sup>12</sup>

13. Polanyi, *Personal Knowledge*, 216.

14. "The curious thing is that we have no clear knowledge of what our presuppositions are and when we try to formulate them they appear quite unconvincing." Polanyi, *Personal Knowledge*, 62.

Still, Charney is right to insist on an "innate response" within the framework of tacit knowledge. Polanyi was consistent in arguing that these collective traditions can be intimate, connected to a person's training and biography, even childhood socialisation, in a way that might be common across a community: "we hold with universal intent a set of convictions acquired by our particular upbringing."<sup>13</sup> Indeed, these convictions—for Charney's Quebecois, how a house should go together and how it should be organised—become suppositions that we perceive to be so natural that we have trouble identifying them as suppositions in the first place.<sup>14</sup> In other words, they become automatic and tacit.

15. Rowe identified these sources in a letter to Hays in May 1996. See: K Michael Hays, *Architecture Theory since 1968* (Cambridge, Ma.: MIT Press, 2000), 90. Ockman also makes the connection between Rowe and Polanyi in a footnote, although does not elaborate: Joan Ockman, "Form without Utopia: Contextualizing Colin Rowe," *Journal of the Society of Architectural Historians* 57, no. 4 (April 8, 1998): 448–56.

Where Charney seems to have drawn primarily from *Personal Knowledge*, Colin Rowe and Fred Koetter turned elsewhere in Polanyi's oeuvre for their seminal book, *Collage City* (1978). Rowe acknowledged many sources for their thinking, including a range of philosophers (Popper most prominently, but also Shklar), anthropologists (Lévi-Strauss), scientists (Medawar) and historians (Cohn), but among them was also Polanyi's essay *Beyond Nihilism* (1960).<sup>15</sup> In this text, Polanyi applied his thinking on personal, tacit knowledge to what he saw as the nihilism of the twentieth century. Polanyi opposed, on one hand, centralised, Soviet science—subjugating individual scientific discovery to official, a priori doctrines—and, on the other, the radical individualism and subjectivity of French existentialism. Both, in his reading, rejected the values and authority of morality and science as mere class interests. Instead, Polanyi pursued a middle line between the freedom of an individual's tacit and embodied subjectivity and that individual's responsibility to go beyond themselves by conforming to certain civic values: collective institutions, but also tacit norms and standards.<sup>16</sup>

16. For an overview of this essay and its relationship to his wider thought, see Grene's introduction in: Michael Polanyi and Marjorie Grene, *Knowing and Being* (Chicago: Chicago University Press, 1969).

Rowe like many others of his generation, had come to regard architectural modernism as another aesthetic style, rather than a

17. Ockman, "Form without Utopia," 452.

18. Colin Rowe and Fred Koetter, *Collage City* (Cambridge: MIT Press, 1978), 97.

19. *Ibid.*, 121.

wholesale societal restructuring, as it had been conceived. Ockman writes that Rowe, too, "eventually negotiated—for better or worse—a way beyond nihilism".<sup>17</sup> It is in this context that Rowe and Koetter advocate a compromise very similar to Polanyi's individual/collective relationship, calling for balance in the "necessary conflicts of democracy with law".<sup>18</sup> This was a compromise between top-down, bureaucratic and Modernist "scientific idealism" and the type of "populist empiricism" that called for architects to accept what "the people", already professed to like: between "the highly uncertain roles of custom and innovation, of stability and dynamism."<sup>19</sup> In this sense, they departed from Charney's more unequivocal embrace of tradition and the tacit knowledge of everyday building practices. They argued, instead, that architecture should temper this personal, tacit knowledge—connected to shared, popular sensibilities—with technological expertise and the controls of law and justice, mandating certain standards irrespective of the desires and knowledge of the individual. In the polemics of *Collage City*, this manifested as stylistic freedom and choice within the confines of an overall urban composition—often explicitly within a grid—grounded in the logics and balance of collage.

### A Tacit Pedagogy

20. This building/architecture distinction was made in Rowe's Cubitt lecture of 1979, published in: Colin Rowe, "The Present Urban Predicament", *The Cornell Journal of Architecture* 1 (1981), 16-33. For a useful overview of Rowe's teaching, see Michael Jasper, "From Composite Building to Partial Figure: Variations in the Teaching of Colin Rowe and Peter Eisenman," *Cahiers de La Recherche Architecturale, Urbaine et Paysagère*, no. 4 (June 28, 2019).

21. George Baird, "Oppositions in the Thought of Colin Rowe," *Assemblage*, no. 33 (June 22, 1997): 22-35.

22. Rowe and Koetter, *Collage City*, 101.

Charney and Rowe's respective interpretations and applications of tacit knowledge became evident in their teaching. For Charney, this occurred as part of the *Unité d'architecture urbaine* (JAU) design studio at the University of Montreal. Rowe, meanwhile, taught his collage approach to urbanism in a recurring studio at Cornell. His Urban Design Studio often combined a careful reading of context, respect for popular sensibilities and a healthy appetite for modernist formalism, while still maintaining that a difference existed between architecture and building.<sup>20</sup> Here we can recognise the sort of high/low culture opposition which Baird read at the core of Rowe's lifelong project,<sup>21</sup> and which again separates Rowe's approach from Charney's theoretical agenda. Whereas Charney insisted that architecture should learn the tacit lessons of vernacular buildings, implying a continuity and essential reciprocity between the two, Rowe and Koetter wrote that "architecture is a discriminatory concept which can, but need not, enjoy a lively commerce with its vernacular".<sup>22</sup>

23. *Ibid.*

24. *Ibid.*, 145.

This notion of architecture as "discriminatory" is important in relation to tacit knowledge. They note that "there can be no simple formula implicating bicycle sheds and Lincoln Cathedral"—we cannot generate a set of rules to categorise something as building or architecture in every case—suggesting that this distinction relies on an established disciplinary distinction and on the sensibilities of individuals to distinguish the two.<sup>23</sup> There is something similar at play in the collage method that Rowe taught his students: "an approach in which objects are conscripted or seduced from out of their context...the provenance of the architectural objects introduced into the social collage need not be of great consequence. It relates to taste and conviction."<sup>24</sup>

Again, this "taste and conviction" signifies a sensibility that could not be made explicit through a set of rules, but which was, instead, learnt through the studio itself. Elsewhere, Rowe quotes Whitehead to describe his aim in studio education as the transmission of a style or

25. Colin Rowe, "On Architectural Education," *ANY: Architecture New York*, no. 7/8 (July 19, 1994): 48–51.

26. Steven Hurr, "Conjectures on Urban Form," *The Cornell Journal of Architecture* 2 (1982), 54–78.

27. Polanyi, *Personal Knowledge*, 56–57.

28. Adamczyk describes the studio's method as an "architectural reading of the urban forms and their meaning in a culture...a know-how deposited in the city itself." It is telling here that he uses Ryle's term, "know-how," reinforcing the connection to tacit knowledge. Irena Latek, "L'architecture Comme Potentiel Humain: Réflexions Sur La Lecture De Montréal Par Melvin Charney," in *ARQ Architecture-Québec* 163 (May, 2013) 5–7; Georges Adamczyk, "The city as a school," in *Ville métaphore projet: architecture urbaine à Montréal, 1980 – 1990*, ed. Irena Latek et. al. (Montreal: Éditions du Méridien, 1992), 11.

29. Melvin Charney, "Architecture sans architectes: Les trulli de l'Apulie," *Rayonnement de l'Italie* 38 (1965), 54–57.

30. Adamczyk, "The city as a school," 2. See also, Jason Gilliland and Pierre Gauthier, "The Study of Urban Form in Canada," *Urban Morphology* 10, no. 1 (2006).

