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RECONSIDERING MIES VAN DER ROHE'S CONCEPT OF TRUE ARCHITECTURE THROUGH ITS PHILOSOPHICAL FOUNDATIONS

The renowned architect Ludwig Mies van der Rohe (Aachen, 1886–Chicago, 1969) argued that the clear understanding of the true nature of architecture was a precondition for a purposeful and effective architectural practice. He often remarked that he was able to gain such an understanding early in his career through the concept of truth maintained by the medieval philosopher Thomas Aquinas. Yet, in his writings and registered oral testimony, Mies did not explain in detail how this concept of truth related to his concept of true architecture. Similarly, this relationship has been insufficiently explored by historians, despite some notable efforts to investigate Mies's thought. Addressing this research gap that has paved the way for misunderstanding of Mies's architectural philosophy, this paper investigates the aforementioned relationship through the content analysis of Mies's discourse excerpted from bibliographic and archival materials. This paper corroborates Mies's claim about such a relationship by showing that his concept of true architecture as 'building-art' [Baukunst] is consistent with Thomas Aquinas's concept of truth as 'the conformity of thing and intellect.' According to the latter concept, truth is manifested in a thing when this thing fulfils its essence as assigned by the intellect that conceived this thing; and when this thing expresses its essence causing a true estimate about itself in any intellect. Similarly, Mies argued that true architecture not only fulfils, but also expresses its essence. While analysing the key terms 'fulfilment,' 'expression' and 'essence' in Mies's discourse, this paper clarifies Mies's concept of true architecture, and opens the way for its reconsideration through its philosophical foundations.

The Guidance of Thomas Aquinas: a Thing is True when it Fulfils and Expresses its Essence

In *Mies van der Rohe: a Critical Biography* (1985), Franz Schulze had already identified the need for a more detailed investigation into the development of various aspects of Mies's thought.¹ Among notable efforts to address this research gap are Fritz Neumeyer's *Mies van der Rohe: Das kunstlose Wort: Gedanken zur Baukunst* (2015 [1986]; Eng. Trans. *The Artless Word: Mies van der Rohe on the Building Art*, 1991), and Detlef Mertins's *Mies* (2014).² Despite such efforts, Mertins recognized that the Miesian scholarship has still referred to only a limited number of the almost eight hundred books Mies is known to have owned, and that many still need further investigation.³ One of these issues is the relationship between Mies's work and the philosophy of Thomas Aquinas. Richard Padovan began to investigate this relationship in his essay "Mies: The Correspondence of Thing and Intellect" (2002) by focusing on Mies's architectural projects.⁴ Meanwhile, the present paper focuses on Mies's architectural philosophy (i.e. the conceptual system that guided his design process), particularly his concept of architecture.

Mies often remarked that he was able to grasp more clearly the concept of true architecture through the philosophy of Thomas Aquinas.⁵ For example, Mies stated, "toward the end of the Art Nouveau movement, we began to ask ourselves: what is architecture? We asked everyone... We searched in the quarries of ancient and medieval philosophy. Since we knew it was a question of the truth, we tried to find out what truth really was. We were very delighted to find a definition of truth by Thomas Aquinas... I never forgot this. It was very helpful, and has been a guiding light."⁶

Thomas Aquinas argued that "truth is the conformity of thing and intellect."⁷ He believed that this conformity was achieved in a thing, thus making this thing true, when this thing fulfilled its essence, nature, or proper operation as assigned by the intellect that had conceived this thing - be this intellect human or divine. To achieve this conformity fully, this thing also had to express its essence through an external appearance that was likely to cause a true estimate about this thing in any intellect. On the other hand, to be true, an intellect also had to conform to things, to the external objective reality. Thus, when a thing changed and the intellect's thoughts were similarly changed, truth remained, even though it was another truth. This change could take place with respect to accidentals, such as the external appearance of the thing; but not with respect to the essentials aspects of the thing, which was unchangeable while the thing remained.⁸

According to Mies, this notion of truth informed his concept of true architecture, which he summed up in the statement "True building-art is always objective and expresses the inner structure of the epoch out of which it arises" (1965).⁹ This statement clarified and refined a concept of architecture that Mies had developed throughout his career, without losing sight of its seminal content and key elements. For example, in his earliest statement summarizing the true nature of architecture - "Building-art is the spatially apprehended will of the epoch" [*Baukunst ist raumgefaßter Zeitwille*] (1923)¹⁰ - Mies had already included the term "building-art" [*Baukunst*], which he openly preferred to "architecture" [*Architektur*] to convey more accurately his architectural philosophy.¹¹ Mies attributed to the term 'building-art' a profounder meaning, which, as it will be shown, was in close harmony with Thomas Aquinas's notion of truth, as Mies related 'building' [*Bau*] to 'fulfilment,' and 'art' [*Kunst*] to "expression."

