Potential for Interdisciplinary Collaboration Between Architecture and Social Science in Post War Urban Redevelopment

Morten Gjerde
Victoria University of Wellington

Emina Kristina Petrović
Victoria University of Wellington

Casimir MacGregor
Building Research Association of New Zealand

Abstract

In 1956, the American Institute of Architects called for increased integration of architecture with the physical, biological, and social sciences. The aspiration to include other forms of knowledge to complement the contemporary emphasis on technology is telling. It begs the question; was this an effort to consolidate and strengthen architectural technology by making it more scientific than in the past? To date it has been unclear whether such collaborations actually occurred, and if they did, whether they persisted. This paper evaluates collaborations between architecture, urban planning and social science during the post World War II period in the United States. Comparisons are made with the Chicago School of Sociology, which produced complex interpretations of how cities performed from the perspective of the people living there. Findings of the sociologists appear to have been insufficiently reflected upon in architectural and urban planning circles. By examining the technocratic aspirations to interdisciplinary collaborations between architecture and social science, it is possible to observe a disconnect between the doing and knowing in the range of relevant disciplines. This exploration reminds us of some of the important obstacles to interdisciplinarity. It also highlights that architecture and urban planning should not be considered without reference to the social world.

Introduction

In 1956, the American Institute of Architects (AIA) approached the National Science Foundation (NSF) with the suggestion that they help organise a conference on the 'relationships of the physical, biological, and social sciences'. Although the conference did not take place until 1959, a seminar on the same topic was held at the 1958 AIA Convention in Cleveland.[1] Communication and knowledge-sharing between architecture and other disciplines, such as sociology, were on the rise from the 1950s and can best be appreciated in the context of technocratic aspirations of the period. An outcome that increased communication and knowledge-sharing between the disciplines was a series of conferences and publications, where overlaps between architecture and the social sciences were discussed. Many of these continue today. This paper takes 1956 as a watershed moment and seeks to examine interdisciplinary collaborations between social science, architecture and urban planning practitioners in America between the 1950s and the late 1960s.

By exploring interactions between architecture, urban planning and social science (especially sociology) this paper seeks to better understand the relationship between technocratic implementation tools and corresponding disciplinary knowledge. The central question driving this investigation is how well-aligned the doing and the knowing are around ambitions toward interdisciplinary collaboration. In order to bring these developments to light, the paper examines the interactions and disconnections between urban planning and the social sciences in and around 1956 America. This period in American history was one of great transformation.[2] During these years the country's cities underwent significant change, ranging from increased urbanisation due to industrialisation and immigration to infrastructure renewal and expansion, including highway systems.[3] Urban planning was seen as a tool to help manage the transformations and their impact on the ways people conducted their lives. Given that the physical changes to the American cities in the post-World War II period were needed mainly because of social transformation, the paper critically searches for evidence of overlaps between the social science and urban planning and architectural practices. First, it provides an overview of the influences within the development of architecture and urban planning in America. Second, it outlines the academic developments in architecture and urban planning during this time, with particular reference to the work of Catherine Bauer Wurster. The third section examines the Chicago School of Sociology and its now seminal studies on urban social life and how this knowledge related to urban planning practices. Our research suggests that while conditions for collaboration and exchange were conducive, in practice the uptake of social science knowledge was limited. Instead,

urban planning continued to rely on abstract notions connected with modernist theories of design,[4] while social science efforts were mainly focused on documenting the complexities of urban life. It is possible to conclude that this dichotomy led to challenges for the two disciplines to overcome if they were to collaborate effectively.

Influences on architecture and urban planning developments

To better understand the architectural and urban planning developments of the post-World War II period, it is helpful to identify the key characteristics of the pre-existing historical context. For this study, two influences are the most relevant: 1) the regulatory context which defined some aspects of urban redevelopment, and 2) the arrival of the European modernist influences on urban planning.