31. Polanyi, "The Logic of Tacit Inference," 3.

an aesthetic sense: the product of training and expertise that could not be transferred to outsiders or amateurs.<sup>25</sup> As teaching assistant Steven Hurr wrote, after the publication of *Collage City* students in Rowe's studio engaged in this training through a constant process of observation and selection. First, this was directed towards critiquing the work of students in previous studios, and then towards the fragments combined and collisions produced in their own work, all the while guided and corrected by Rowe's overarching attitudes as a critic.<sup>26</sup> Although there is no evidence that Rowe drew on any of Polanyi's writing aside from *Beyond Nihilism*, this strikes a chord with Polanyi's discussion of "connoisseurship" in *Personal Knowledge*: "Connoisseurship, like skill, can be communicated only by example, not by precept...[and] rely on the transmission...from master to apprentice."<sup>27</sup> In this sense, Rowe's approach taught students to recognise good examples from bad, not through a *priori* and explicit rules, but rather through a sensibility learnt over time through the practices of making and judging. Ultimately this engendered the ability to make these discernments, for students to express their "style," even without Rowe's guidance.

Charney's teaching, in contrast, placed greater emphasis on the social and embodied dimensions of tacit knowledge. First, in social terms, Charney taught that buildings and cities carry evidence of their own tacit knowledge through both material and social construction. It is not only that architectural histories have neglected this everyday knowledge of cities—as Charney shows in the case of Quebec, this neglect was at least partly deliberate—but that the complexity of these relationships means they could never be made entirely explicit in treatises anyway; a tacit understanding must always be developed by individual architects or students. Indeed, as Charney's colleague in the studio Irena Latek writes, this approach was fundamentally social: "attentive to and in solidarity with the tacit knowledge of the people to produce their own living environment."<sup>28</sup> In this way, Charney's project was part of a wider movement within the field of architecture to reclaim the everyday building practices excluded from the discipline, especially where these people would struggle to make explicit the appeal of their houses in a way that would satisfy the architectural establishment. This included, despite their theoretical differences, Venturi and Scott Brown's interest in suburbia, but also Rudofsky, on whose work Charney had written an earlier essay with strong parallels to the later "Towards a Definition".<sup>29</sup>

Second, Charney's approach shows that drawing and other design tools are integral for grasping this constructed tacit knowledge. Charney taught a highly specific process of drawing, capturing what critic and former dean of the school Georges Adamczyk described as "specific formal traits; the consistencies, traces, signs, discontinuities, recurrent orders, etc. whose meanings can be related to their context and the collective memory."<sup>30</sup> This, too, finds its equivalence in Polanyi's thought. Gestalt psychology was fundamental to his theory of tacit knowledge, particularly the way that we must attend from particulars to their meaning; *from* a subsidiary awareness of the proximal term, or the parts/"clues", to a focal awareness of the distal term, or the whole. This, according to Polanyi, involved a process of "integration, merging the subsidiary into the focal".<sup>31</sup>

In this sense, the "formal traits" of these drawings constitute the

32. Polanyi, *The Tacit Dimension*, 61.

particulars that are integrated into an overall feeling for the city in a way that cannot be made explicit. Crucially, Polanyi suggests that tools or probes—such as pens or computer—extend our body, providing different kinds of haptic feedback and producing drawings that are, in turn, interpreted through our vision, experience and memory, all of which together provide the clues which we synthesise into overall insights of something beyond ourselves: in this case, the city. This requires practice. Charney's students, like those of Rowe, would have to trust his authority, that this drawing style, as Polanyi argues, "which appears meaningless to start with has in fact a meaning which can be discovered".<sup>32</sup> But it is also a reminder that tacit knowledge seeks to explain processes that are fairly standard in architectural education. It would seem obvious to many designers that we discover something about the world in sketching, and something else again in a more considered drawing, that we did not know before.

### Misalignment, Misreading, Misunderstanding

33. Martin and Latek both emphasise this influence, while Charney acknowledges his connection to Foucault in: Melvin Charney, "Confrontations in Urban Architecture," in *Ville, métaphore, projet: Architecture urbaine à Montréal, 1980-1990*, ed. Irena Latek (Montreal: Éditions du Méridien, 1992), 99-103; Martin, "Thinking Architecture, Its Theory and History."; Latek, "L'architecture Comme Potentiel Humain."

34. Polanyi, *The Tacit Dimension*, 63–66.

It is at this point that we start running up against the limitations of scientific tacit knowledge in its application in architectural theory. Charney's interest in tacit knowledge was connected to a political commitment to dismantling power structures within architecture, influenced by Foucault.<sup>33</sup> Indeed, as we have seen, he used tacit knowledge to help explain the embodied connection of people to vernacular architecture, and to understand buildings and the city outside existing, dominant systems of categorisation in the discipline. Yet, consistent with his argument in *Beyond Nihilism*, Polanyi comes to precisely the opposite conclusion, arguing that tacit knowledge in science required "traditional frameworks" which—through a system of mutual control and critique—established a common basis of knowledge that was substantially tacit. Indeed, the establishment, particularly scientific journals, had a responsibility to exert authority to reject "implausible claims" and even arbitrate which discoveries were "interesting to science".<sup>34</sup>

35. *Ibid.*, 84.

Authority and power structures were, for Polanyi, integral to tacit knowledge and, by this logic, the architectural establishment would be correct in rejecting the vernacular. In this sense, Polanyi's thought aligns much more closely with the position of Rowe, who embraced the discipline's prerogative to determine the tacit boundary between buildings and architecture. Moreover, Polanyi readily acknowledged that the situation was different again in the arts, where "reliance on secondhand authority reaches less far...than in science, and divisions between rival opinions go deeper."<sup>35</sup> While scientific discoveries relied and built upon a body of common scientific knowledge as a matter of necessity, given that not all scientists could be experts in all areas, no such requirement exists in literature in the same way.

Looking to Rowe and Charney's relationship to Polanyi also prompts us to examine Polanyi's own position and biography. Although it is beyond the scope of this paper to explore his background in detail, in this light Polanyi's tacit knowledge was not necessarily neutral. He had served as Secretary to the Minister of Health in the Hungarian Democratic Republic, forced out when communists declared the Hungarian Soviet

36. Martin Beddeleem, "Michael Polanyi and Early Neoliberalism," *Tradition & Discovery: The Journal of the Polanyi Society* 45 (2019): 34.

37. See, in particular, Pier Vittorio Aureli, *Possibility of an Absolute Architecture* (Cambridge Mass.: MIT Press, 2014), 204.

38. Polanyi, "The Logic of Tacit Inference," 1.

39. See: Harry Collins, *Tacit and Explicit Knowledge* (Chicago: University of Chicago Press, 2010), 148.

Republic in 1919. He repeatedly returns to what he regards as the problems of Soviet science in his work, and in this context emphasises the necessity of personal freedom and intuition in research. This relationship between individual freedom and collective, tacit traditions informed Polanyi's role as one of the early proponents of neoliberalism and member of the Mont Pelerin Society, in a way that was inseparable from the theory of tacit knowledge itself. As Beddeleem writes, Polanyi's neoliberalism rested on a belief in the "superiority of the market to access these reservoirs of untapped knowledge, a tacit knowledge that could not be discovered by any other means than the independent initiative of the individual."<sup>36</sup> While some commentators have identified a similar neoliberal agenda in Rowe's anti-utopian anything-goes urbanism,<sup>37</sup> this certainly seems out of step with Charney's attempt to redefine disciplinary power structures.

At the same time, Polanyi's interest in the individual recognised that a person's body and biography played a greater role in scientific discovery than positivism had allowed. He noted, with another of his aphoristic phrases, that "Rules widely current may be plausible enough, but scientific enquiry often proceeds and triumphs by contradicting them."<sup>38</sup> Indeed, in so strongly emphasising more subjective, intuitive forms of knowing against the rigours of early-twentieth century positivism, some more recent commentators have accused Polanyi of sometimes going too far in making the tacit seem mysterious.<sup>39</sup> Understood in this context, it is easier to understand why Charney and Rowe both invoked Polanyi in establishing their own positions in relation to Modernism. There are clear parallels between the architecture of the first half of the twentieth-century and the dogmatic logics of positivism.