The Fulfilment of Architecture as 'Building'

Mies defined "building" as the act of "giving form to reality,"¹² which was the opposite of making a meaningless heap of unfulfilled form. Building could only spring into being when it was deeply rooted in reality, being subordinated to objective demands and facts, and to the limits of the possible.¹³ Mies explained, "If we would give to each thing what intrinsically belongs to it, then all things would easily fall into their proper place; only there they could really be what they are and there they would fully realize themselves."¹⁴ This attention to reality, to life, to the evident and valid, required self-restraint and discipline.¹⁵ Mies concluded that "Building is serving."¹⁶

Among all the factors to which building had to be subordinated, the 'construction' - the building materials, techniques, and principles - tended to be prioritized by Mies. He explained, "Building, where it became great, was almost always indebted to construction, and construction was almost always the conveyor of its spatial form."¹⁷ This priority reflected the view that construction was the most permanent factor to consider in a building. It was expected to remain virtually unchanged for several hundred years, much longer than the site conditions, the practical demands, and the mechanical systems, whose process of renewal was notably accelerated in an ever more dynamic society.¹⁸ Thus, a

stable, solid construction containing a flexible, adaptable interior was crucial to avoid the complete replacement of the building. Through its endurance, the construction crystallized the building's original tasks, aspirations, materials, and technologies, standing as a testimony of the particular historical period in which the building was completed. Mies concluded that, "construction is the truest guardian of the times."¹⁹

Construction was more evidently influenced by historical circumstances through technology. Mies believed that technological advancements tended to be gradually diffused and to replace traditional technologies worldwide, like the car had replaced the coach and the refrigerator had replaced the icebox, even though they were more expensive.²⁰ Similarly, the lightweight modern skeleton construction was replacing the heavy traditional masonry walls by reducing material consumption and increasing interior flexibility. To Mies, this modern skeleton was the most efficient, flexible, economical, and ultimately the most perfect type of construction.²¹

Besides subordination to such factors that reflected a broader historical process, the act of building also required a good, simple, and careful work process.²² Mies illustrated this notion with an example: "I saw every day a very old house I liked particularly ... And then I asked myself: 'What is the quality of this house?' ... By looking at it carefully, I found that the brickwork was done very well, and that the stone frame of the windows was done very well, and that the timber work was done very well ... it had very good proportions ... Everything was in harmony with the other parts."²³ Mies synthesized this thought into a single statement that reduced the architectural problem to its simplest elements: "The building-art begins with the *careful* fitting of two bricks."²⁴ This statement could be understood literally as suggested by one of Mies's interventions in the building process, "They were good bricklayers, but they refused to make careful brickwork. They have to lay four hundred bricks a day. We said, 'We want to have it done carefully'. We told the contractors that they had to be careful. I took nearly all the bricks off the first building. As soon as they knew that, they started to be careful."²⁵ However, more than carefulness, Mies aimed at clarity, perfection, and excellence. To achieve this higher level of refinement, he not only took great care in selecting materials and workmanship, but also arranged the various parts of the building and the spaces between them according to the principles of geometry, rhythm, and proportions.²⁶

The Expression of Architecture as 'Art'

Responsiveness to factual circumstances and refinement were prerequisites for achieving 'building'. However, to achieve true architecture, one still had to elevate 'building' to 'building-art'.²⁷ This artistic component regarded mainly the "form" - the visible, external appearance of the building - which matured during the final stages of the design process, following the resolution and consolidation of more basic factors, such as the construction.²⁸ This procedure reflected the view that the form had to rely on construction to express the building as it really was.²⁹ Mies explained, "The few authentic structures of our period exhibit construction as a component of building. Building and meaning are one. The manner of building is decisive and of testimonial significance."³⁰