From the nineteenth century, issues related to uncontrolled urban development have been extensively debated in literature.[5] In many parts of the world these discussions gradually began to focus on possible interventions, and in the United States, the federal power to support such improvements increased with the Housing Act of 1937.[6] This was the first act that created an opportunity for the federal government to build housing directly (although only as a model estates), and also empowered individual states to increase their housing stocks. In the first decade after the Act was introduced, a total of 165,000 new units were delivered.[7] The Act was framed to provide financial assistance to the states 'for the elimination of unsafe and unsanitary housing conditions [and] for the eradication of slums'.[8] Through the extensive efforts of Catherine Bauer and other proponents of modern housing, a loophole was also created that would allow housing to be constructed on bare land. In the first decade after the Act was introduced, 28% of all development was on previously undeveloped land.[9] After publishing the *Modern Housing* (1934),[10] Bauer directed her advocacy efforts toward this legislation in the hope that working families could have better access to quality housing. While the Act has at times been seen as a Pyrrhic victory of sorts, some recent works argue that it was 'a triumph of liberal activism that came through the legislative 'sausage-making' process surprisingly well.'[11] Many of the key features of the 1937 Housing Act were retained in the subsequent 1949 Housing Act.

Another influence was the relevance of the social sciences in modernist approaches to urban planning. The Congress for Modern Architecture (*Congrès Internationaux d'Architecture Moderne* or CIAM) confirmed this during their first meeting in La Sarraz in 1928, when the membership asserted the importance of 'putting architecture back on its real plane, the economic and sociological plane.'[12] CIAM can be seen as deliberately

aspiring to create an avant-garde, anti-traditionalist architecture, with 'efforts to reform society through architecture.'[13] The question is, how did these sentiments evolve into practice?

The field of urban planning was reasonably well established as a professional discipline in the late-nineteenth and early-twentieth centuries, accompanied by legislation and professional education in the area.[14] During this period cities were mainly understood through statistical analysis, with reference to land use activities, residential densities, income and demographic characteristics of the inhabitants. Rather than continue with this tradition, CIAM proposed changing the focus onto four urban functions: dwelling, work, recreation and transportation, in order to confront the perceived problems.[15] These statements were subsequently reinforced in the Athens Charter, which was based upon the Town-Planning Chart from the fourth CIAM Congress, held in 1933 in Athens,[16] and much later in José Luis Sert's *Can Our Cities Survive?* (1942).[17]

Unsurprisingly, this approach was challenged for oversimplifying the actual circumstances, with some of this criticism also coming from within CIAM. Arthur Korn and Cornelius van Eesteren both argued that production and class relationships, as well as prevailing social conditions, were poorly analysed. These were needed to inform and support predictions of users' need in various areas, as well as toward aesthetic principles.[18] Additional critique was directed at this emphasis on four urban functions by Lewis Mumford, who declined to write the introduction for Sert's *Can Our Cities Survive?* He argued that 'the four functions of the city do not seem to me to adequately cover the ground of city planning: dwelling, work, recreation, and transportation are all important. But what of the political, educational, and cultural functions of the city design.'[19]

Such simplifications limited CIAM's ability to foster specific strategies to redirect attention toward social factors. In turn, this constrained their ability to bridge existing gaps between urban planning and social sciences. The weakness of this link with social sciences was perceived to extend across all modernist approaches to urban planning.

Academic developments in architecture and urban planning

As the intense slum clearances and redevelopments informed by the ideas of European modernists accelerated, plans for extensive redevelopment were drawn up and implemented in cities across the country.[20] Funding from two government initiatives, the GI Bill and the Housing Acts of 1937 and 1949, helped support large scale redevelopment.

While modernist design approaches became increasingly common, dissatisfaction with the built outcomes also began to grow. Questions began to surface around the appropriateness of these large scale redevelopments as solutions for the poverty and poor environmental conditions that had arisen during the Great Depression and the economic regimes of the period.[21] Similarly, the simplicity and sterility of the *Ville Radieuse* and other modern utopian models were being challenged from within the profession by groups such as Team 10, a young group of CIAM upstarts and New Brutalists.[22] Cities were much more complex than Le Corbusier would have us believe and many academic and practicing planners were eager to understand how people could influence and might be influenced by these complexities.