Ultimately, these invocations of Polanyi in the work of Charney and Rowe demonstrate that tacit knowledge is neither monolithic nor stable in architecture: that it does not always describe the same knowledge in different places, times or circumstances. Instead, it is deeply contextual. For Charney, working in Quebec, tacit knowledge was collective, fundamentally connected to embodiment and craft. For Rowe, trained in London and teaching in the USA, Polanyi's theories were political, helping navigating a way between populism and top-down control. Yet, in both cases, tacit knowledge played a key role in their design pedagogy: something inexplicable and irreducible to other forms of knowing. While each brought their own approach to teaching, it is important to recognise that it was still the practices and socialisation of the studio—an educational format that has so long been a part of architectural education in some form or another—that played the decisive role in passing on their particular conception of tacit knowledge.

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# Making with the Past: Bricolages in Wang Shu's Design Writings and Built Projects

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## Keywords

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## Abstract

This study explores how design research writing can engage with historical reference in a radical way. In the 2002 essay "Shijian Tingzhi de Chengshi" ("City Froze in Time"), based on Chapter 2 of his 2000 PhD thesis, *Xugou Chengshi (Fictionalising City)*, the Chinese architect Wang Shu proposes reinterpreting the traditional Chinese architecture and city through the anthropologist Claude Lévi-Strauss's notion of "bricolage", which is defined as making do with available objects. Bricolage is informative for understanding Wang's design undertakings, which involve skilful adaptations of vernacular building types and construction techniques in new urban projects. Nevertheless, its fundamental role in shaping Wang's design writings is yet to be fully understood. In his design writings, Wang employs a specific quotation method whereby words and paragraphs from other writers' preexisting works are reused and woven into new textual compositions. Through formal analysis of "City Froze in Time" and comparisons of compositional patterns between the essay and Wang's built projects, mainly the Xiangshan Campus of the China Academy of Art, Phase II, Hangzhou (2007) and the Ningbo History Museum, Ningbo (2008), this piece explores three issues. First, it demonstrates how textual fragments found in the past and uttered by others undergo bricolage in Wang's essay. Second, it foregrounds the intention behind Wang's chosen writing strategy and investigates broader critical issues, such as authorship and the past–present nonlinear order associated with Wang's strategy. Third, it expresses how historical materials – understanding "materials" in an inclusive sense – are treated in comparable ways in Wang's written and built works. By examining Wang's case, this paper highlights a radical case of contemporary architectural research writing in which an attempt is made to demolish the boundary between theory and design by extending the make-do logic of design into the field of design reflection.

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## Introduction

1. C. Greig Crysler, *Writing Spaces: Discourse of Architecture, Urbanism, and Built Environment, 1960-2000* (New York and London: Routledge, 2003), 57-84.

2. Jane Rendell, *Site-Writing: The Architecture of Art Criticism* (London and New York: I.B. Tauris, 2010); Klaske Havik, *Urban Literacy: Reading and Writing Architecture* (Rotterdam: nai010 publishers, 2014); Hélène Frichot and Naomi Stead, eds., *Writing Architecture: Fictio-Critical Approaches* (London and New York: Bloomsbury, 2020).

3. The Chinese title of Wang's essay (i.e., "Shijian Tingzhi de Chengshi") derives from the structuralist anthropologist Claude Lévi-Strauss's claim (through Edmund Leach's translated work Lévi-Strauss) that myth and music are "machines for suppression of time". Given this derivation, a more accurate English translation of the Chinese title is "The City for the Suppression of Time". See: Edmund Leach, *Lie Wei Si Te Lao Si* [Lévi-Strauss], trans. Qingren Wang (Beijing: Joint Publishing, 1988), 136; Edmund Leach, *Lévi-Strauss*, 4th ed. (London: Fontana Press, 1996), 135.

4. Shu Wang, "Shijian Tingzhi de Chengshi" [City Froze in Time], in *Sheji de Kaishi* [The Beginning of Design], ed. Mingxian Wang and Jian Du (Beijing: China Architecture & Building Press, 2002), 130-70.

The norms of architectural writing have been a subject of constant debate in past decades. In the 1980s and 1990s, architectural poststructuralists conceived of writing as a mode of constructing with words and texts. In this discourse, architecture and writing become the equivalent, but not identical, textual practice.<sup>1</sup> Informed by postmodern philosophies, more recent studies of architectural writing have problematised the norms of the standard scientific mode of writing while actively incorporating fiction, autobiography, and other literary genres into architectural qualitative investigations.<sup>2</sup> In this later trend, the boundary between academic criticism and artistic creation has been blurred.

By examining the Chinese architect Wang Shu's 2002 essay, "*Shijian Tingzhi de Chengshi*" ("City Froze in Time"), based on Chapter 2 of his 2000 PhD thesis, *Xugou Chengshi (Fictionalising City)*, this article highlights a radical case of research writing whereby language and architectural matters mingle and academic routines of architectural writing are challenged.<sup>3</sup> The essay "City Froze in Time" (henceforth "City Froze") is a key piece of literature articulating the architect's typology design thought, which was published in Issue 96 of the Chinese architectural journal *The Architect* and reprinted in *The Beginning of Design*, a collection recording Wang's major written and built works with critics' commentaries.<sup>4</sup> First, this article demonstrates Wang's often overlooked reflection on architectural theoretical writing. Second, through close reading of "City Froze", the article inspects the writing technique and compositional pattern of the essay and articulates the implications of Wang's writing strategies in reference to his specific theoretical context. Third, by comparing aspects of Wang's essay and his built works, especially the Xiangshan Campus of the China Academy of Art, Phase II, Hangzhou (2007 [henceforth the CAA Campus]) and the Ningbo History Museum, Ningbo (2008), this article explores how Wang expands his bricolage design logic into design reflection.

## Wang Shu on Writing

5. Dongyang Liu, "Wang Shu de Yige Sixiangxing Xiangmu: Ta Cong A Er Duo Luo Xi de Chengshi Jianzhu Xue zhong Xuedao le Shenmo" [An Intellectual Project by Wang Shu: His Learning from Aldo Rossi's *The Architecture of the City*], *Xin Meishu* [New Arts] 34, no. 8 (2013): 105; Jianfei Zhu, Lu Zhang, and Cheng Sun, "Wang Shu he Wei Yan Wu: Dongya Jianzhushi Xiezuo Celue Weiguan Gean Yanjiu" [Wang Shu and Kengo Kuma: Writing Strategies of Two Architects from East Asia], *Shidai Jianzhu* [Time+Architecture] 172, no. 2 (2020): 144.

6. Shu Wang, "Xugou Chengshi" [Fictionalising City], PhD diss., (Tongji University, 2000), 16. (Unless otherwise noted, all translations are my own.)

7. Wang, "Xugou Chengshi" [Fictionalising City], 5.

Among Wang's written works, *Fictionalising City* is held by commentators as one of the foundational works of literature for understanding the architect's practice and design thinking.<sup>5</sup> Despite such appraisals, Wang's theoretical project is yet to be fully understood. One missing part is the intention behind the architect's intensive experiments with architectural writing. In *Fictionalising City*, Wang asserts that "if designing is 'doing', theorising is 'doing' as well".<sup>6</sup> Wang's proposition of writing as architecture is in line with his text theory informed design research, as he writes:

To see the city as a kind of text brings forward the second tenet of [the activity of] fictionalising cities: the equivalence principle. [...] It [*Fictionalising City*] means demolishing the distinction between theory and design, concept and object.<sup>7</sup>

8. See for example: Jian Shi and Keru Feng, "Wang Shu Fangtan——Huifu Xiangxiang de Zhongguo Jianzhu Jiaoyu Chuantong" [Interview with Wang Shu: Renew the Imagined Tradition of Chinese Architecture Education], *Shijie Jianzhu* [World Architecture], no. 5 (2012): 25.

9. Xiangning Li and Xiaochun Zhang, "Wang Shu Fangtan" [An Interview with Wang Shu], *Shidai Jianzhu* [Time+Architecture], no. 4 (2012): 95.

On multiple occasions, Wang has explicated his critical attitude towards writing as a means of theorising.<sup>8</sup> His reflections on this topic are unambiguously expressed in a 2012 interview in which he stated that

what I really care about is exploring the notion of writing itself. [...] My exploration of writing is closer to the way Roland Barthes conceptualises it. For example, I pay more attention to genres of writing than just what is written about.<sup>9</sup>

Wang insists that the text of *Fictionalising City* is "self-referential" and is "not at all a normative theoretical writing but an archi-design with words and texts". Reflecting on the relationship between his thesis and design practice, Wang concludes that "10 years after its [*Fictionalising City*]'s completion, I have realised the thesis once again in architecture".<sup>10</sup> Despite Wang's affirmation of the significant role of writing in his theoretical project, two issues remain unaddressed. First, Wang has not explained which actual writing styles or means he adopted in *Fictionalising City* and other derived essays. Second, he has not specified how the claimed equivalence between writing and building has been achieved in his works.

## Writing with the Past

11. Gaojin Xinleng, Jonathan Hale, and Qi Wang, "Novelistic Essay: On the Form of Wang Shu's PhD Thesis, 'Fictionalising Cities'", *Architectural Research Quarterly* 23, no. 2 (2019): 157-66.

A recent study may shed some light on the first issue concerning the style and form of Wang's theoretical writings. By thoroughly comparing excerpts from Chapter 3 of *Fictionalising City* with other authors' writings, Xinleng Gaojin, Jonathan Hale, and Qi Wang note that Wang's thesis employs a specific quotation method that involves systematically reusing and collaging textual fragments from other authors' writings while forgoing the conventions of modern academic referencing.<sup>11</sup> The present article extends Gaojin and his colleagues' investigation by applying their method of cross-textual comparison to a reading of "City Froze". The aims of the following analysis are threefold. First, using several reading samples, the analysis shall demonstrate how previously published writing materials are appropriated in "City Froze". Second, beyond Gaojin and his colleagues' focus on textual form, the analysis shall further explore the alternative discursive mode enabled by Wang's specific writing method. Third, the analysis shall clarify the essay's compositional pattern by applying the abovementioned comparative method to the full text of "City Froze".

12. "City Froze" was originally written in Chinese. Therefore, the comparisons of texts presented in this article began by comparing Wang's original text with other works written in Chinese or the Chinese translation. The excerpts from "City Froze" are my translations. In producing these translations, reference was made to both the Chinese and English versions of the texts with which Wang's essay is compared.

In the reading samples below, excerpts from "City Froze" (nonitalicised) are presented together with other writings (italicised) for the purpose of comparison. Sample 1, for instance, demonstrates how Wang's text reuses a paragraph of structuralist anthropologist Claude Lévi-Strauss's *The Savage Mind* to describe daily life in a traditional Chinese village.<sup>12</sup> This excerpt from "City Froze" is part of Wang's case studies in support of his rereading of the Chinese urban tradition.

### Sample 1

Excerpt from "City Froze":

Often a farmer is also an amateur architect, carpenter, and

13. The original Chinese text: 一个农夫常常也是一个木匠, 是业余的建筑师与建筑工人, 能够认出哪块小木头是属于哪一种树上的, 而且通过观察木头和树皮的外表、气味、硬度和其它属性来做精细确定。Wang, "Shijian Tingzhi de Chengshi" [City Froze in Time], 147.

construction labourer who can identify the kind of tree from which a tiny wood fragment has come and, furthermore, make an accurate judgement by observing the appearance of its wood and bark, its smell, its hardness, and similar characteristics.<sup>13</sup>

Excerpt from *The Savage Mind*:

14. Claude Lévi-Strauss, *The Savage Mind* (London: Weidenfeld and Nicolson, 1966), 5. The original Chinese text: 关于琉球群岛的一个落后种族, 我们读到: “甚至一个孩子也能常常认出哪块小木头是属于哪一种树上的, 而且通过观察木头和树皮的外表、气味、硬度和其它特征来确定那种树的性别 [...]”. Claude Lévi-Strauss, *Yexing de Siwei* [The Savage Mind], trans. Youzheng Li (Beijing: The Commercial Press, 1987), 8.

Of a backward people of the Tyukyu archipelago, we read: “Even a child can frequently identify the kind of tree from which a tiny wood fragment has come and, furthermore, the sex of that tree, as defined by Kabiran notions of plant sex, by observing the appearance of its wood and bark, its smell, its hardness, and similar characteristics. [...]”<sup>14</sup>

Sample 1 shows that the phrases highlighted in grey are strikingly similar to the underlined phrases. Given that such similarities have not been explained by Wang in “City Froze” or elsewhere, this resemblance may raise concerns about academic ethics. Most noticeably, this textual resemblance challenges operations of power in the canonical form of the academic essay where the text’s power to mean and represent others is expected to be fully manipulated by authorial intention. Wang’s way of uttering through instead of on behalf of other authors is distinct from the routine practice of academic referencing, which is a procedure that requires and actualises the judging authority of the author over the other within the text. In Sample 1, Lévi-Strauss’s voice and the new significances stemming from Wang’s recontextualisation of the original text tangle and overlap. The absence of an author–other hierarchy both shatters Wang’s text into heterogeneous fragments and prevents the text from being taken as a derivation of Wang the writer. In other words, Wang’s textual construction underlines coauthorship and dialogism on a structural level in the concerned essay, which could be controversial in the context of academic writing.

Another consequence of Wang’s quotation technique is that the essay comes to embody a nonlinear temporality in which the “already said” is an indispensable participant of the current intellectual reflection. Differently, in standard academic referencing, the current writing represents the intellectual or cultural past. The former is privileged as a perspectival point through which the past is exhibited, assessed, and received. In so doing, the cultural past is reduced to merely an object of the undergoing reflection; the historical context no longer operates as the very condition whereby such reflection can emerge. More precisely, in academic referencing, the present is singled out as a moment completely outside history. This irreversible order between now and then, or the one-dimensional linear temporality that undergirds standard academic referencing and scientific writing formats, is coherent with the modernist notion of progress where the now is often welcomed as a total renewing, replacing, or eradicating of the past. Alternatively, Wang’s quotation technique can be seen as a specific means of writing with the past, which interrupts a simple past–present evolution.

Wang’s quotation technique also draws attention to a method of writing itself that disassembles and reassembles historical writings to formulate a new whole. This practice of writing with the intellectual past parallels

15. Lévi-Strauss, *The Savage Mind*, 1-33.

16. Wang, "Shijian Tingzhi de Chengshi" [City Froze in Time], 145-167.

17. The original Chinese text: 做为修补木的类型学,其特征是:建立起有结构的组合,并不是直接通过其它有结构的组合,而是通过事件,或者更准确的说,把事件的碎屑拼合在一起来建立诸结构。Wang, "Shijian Tingzhi de Chengshi" [City Froze in Time], 164.

18. Lévi-Strauss, *The Savage Mind*, 28. The original Chinese text: 现在,作为实际平面上的修补木的神话思想,其特征是,它建立起有结构的组合,并不是直接通过其它有结构的组合,而是 [……]通过把事件,或更准确地说,把事件的碎屑拼合在一起来建立诸结构 [……]。Lévi-Strauss, *Yexing de Siwei* [The Savage Mind], 21-22.