Business leaders and government officials also took interest in cities. With an awareness of scientific advances made by defence industries during the war, many began to look for ways that research could help improve society in times of peace. A rising consciousness of urban blight, shortages of affordable housing, general obsolescence of the urban fabric and awareness of increasing suburbanisation stimulated growth in research activities. As a consequence, government and private institutions would help establish and fund research focussed on hard and soft sciences in a number of leading universities.[23]

The emerging Cold War and anti-communist fervour led academics toward 'techno-scientific thinking' in the 1950s. As academics and universities became aware of persecutions seemingly brought on by the target's political leanings, they retreated toward the centre. By re-focussing their thinking on the sciences, including the social sciences, academics and practitioners were provided with a rationale for not becoming more deeply involved in political discussions.[24] Historians of these developments, Ockman and Sachs, argue that the government demanded, though its actions, a maximum of technical ingenuity with a minimum of dissent and that this completed a process of depoliticising modern architecture in the United States.

These circumstances also led to changes in many of the nation's schools of architecture. There began to develop a second form of modernism, which sought to emphasise social over artistic concerns, with a view to enhancing opportunities for designers to collaborate with other professionals.[25]

With increased funding to universities in the late 1940s and 50s, a number of schools, started to define architectural education as a specialist field, in a similar way to other

academic disciplines.[26] Schools invested in research to enhance their specialist knowledge and to develop the necessary expertise. It had become clear to them that a culture of experts in architecture would lead change in the future, along incremental steps of technological modernisation.

Foundations for collaborative engagement around planning and design of cities had been laid at Harvard University with the establishment of the Graduate School of Design. Shortly after his arrival in 1935, Joseph Hudnut amalgamated Harvard's schools of architecture, landscape architecture and city planning into a single new graduate school, continuing the trends seen elsewhere in the university away from siloed thinking toward increased coordination between and amalgamation of academic subjects.[27] This model fitted well with Hudnut's pedagogical philosophies, which considered design to be a collaborative effort shared equally by experts, interpreting their aesthetic and functional ideas into space and form.[28] This model would later become the model for architectural programmes throughout the country, with the three most relevant to this discussion being the University of Pennsylvania (Penn), the Massachusetts Institute of Technology (MIT) and the University of California at Berkeley.

William Wurster and Catherine Bauer were an interesting thread through these programmes. Bauer had only briefly studied architecture but became familiar with European housing during her extensive travels in 1930. She came to admire contemporary housing in Germany and Scandinavia, which was designed to confront the challenging economic conditions and the harsh local environments. She encountered housing that had been carefully designed for people with a range of different needs and expectations in these countries. She also came to understand that technical, economic and social research was being carried out to inform the designs and to understand the effects the settings once completed were having on the people who used them. By her own admission, what she had seen during her travels came as an epiphany of sorts and changed her from being 'an aesthete to a housing reformer'.[29] Following this, she went on to advocate for architects to be more considerate of people's social and psychological needs in their work. Bauer wrote well and was invited to express her ideas regularly in publications such as the *New York Times* and *Fortune* magazine.

The research she conducted for these articles led to contact with a number of architects and planners, including Adolf Loos and Clarence Stein. She also became acquainted with urban theorist and historian Lewis Mumford while gathering information about European housing communities for a series of articles they were to write together. In

1934, Bauer went on to publish *Modern Housing*, an extensive and well-researched review of housing programs and projects for the pre- and post-WWI periods.[30] Based in large part on what she had discovered during her European visits, Bauer's strong beliefs around social equity and the rights of individuals to access housing that could accommodate their needs were clearly laid out. She wrote that 'good housing for the average citizen is not a normal product of a capitalist society. It can be achieved, even partially, only when there is an active demand by workers and consumers, which is strong enough to over-balance the weight of real estate and allied interests on the other side'.[31] Through her published work, Bauer gained a strong and positive reputation for her knowledge about issues affecting housing. Only she, it seemed, had a full enough picture to be able to write comparative and authoritatively on the subject. This was the basis for her significant contributing to the writing of the 1937 Housing Act. After 1937, Bauer left politics to continue her comparative studies of housing in Europe before eventually ending up in Berkeley with a lectureship in public social service in 1940.

Soon after her arrival there, Bauer met Wurster, who at that time was pursuing a career in architectural practice. Wurster's housing projects were considered highly responsive to place and client needs. After marrying him, Bauer accompanied Wurster to Harvard, where he was to take up doctoral studies in city and regional planning. Bauer had a strong influence on Wurster's professional ethos, and he saw his studies as a way of becoming more closely acquainted with her expertise and professional passions. Then, in 1945, Wurster was offered the role of Dean of architecture at MIT, which he accepted, taking him away from his studies. While he never returned to complete his degree, his interests in planning and social sciences would go on to influence his pedagogical approaches at MIT and later at Berkeley.

The architecture school at MIT included a division of city planning and housing, which emphasised relationships between planning and the social sciences and the practical application of political and economic theory.[32] While they were linked in the organisational structure of the school, Wurster took steps to articulate the planning programme on the basis that the needs of the planning profession were quite different to those of architects. This set up the conditions for collaborations to occur between experts from different fields as he reorganised the curriculum around the design studio. Students were encouraged to take responsibility for researching problems falling within the domain of their expertise in large scale, complex projects and then to share their findings with other members of the team. Wurster felt that architects could have an exciting and key

role in shaping human environments but that this could only be made manifest by working collaboratively with others and by treating their collaborators as equal peers.[33]

The planner Kevin Lynch was appointed jointly to MIT's architecture and planning programmes by Wurster. Along with championing collaboration between these disciplines, Lynch pursued an agenda of finding out the needs of users at the project and urban scales. The research findings that eventually made their way into the seminal publications *The Image of the City* and *Good City Form* were developed through his work with students in design studio and seminar courses. Lynch was also a member of the Joint Centre for Urban Studies, which had been established between the planning departments of Harvard University and MIT in the 1950s with funding from the Ford Foundation. In a relatively short time, the Joint Centre became the preeminent source of new knowledge in city planning and urban studies.[34] The centre had a mission of pursuing basic research and of influencing, through its research, urban development policies at local, national and international levels.

Like MIT, Penn's multidisciplinary pedagogical model was modelled on Harvard's GSD. A point of difference however, was that the GSD was built around the Bauhaus-derived ideas of Gropius and the architecture-centric views of urban development promoted by CIAM and Sert, whereas the social sciences had displaced these ideas in Penn's Graduate School of Fine Arts (GSFA). In pursuing a social sciences-based approach, institutional leaders looked increasingly toward research being done at the University of Chicago.[35] The design studio at Penn was central to the education of all architects, planners and landscape architects. These studios were linked closely to courses taught in other subject areas, guided by the philosophy that topics such as sociology should be studied while students are immersed in their design work in order that the information is made more relevant. Research was supported by the cross disciplinary Institute for Urban Studies, which had been established to provide the GSFA with what Robert B Mitchell had characterised as the 'equivalent of a medical school teaching hospital.'[36] The scientific resources of the university could thereby be pooled to provide ongoing attention to the rapidly changing issues confronting cities at the same time as generating basic social scientific knowledge.

A final example of how architecture programs were changing in the post-war years to broaden the conception of design across all scales was at the University of California at Berkeley. Wurster was recruited to Berkeley from MIT in 1950 and, with Bauer's interests in social issues to help guide him, he completely reshaped the environmental design

programmes there over the following nine years. Planning, landscape architecture and architecture were each situated in separate parts of the university at the time and Wurster brought them together into a larger, renamed College of Environmental Design. Dropping the term architecture from the name of the college was not uncontroversial but it heralded the term environmental design, which today has broad acceptance and is expressive of the broad range of individual disciplines involved in shaping human surroundings.