19. Wang, "Shijian Tingzhi de Chengshi" [City Froze in Time], 159.

20. The original Chinese text: 也就是把过去的城市讲述一次,或者把过去的事情每回忆一次,城市的历史就被从新构造一次。[……]由过去变成了现在的一部分,关于织体城市的理论就是对关于城市的历史进步与历史发展的传统理论的拒绝。Wang, "Shijian Tingzhi de Chengshi" [City Froze in Time], 161.

the strategies of architectural typology design articulated in "City Froze". Wang's typology design approach is modelled on the Lévi-Straussian notion of bricolage, a metaphorical term that characterises mythical thought and, more generally, artistic modes of creation.<sup>15</sup> According to Lévi-Strauss, myth is a narrative form in which "mythemes" or elements of old stories are recycled and reassembled for the telling of new ones. Wang integrates this recycling ecology of the narrative form of myth into his typology design theory. According to Wang, an architectural type is a fragmentary form detached from the existing fabric of a city, and the task of urban design is essentially similar to the work of a bricoleur and involves the agential rearrangement of recycled forms into new constructions.<sup>16</sup>

## Sample 2

Excerpt from "City Froze":

[...] the characteristic feature of typology design, as of "bricolage", is that it builds up structured sets, not directly with other structural sets but by fitting together events, or rather debris of events.<sup>17</sup>

Excerpt from *The Savage Mind*:

Now, the characteristic feature of mythical thought, as of "bricolage" on the practical plane, is that it builds up structured sets, not directly with other structural sets but [...] by fitting together events, or rather the remains of events [...].<sup>18</sup>

Wang argues that traditional Chinese cities, such as Hangzhou, Suzhou, and Beijing, have been constructed in a similar way to the bricolage of myth.<sup>19</sup> Following Lévi-Strauss's opposing between bricoleur and engineer, Wang contrasts the premodern Chinese craftsman or artisan with the Western conception of the architect-creator because the former works with concrete signs and makes do with the already formed, while the latter begins with concepts and imposes preconceived order on the city. By metaphorically linking architectural typology design and bricolage, Wang critiques the modernist ideology of architectural progress.

## Sample 3

Excerpt from "City Froze":

The history of the city is reconstituted each time the past of the city is retold or recollected. [...] By having the past become part of the present, the theory of texture-city discounts traditional theories of progress or evolution.<sup>20</sup>

Excerpt from *The Age of Structuralism*:

For him [Lévi-Strauss], history is reconstituted each time a myth is retold or the past is recollected. [...] By having the past become

21. Edith Kurzweil, *The Age of Structuralism: Lévi-Strauss to Foucault* (New York: Columbia University Press, 1980), 23. The original Chinese text: 按照他的看法, 一个神话每重新讲述一次, 或者过去的事情每回忆一次, 历史就被重新构造了一次。[……]由于过去变成了现在的一部分, 莱维-斯特劳斯的理论不赞成关于历史进步或历史发展的传统理论。Edith Kurzweil, *Jiegou Zhuyi Shidai: Cong Lei Wei-Si Te Lao Si dao Fu Ke* [The Age of Structuralism: Lévi-Strauss to Foucault], trans. Dayi Yin (Shanghai: Shanghai Translation Publishing House, 1988), 14.

part of the present, Lévi-Strauss' theory discounts traditional theories of progress or evolution.<sup>21</sup>

The above readings indicate that the Lévi-Straussian notion of bricolage has a twofold significance in "City Froze". Bricolage offers a theoretical model for the architect's conceptualisation of architectural typology design; meanwhile, Wang's writing with the past is a work of bricolage in its own right, as the text combines previously unrelated topics, texts, and ideas to construct ad hoc instruments of analysis. It is in this sense that the text of "City Froze" is self-referential; it simultaneously articulates Wang's preferred design strategy and performatively embodies this strategy.

### **Bricolage Pattern**

By applying the method of cross-textual comparison demonstrated in the above reading samples to the full text of "City Froze", the present article also maps and offers a visual representation of the bricolage form of Wang's text.

Table 1 presents the 146 textual fragments found in "City Froze" in the order of their appearance in the essay. Each entry in Table 1 is numbered and includes the title of the original text in English, the page number(s) of the fragment in the Chinese edition of the text, and the page number(s) of the corresponding fragment in the English edition. If there is no corresponding English edition of the Chinese text, the digit(s) following the English title refer(s) to the page number(s) in the Chinese source. When a text appears for the first time in Table 1, it is indexed with a letter (from "[A]" to "[J]"), which links the marked entry to its corresponding bibliographic categories in Table 2.

|   |  |   |
|---|--|---|
| 1. Lévi-Strauss [A], 136/135  | 47. "The Myth of the Other: China in the Eyes of the West" (henceforth "The Myth of the Other") [H], 147/108-109 | 96. <i>The Savage Mind</i> , 17/12  |
| 2. Lévi-Strauss, 98/99  | 48. "The Myth of the Other", 147/109   | 97. <i>The Savage Mind</i> , 18/13  |
| 3. "Chinese Geomancy and Urban Image" [B], 301-303  | 49. "The Myth of the Other", 148/109   | 98. <i>Structuralism</i> , 137/107  |
| 4. <i>Structuralism: Moscow-Prague-Paris</i> [C], 123/95  | 50. "The Myth of the Other", 148/109   | 99. <i>The Savage Mind</i> , 16-17/12   |
| 5. Lévi-Strauss, 58/63  | 51. "The Myth of the Other", 148/109   | 100. <i>The Savage Mind</i> , 22/16   |
| 6. "Writing Itself: On Roland Barthes" [D], 193/xix   | 52. "The Myth of the Other", 148/109   | 101. <i>The Age of Structuralism</i> , 6/17   |
| 7. Lévi-Strauss, 58/63  | 53. "The Myth of the Other", 149/110   | 102. <i>The Savage Mind</i> , 3/1   |
| 8. "Writing Itself: On Roland Barthes", 194/xx  | 54. <i>Structuralism</i> , 105/88  | 103. <i>Structuralism</i> , 114/87  |
| 9. Lévi-Strauss, 16/25  | 55. "The Myth of the Other", 149/110   | 104. <i>The Savage Mind</i> , 15-16/11  |
| 10. <i>The Age of Structuralism: Lévi-Strauss to Foucault</i> (henceforth <i>The Age of Structuralism</i> ) [E], 6/16 | 56. "The Myth of the Other", 149/110   | 105. "In Praise of Amateur: On Roland Barthes and <i>La chambre Claire</i> " [J], 163 |
| 11. Lévi-Strauss, 16/25   | 57. <i>Structuralism</i> , 4 note 2  | 106. <i>Structuralism</i> , 94/71   |
| 12. <i>The Age of Structuralism</i> , 190-191/185   | 58. <i>Structuralism</i> , 123/95  | 107. <i>The Age of Structuralism</i> , 5/16   |
| 13. Lévi-Strauss, 16/25   | 59. <i>Structuralism</i> , 4 note 2  | 108. <i>The Age of Structuralism</i> , 5/16   |
| 14. Lévi-Strauss, 14/23   | 60. <i>Structuralism</i> , 124/95-96   | 109. <i>The Age of Structuralism</i> , 4/15   |
| 15. <i>The Savage Mind</i> [F], 297-298/259-260   | 61. <i>Structuralism</i> , 116/88  | 110. <i>The Savage Mind</i> , 22/16   |
| 16. Lévi-Strauss, 15/24   | 62. Lévi-Strauss, 58/63  | 111. <i>The Age of Structuralism</i> , 6/17   |
| 17. <i>The Age of Structuralism</i> , 3/14-15   | 63. <i>Structuralism</i> , 12/2  | 112. <i>The Savage Mind</i> , 23/17-18  |
| 18. Lévi-Strauss, 14/23   | 64. <i>Structuralism</i> , 125/97  | 113. <i>The Age of Structuralism</i> , 6/17   |
| 19. <i>The Age of Structuralism</i> , 4/15  | 65. <i>Structuralism</i> , 124/95  | 114. Lévi-Strauss, 16-17/25-26  |
| 20. Lévi-Strauss, 14/23   | 66. <i>The Savage Mind</i> , 3/1   | 115. <i>The Age of Structuralism</i> , 3-4/15   |
| 21. Lévi-Strauss, 41/49   | 67. <i>The Savage Mind</i> , 4/1   | 116. <i>The Savage Mind</i> , 24/18   |
| 22. <i>Structuralism</i> , 112/86   | 68. Barthes: <i>A Very Short Introduction</i> (henceforth Barthes) [I], 88/89-90                                 | 117. <i>The Age of Structuralism</i> , 14/23  |
| 23. <i>Structuralism</i> , 115/88   | 69. <i>The Savage Mind</i> , 4/2   | 118. <i>The Age of Structuralism</i> , 6-7/17   |
| 24. <i>The Age of Structuralism</i> , 214/211   | 70. <i>The Savage Mind</i> , 4-5/2   | 119. <i>The Savage Mind</i> , 43/35   |
| 25. <i>Structuralism</i> , 114/87   | 71. <i>The Savage Mind</i> , 5/2   | 120. <i>The Savage Mind</i> , 43/35   |
| 26. <i>The Age of Structuralism</i> , 3/14  | 72. <i>The Savage Mind</i> , 5/2-3   | 121. <i>The Age of Structuralism</i> , 7/17   |
| 27. Lévi-Strauss, 138/137   | 73. <i>The Savage Mind</i> , 6/3   | 122. <i>The Savage Mind</i> , 43/35   |
| 28. <i>Structuralism</i> , 22/10  | 74. <i>The Savage Mind</i> , 6/3   | 123. <i>The Savage Mind</i> , 25/19   |
| 29. <i>Empire of Signs</i> [G], 51-56/33-36   | 75. <i>The Savage Mind</i> , 7/4   | 124. <i>The Savage Mind</i> , 28/21   |
| 30. <i>Empire of Signs</i> , 52/34  | 76. <i>The Savage Mind</i> , 8/5   | 125. <i>The Savage Mind</i> , 26/20   |
| 31. Lévi-Strauss, 36-37/44-45   | 77. <i>The Savage Mind</i> , 9/5   | 126. <i>The Age of Structuralism</i> , 7/17   |
| 32. Lévi-Strauss, 37/45   | 78. <i>The Savage Mind</i> , 11/7  | 127. <i>The Savage Mind</i> , 28/21-22  |
| 33. Lévi-Strauss, 62/67   | 79. <i>The Savage Mind</i> , 12/8  | 128. <i>The Age of Structuralism</i> , 7/17-18  |
| 34. Lévi-Strauss, 101/101   | 80. <i>The Savage Mind</i> , 13/9  | 129. <i>The Savage Mind</i> , 44/36   |
| 35. Lévi-Strauss, 56-57/61-62   | 81. <i>The Savage Mind</i> , 48/39   | 130. <i>The Age of Structuralism</i> , 7/17-18  |
| 36. <i>Structuralism</i> , 116-117/89   | 82. <i>The Savage Mind</i> , 14/9-10   | 131. <i>The Savage Mind</i> , 26/19   |
| 37. Lévi-Strauss, 56-57/62  | 83. <i>The Savage Mind</i> , 13-14/9   | 132. <i>The Savage Mind</i> , 26-27/20  |
| 38. <i>Empire of Signs</i> , 54/34-35   | 84. <i>The Age of Structuralism</i> , 15/24  | 133. <i>The Savage Mind</i> , 27/21   |
| 39. <i>Structuralism</i> , 22/10  | 85. <i>Structuralism</i> , 132/103   | 134. <i>The Savage Mind</i> , 28-29/21-22   |
| 40. <i>The Age of Structuralism</i> , 207/205   | 86. <i>Structuralism</i> , 132/103   | 135. <i>The Savage Mind</i> , 28/21   |
| 41. <i>The Age of Structuralism</i> , 210/208   | 87. <i>Structuralism</i> , 133-134/104   | 136. <i>The Savage Mind</i> , 26-27/20  |
| 42. <i>Structuralism</i> , 107-108/82   | 88. <i>The Savage Mind</i> , 14-15/10  | 137. <i>The Savage Mind</i> , 24/18   |
| 43. <i>Structuralism</i> , 109/83   | 89. <i>The Savage Mind</i> , 15/10   | 138. <i>The Savage Mind</i> , 27/20   |
| 44. <i>Structuralism</i> , 108/82   | 90. <i>The Savage Mind</i> , 15/10-11  | 139. <i>The Savage Mind</i> , 27/21   |
| 45. <i>The Age of Structuralism</i> , 144/145   | 91. <i>The Savage Mind</i> , 16/11   | 140. <i>The Age of Structuralism</i> , 15/24  |
| 46. <i>The Age of Structuralism</i> , 144/145   | 92. <i>The Savage Mind</i> , 16/11   | 141. Barthes, 55/56   |
|   | 93. <i>The Savage Mind</i> , 16/11   | 142. Barthes, 58/58   |
|   | 94. <i>The Savage Mind</i> , 16/11   | 143. Barthes, 32/32   |
|   | 95. <i>The Savage Mind</i> , 21/15   | 144. Barthes, 33/34   |
|   |  | 145. Barthes, 36-37/37  |
|   |  | 146. Barthes, 34-35/35-36   |

Table 1: The 146 discourse fragments found in "City Froze in Time" Source: Shu Wang, "Shijian Tingzhi de Chengshi" [City Froze in Time], 130-70.

| Chinese bibliography  | Corresponding non-Chinese bibliography   |
|---|--|
| [A] Leach, Edmund. <i>Le Wei Si Te Lao Si</i> [Levi-Strauss]. Translated by Qingren Wang. Beijing: Joint Publishing, 1988.  | Leach, Edmund. <i>Lévi-Strauss</i> , 4th ed. London: Fontana Press, 1996.  |
| [B] Kuroi, Mizuo and Mizura Kiko. "Fengshui yu Chengshi Xingxiang" [Chinese Geomancy and Urban Image]. In <i>Fengshui Yanjiu</i> [Research of Fengshui Theory], edited by Qibing Wang, 299-310. Tianjin: Tianjin University Press, 1998.  | No corresponding non-Chinese literature found  |
| [C] Broekman, Jan M. <i>Jiqion Zhuyi: Moskow-Prague-Paris</i> [Structuralism: Moscow-Prague-Paris]. Translated by Youzheng Li. Beijing: The Commercial Press, 1980.   | Broekman, Jan M. <i>Structuralism: Moscow-Prague-Paris</i> . Translated by Jan F. Beckman and Brnhilde Helm-Dordrecht: D. Reidel Publishing Company, 1974. |
| [D] Sontag, Susan. "Xiezu Benshen, Lun Luo Luo Ba Te" [Writing Itself: On Roland Barthes]. In <i>Fuhuaao Yuanli: Jiqion Zhuyi Woxue Lilun Woxuecan</i> [Elements of Semiology: Selected Essays of Structuralism: Literary Theory], translated and edited by Youzheng Li, 182-207. Beijing: Joint Publishing, 1988.  | Sontag, Susan. "Writing Itself: On Roland Barthes." In <i>A Barthes Reader</i> , edited by Susan Sontag, vii-xcvi. New York: Hill & Wang, 1982.            |
| [E] Kurzwel, Edith. <i>Jiqion Zhuyi Shidao: Cong Lei Wei-Si Te Lao Si dao Fu Ke</i> [The Age of Structuralism: Lévi-Strauss to Foucault]. Translated by Linyi Yin. Shanghai: Shanghai Translation Publishing House, 1988.   | Kurzwel, Edith. <i>The Age of Structuralism: Lévi-Strauss to Foucault</i> . New York: Columbia University Press, 1980.                                     |
| [F] Lévi-Strauss, Claude. <i>Taxing de Srwei</i> [The Savage Mind]. Translated by Youzheng Li. Beijing: The Commercial Press, 1987.   | Lévi-Strauss, Claude. <i>The Savage Mind</i> . London: Weidenfeld and Nicolson, 1966.  |
| [G] Barthes, Roland. <i>Fuhua Dignao</i> [Empire of Signs]. Translated by Naitou Sun. Beijing: The Commercial Press, 1994.  | Barthes, Roland. <i>Empire of Signs</i> . Translated by Richard Howard. New York: Farrar, Straus and Giroux, 1983.   |
| [H] Zhang, Longxi. "Fei Wo de Shenghua — Xifangren Yanzhong de Zhongguo" [The Myth of the Other: China in the Eyes of the West]. In <i>Wenhua Lisheng yu Wenhua Liyong — Shi Jiqion Baichu Jianguoshu</i> [Culture Equivalence and Culture Use: Speeches Delivered by Jonathan Spence at Peking University], edited by Rong Jiang, 147-173. Beijing: Peking University Press, 1990. | Zhang, Longxi. "The Myth of the Other: China in the Eyes of the West." <i>Critical Inquiry</i> 15, no. 1 (Autumn 1988): 108-133.                           |
| [I] Culler, Jonathan. <i>Luo Luo Ba Te</i> [Roland Barthes]. Translated by Jian Fang. Taipei: Laurent Publications, 1992.   | Culler, Jonathan. <i>Barthes: A Very Short Introduction</i> . Oxford: OUP Oxford, 2002.  |
| [J] Hsu, Chu-Lin. "Yeyu Song — Guanyu Luo Luo Ba Te yu Ming Shi Yishu" [In Praise of Amateur: On Roland Barthes and <i>La chambre claire</i> ]. In <i>Ming Shi: Sheying Zaji</i> [La chambre claire], edited by Yongsheng Xiao, 151-167. Taipei: Idea Photography Taiwan, 1995.   | No corresponding non-Chinese literature found  |