Through this set of changes, architectural and planning education in the United States increased its own identity as a discipline, the role of research within the discipline, and at least theoretical readiness for collaboration with other the social sciences.

The rise of social science in response to urban transformations: the Chicago School of Sociology

The increased concern of American architecture and urban planning in post-WWII America with 'techno-scientific thinking' was also found in social sciences, such as sociology attempting to be more scientific in its approach. While architectural technologies sought to transform the world around them, others such as social scientists sought to understand the transformations that were happening around them. The concern in this section is to examine how social scientists (in this case sociologists) sought to understand the transformations that were taking place and how this related to architecture and urban planning in this period. In order to explore these issues, this paper focuses on the so called 'Chicago School' which refers to a specific group of sociologists at the University of Chicago, the main period of which was the turn of the 1900s until the 1950s.

The legend of the Chicago School is generally known within the discipline of sociology and other cognate social sciences for two key elements. First, it focused on urban environments as a form of social laboratory. At the time, Chicago' population was undergoing considerable change, it became increasingly urban through migration from surrounding rural areas, other American cities and immigration from Europe. The growth in population led to increased development and changes to the urban environment. The second key characteristic of the Chicago School was its approach to sociology – where it sought a more scientific approach through the use of more systematic methods such as ethnography to capture the experiences of people living in city.[37]

A key figure of the early days of the Chicago School was Robert E. Park, an American who had initially studied with John Dewey the philosopher. This was followed by doctoral

training in Germany, where he studied with Georg Simmel in Berlin, and Wilhelm Windelband (a philosopher) and Alfred Hettner (a geographer) at the University of Heidelberg. Along with Ernest Burgess and Louis Wirth, Park focused his research on urban ecology. In Wirth's view, a sociology of the city is to discover the forms of social interaction and organization that emerge in relatively permanent, compact settlements of large numbers of heterogeneous individuals.[38] For Wirth and other members of the Chicago School, cities were seen as urban ecologies, defined by a range of features including loss of primary relationships, weaker social control, a greater division of labour and that urban dwellers treat others instrumentally. Wirth suggested that urbanism is created by the relationship between: (A) numbers of population, (B) density of settlement, (C) heterogeneity of inhabitants and group life. Thus, the early Chicago School tended to examine the city in terms of changing patterns of spatial arrangement of populations and institutions.

This view of the urban environment was very different from the next generation of the Chicago School, which was led by Everett C. Hughes, Herbert Blumer. They sought to understand the urban environment from the perspective of symbolic interactionism, inspired by the work of George Herbert Mead. For Mead, reflexivity was crucial to the self as a social phenomenon. Mead provides an opportunity for the individual to carry on internal conversations in reference to an environment that has symbolic meanings and that influences the self. Mead commented on the role of objects and the reflexive nature of the self; '[a]nything—any object or set of objects, whether animate or inanimate, human or animal, or merely physical—toward which he acts, or to which he responds, socially, is an element in what for him is the generalized other; by taking the attitudes of which toward himself he becomes conscious of himself as an object or individual, and thus develops a self or personality.'[39] The symbolic interactionist perspective of the urban environment within the second generation of the Chicago School contrasts with the first generation in that focused on urban ecologies. An understanding of the urban environment from a symbolic interactionist perspective means that the relation people have with the built environment is often positioned inwards towards self-understanding and experience. This is contrasted with the earlier ecological perspective where cities were seen as a complex web of dynamic processes where city, land, culture and population operated as an in separate whole.

In these two early engagements with the urban built environment, the Chicago School of Sociology sought to create knowledge within the academy and to document, as a witness, the mass urbanisation, migration and industrial development that was happening

around them. This intense interest in social issues within the city led to spot maps of Chicago being created, which outlined places of specific behaviours, including alcoholism, homicides, suicides, and poverty.[40] While this desire by the Chicago School to highlight pressing social issues within the urban environment, there is little evidence for its members collaborating with urban designers, planners and architects in order to reform the urban environment materially. Given their intense interest in cities, the questions must be asked; why not?

Broady suggests that sociological research and insight fell out of favour amongst planners and architects especially within the 1950s-1960s.[41] Sociologists (who at the time were situated mainly at universities) often lacked opportunities and financial support, which inhibited the contribution they could make to urban planning. However, Broady also suggests that one reason for the disconnect between sociology and urban planning was due to their different understandings of time. Sociologists rarely predict the future. As can observed with much of the Chicago School, it was more concerned about documenting the present, such as the study of polish immigrants in Chicago by Znaniecki and Thomas in 1918.[42] In contrast, planners must use whatever evidence they have access to in order to anticipate the future. However, as the work of Jane Jacobs[43] would later highlight, this was not always the case.

Sociological engagement with urban planning, particularly the earlier work by Patrick Geddes and Lewis Mumford, tended to stress a 'survey before plan' approach. In this sense, social research including surveys, help to establish the 'facts' that could inform planners about how to achieve social goals for the city – this view of sociology is much criticised by the profession as mere market research. Further, it could be argued that the perspectives of Chicago School, such as the symbolic interaction was concerned with knowledge and experiences of the city, which made it difficult for the professions, such as architecture, planning and urban design to engage with sociological research as they sought to plan space, rather than understand a person's relation to space. This is an interest that would develop later in the domains of architecture and urban design.

However, if during the pre-1956 period American sociological knowledge is reduced to a mere survey tool, this would also suggest that it undermines sociology's contribution to theoretically based analysis of urban life. Theory about cities, and urban life more generally, are important for urban design, planning and architecture as these professions need to understand *how* cities function. However, such insights can only come from accurate empirical observations of a particular phenomenon, which then leads to

development of theories that can help explain what is happening and why. It can therefore be suggested that the lack of collaboration between sociologists, architects and urban planners has been about this contrast; too much simple fact finding and not enough analysis leading to useful and productive theory. Planners supported architectural determinism, the orthodoxy at the time, which states that physical structures determine social relationships[38]. This can be contrasted with sociologists who document experiences of living in cities and how cities are shaped and shape our social relationships.

Conclusion

What emerges through this paper is that, while social scientists and planners in the post World War II period in the United States may have each been interested in people and cities, they viewed the relationships between them from different perspectives. Social scientists were engaged with understanding how people made use of and were impacted by the form of cities. However, it appears that urban planners continued to be less interested in the evidence that social scientists could provide to help them in their work. Planners remained fixed in their interest in how physical space could be manipulated and transformed a priori. Social science has a tendency to look back in order to assemble evidence on which theories can be based, while planning must look forward. Thus to be effective in this, planners need theories on which to base their proposals for urban change and these theories are mostly useful when clearly articulated and responsive to social need – social need in the present, but also the future. It is perceptions of time that differentiates distinguishes between urban planning and social scientific disciplines.

In looking for answers as to why there was little collaboration between the design professions and social science, it is important to look to the wider context in which several sources discredit the notion of value-neutral technocracy during the 1950s to 1970s. This can help explain why social science had limited impact on planning policies at the time. In value-neutral planning, technical expertise is discredited, as it is clear that any planning decision could be justified through expert technical testimony. In practice, and despite a mandate to be responsible to no sector, planners sought to substantiate policies that tended to favour the elite sectors of society. From this it has been argued that when civil servants (planners) collaborate with social scientists, it is to use them to justify preselected policies, rather that help create socially progressive polices. Social scientists' data would be misappropriated and examined from different perspectives until they were found to support the desired conclusions. On these levels, it can be seen that planners continued to serve the needs of the dominant capitalist economy.

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