Table 2: A bibliography of "City Froze in Time" Source: Shu Wang, "Shijian Tingzhi de Chengshi" [City Froze in Time], 130-70.



Diagram 1: Mapping of the compositional pattern of "City Froze in Time" Source: Shu Wang, "Shijian Tingzhi de Chengshi" [City Froze in Time], 130-70. Note: The mapping is not provided simply to offer a comprehensive bibliographic list of texts quoted in "City Froze". Rather, the purpose of the presented mapping is to visually represent how heterogeneous discourses are juxtaposed in Wang's essay. There is a chance that new fragments may be identified as readers continue to compare Wang's essay with those of other authors; in this case, the specific details of the bricolage form of the essay would change, but its patchwork nature would remain the same.

The bricolage pattern of the 146 textual fragments found throughout “City Froze” can be visualised further. In Diagram 1 above, each textual fragment listed in Table 1 is represented as a coloured circle. The circles in Diagram 1 are sorted vertically into 10 rows corresponding to the bibliographic sources presented in Table 2, which are labelled alphabetically in the far-left column of the diagram from “Source [A]” to “Source [J]”. Circles of the same colour represent textual fragments derived from the same source. Meanwhile, corresponding with Table 1, the circles in Diagram 1 are also sorted horizontally according to the order in which they appear in the text. For example, the first black circle that is highlighted in the upper left-hand corner of Diagram 1 belongs to “Source [A]: *Lévi-Strauss*” and is the first identified textual fragment to appear in “City Froze”.

Diagram 1 embodies the Lévi-Straussian notion of bricolage. In Diagram 1, each circle marks out an event of theorising and writing about the city using codes found in other authors’ texts. In these events, linguistic signs become blocks of constructing ideas, which carry within them meanings of the past and the traces of various writers’ engagements with written marks. The patchwork of the essay formulates a second-level significance, which renders the concept of bricolage perceptible. In this sense, the essay goes beyond technical modes of representation but is charged with symbolic force.

It should be clarified that the above analysis implies no intention to deny the practical necessity of standard academic referencing. The article only attempts to highlight that academic referencing is simultaneously an element of scientific writing and a cultural practice; it is a template that is not ideologically free but charged with presuppositions. Consequently, the article suggests that it understands Wang’s challenging practice of referencing without overlooking his very specific critical position.

## Building with the Past

Considerable research has been focusing on the built projects of the Amateur Architectural Studio, which was cofounded by Wang and his professional partner and wife, Lu Wenyu. Nevertheless, comparative studies of Wang’s written and built works remain rare, which leaves the writing–building equivalence claimed by the architect underexamined. In fact, forms of bricolage are readily discernible in Wang’s typology design and architectonics.

The CAA Campus’s complex consists of three building types: hill, water, and courtyard type houses, which are geometric abstractions of distinctive forms that the architects extracted from various historical sources (Figure 1).<sup>22</sup> Each type repeats several times on the campus site while varying to fit particular topographical and compositional conditions. For example, defined by their twisting and undulating volumes, Buildings 11 and 18 are variations of the hill type house and are modelled on the Buddhist grotto of Lingyin Temple outside Hangzhou. Buildings 14 and 19 are water type houses whose curvilinear roofs metaphorically refer to the ripples of water depicted in traditional Chinese landscape paintings. Buildings 12, 13, 15, 16, and 17 belong

22. Shu Wang and Wenyu Lu, “Zhongguo Meishu Xueyuan Xiangshan Xiaoyuan Shannan Erqi Gongcheng Sheji” [Phase II of Xiangshan Campus, China Academy of Art], *Shidai Jianzhu* [Time+Architecture], no. 3 (2008): 72-84.

to the courtyard type, which was historically the most common form of vernacular house in the area (Figure 2). Like the bricolage of Wang's theoretical texts, the typology design of the CAA Campus combines selected and transformed historical references from local religious, urban, and landscape traditions to house new programmes and sustain cultural continuity.

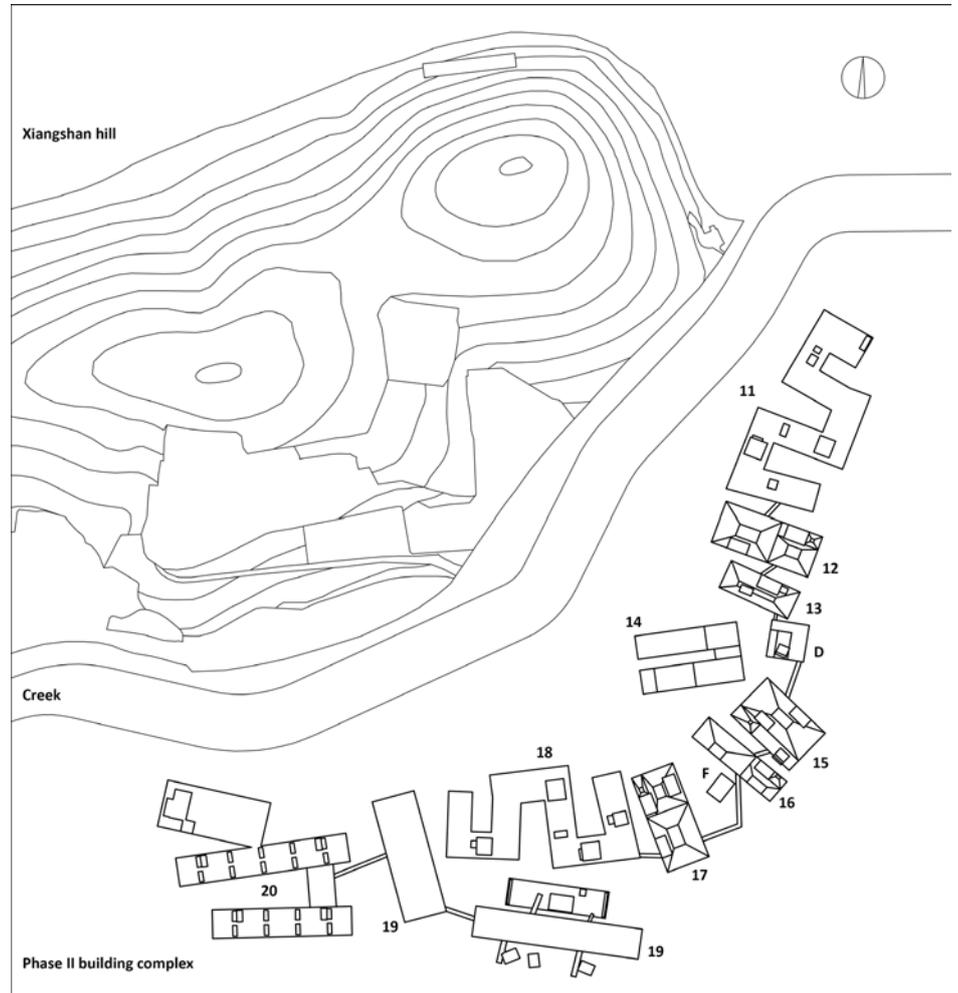
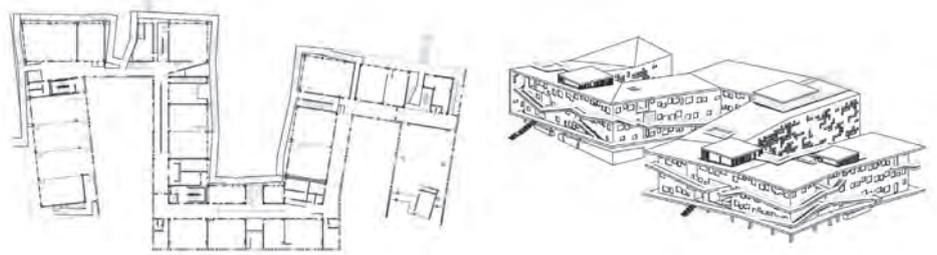
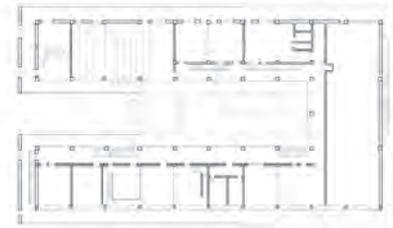


Figure 1: The overall plan of the Xiangshan Campus of the China Academy of Art, Phase II, Hangzhou, 2007 (author's drawing)

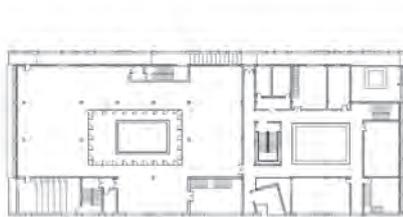
Source: Shu Wang and Wenyu Lu, "Zhongguo Meishu Xueyuan Xiangshan Xiaoyuan Shannan Erqi Gongcheng Sheji" [Phase II of Xiangshan Campus, China Academy of Art], 72-84.



**Building 18 - hill type house**



**Building 14 - water type house**



**Building 12 - courtyard type house**

Figure 2: Three building types on the Xiangshan Campus of the China Academy of Art, Phase II, Hangzhou, 2007 (author's drawing)  
 Source: Shu Wang and Wenyu Lu, "Zhongguo Meishu Xueyuan Xiangshan Xiaoyuan Shannan Erqi Gongcheng Sheji" [Phase II of Xiangshan Campus, China Academy of Art], 72-84; Shu Wang, *Imagining the House* (Zürich: Lars Müller Publisher, 2012).

The idea of making with the past is also detectible in Wang's architectonics. In a series of projects – the Five Scattered Houses, Ningbo (2006); the CAA Campus; the Ningbo History Museum; and the *Shui'an Shanju* Guesthouse, Hangzhou (2011) – Wang adopted a vernacular tiling technique known as *Wapan*, which enabled local craftsmen to build with materials salvaged from torn-down villages that were deemed to be obstructive to China's rapid urbanisation. The Ningbo History Museum's masonry facade presents a spectacle of heterogeneity wherein broken tiles, bricks, and other irregular pieces of various colours, sizes, shapes, textures, and manufacturing dates are rearranged in a dramatic form (Figure 3). The aesthetic experience evoked by the museum's facade is somehow comparable to that of reading Wang's theoretical texts, as its material hybridity displays "a visual manifestation of fragmentation" that attracts attention to the "enigmatic juxtaposition" of ill-fitting, recycled masonry blocks, which, in

23. Hing-Wah Chau, "The Aesthetics of Reuse: The Materiality and Vernacular Traditions of Wang Shu's Architecture", in *Unmaking Waste 2015 Conference Proceedings*, ed. Kathrine Thornton (Adelaide: Zero Waste SA Research Centre for Sustainable Design and Behaviour, 2015), 360; David H. Fleming, "The Architectural Cinematicity of Wang Shu and the Architectonic Cinema of Jia Zhangke: Diagrammatically Decomposing the "Main Melody" in Monumental Assemblage Art", *Journal of Urban Cultural Studies* 3, no. 1 (2016): 45.

turn, "necessarily gather new meanings once they [the masonry blocks] become arranged".<sup>23</sup>

Through *Wapan*, Wang and his team celebrate coauthorship as an essential architectural quality whereby different types of craftsmanship and materials, cultural and natural forces, and human and nonhuman agencies beyond the architects' immediate control are honoured in and absorbed and fused into the masonry masterpiece. In Wang's built version of installation art, the nonlinear past–present order is pushed to a new level. The facade recovers the natural link of temporality, events, matters, and human perception and, in turn, resists abstracting time into an unlimited accumulation of mathematically determined, monotonous intervals. In a broader sense, Wang's reassembling of material offers an architectural critique of Chinese state-sanctioned urban renovation, which ruthlessly erases existing urban fabrics with their enduring human attachments in the name of progressive modernisation. These cases witness forms of bricolage embedded in Wang's built works. Furthermore, the shared bricolage pattern in the architect's written and built works suggests that amid them, there exists a radical transition of make-do logic from building design to reflection on design.



Figure 3: The Ningbo History Museum's masonry wall (author's photo)

## Concluding Remarks

24. Gaojin, Hale, and Wang, "Novelistic Essay".

The presented close reading reconfirms the previous research finding that in Wang's PhD thesis and other published essays based on this thesis, the architect consciously appropriates other writers' texts to formulate his own writing.<sup>24</sup> Furthermore, by understanding Wang's writing approach with reference to the architect's specific theoretical context, the article demonstrates that Wang's challenging writing method is an integral component of his theoretical project. The Lévi-Straussian notion of bricolage, or making do with the readymade, has both informed Wang's typology design theory and supplied the cultural logic beneath the theory's textual surface. Wang's writing approach brings to the fore the dimension of cultural continuity, which is arguably inherent in activities of theorising architecture but suppressed to some extent in scientific norms of quotation. Additionally, Wang pushes the logic of cultural continuity to an extreme and expands it into the procedure of scientific writing. His essay is a mosaic piece made with the past and coauthored by many. The unconventional characteristics of Wang's essay echo in several aspects of his built works. The typology design of the CAA Campus incorporates distinctive historical forms into the public project. By adopting the *Wapan* technique, Wang and his team construct literarily using recycled urban debris bearing traces, memories, and various agencies. Examining Wang's writing method does not confine the reader to the margin of his design thought. On the contrary, it reveals the fundamental, but sometimes overlooked, core of Wang's theoretical project in which an attempt is made to demolish "the distinction between theory and design, concept and object".