By relying on construction, the guardian of the times, the form could express not only the building's own character, but also the character of the epoch, and thus expand its significance. Mies highlighted the importance of the expression of the epoch to achieve superior artistic quality, when he stated, "I believe that all great arts have been, and will be, the expression of the essence of their epoch ... Refined solutions of our problems which express these forces of our time are, in fact, art."³¹ Indeed, to Mies, artistry relied less on personal predispositions than on the creative vigour required to push away the old, long obsolete forms; and bring forth meaningful ones that were engaged in the ever-changing life conditions.³²

Like the other arts, the building-art was also meant to stand as a true symbol of the epoch, clarifying in what respects this epoch was similar to earlier ones and in what respects it differed.³³ Still, Mies considered that this "real modern expression"³⁴ was particularly crucial to architecture, an art that was more strongly rooted in the broader objective reality - the common ground on which all could agree - thus making the goal of subjective self-expression inappropriate.³⁵ Mies explained, "If I were subjective, I would be a painter, not an architect. There I can express anything I like, but in buildings I have to do what has to be done ... with a beam of wood or a piece of stone you cannot do much about it. If you try to do much about it, then you lose the character of your material. I think architecture is an objective art."³⁶ Mies added that architectural development did not rely solely on the work of one individual, but rather on the work of generations, even if this collective work was performed unconsciously,³⁷ and even if individuality, personality, and uniqueness also had its natural place in architecture.³⁸

The Essence of Architecture as “Building-art” and “Structure”

Having achieved such an understanding of what a truthful architectural fulfilment and expression was, Mies soon faced another challenge. He explained, “I realized that architecture was always an expression of a particular form of civilization, but then came the difficult task ... what is our civilization? What is essential?”³⁹ While studying the work of contemporary philosophers, particularly Alfred North Whitehead (1861–1947), Mies understood that the sustaining and driving forces of his epoch were universality, science, industrialization, economy, and technology.⁴⁰

To Mies, the architectural expression of the essence of this ‘Technological Age’ was not equivalent to the direct display of technology, that is, of the building’s skeleton as in a work of engineering. For example, when asked why he had determined similar dimensions to building elements that carried different loads, Mies was reported to have answered “Don’t be so literal-minded.”⁴¹ Indeed, instead of a literal expression, Mies aimed at an essential expression. The essence, the inner nature of a thing, transcended the material realm and reached the immaterial realm of ideas and significance, which could be expressed by means of symbols, comparisons, similitudes, and metaphors.

Mies often used the words ‘essence’ and ‘structure’ interchangeably. For example, he wrote “What is its [our time’s] structure, its essence?”⁴² Similarly, he stated that architecture “expresses the real essence of its times,”⁴³ and, on another occasion, that architecture is “an expression of the innermost structure of its time.”⁴⁴ Thus, contradicting common assumptions, Mies did not use the word ‘structure’ to refer to the building’s supporting system. Rather, to Mies, the ‘structure’ was the immaterial, underlying conceptual order that established the rightful place of each part in the whole.⁴⁵ Mies explained, “People often think I have a formula when I talk about structure. They think that I am talking about a steel beam. I’m not, you know. That has nothing to do with it.”⁴⁶ He added, “It is very difficult to stick to this fundamental construction, and then to elevate it to a structure ... I must make it clear that in the English language you call everything structure. In Europe we don’t. We call a shack a shack and not a structure. By structure we have a philosophical idea. The structure is the whole, from top to bottom, to the last detail – with the same ideas. That is what we call structure.”⁴⁷

Mies used this concept of ‘structure’ to refer to the essential idea that sustained specific architectural works, as well as to the essential forces that sustained an epoch. To Mies, the essence of architecture and essence of the epoch were closely related. True architecture was an intrinsic part of its epoch, arising out of the civilization’s needs, aspirations, and means; and acquiring its relevance through its involvement in the evolution of the civilization.⁴⁸ Mies concluded, “Building-art is the sense-bestowal of a historical event. Genuine realization of its inner movement. Fulfilment and expression of its essence.”⁴⁹ While architecture was changed and adapted to its epoch, it continued to be what it had always been - “building-art.”⁵⁰ With this term, Mies clarified the essence of architecture in general, which had ‘building’ as its content and fulfilment; and ‘art’ as its perfect form and expression.⁵¹

Unique Contributions to a Modern Conception of Architecture

Even though Mies proclaimed this concept of true architecture with strong conviction, renowned architectural historians, theorists, and critics have brought this concept into question. For example, the notion that architecture should express the essence of the modern civilization has been regarded as trivial because of its lack of originality and explanatory power.⁵² This notion has also been regarded as threatening because it could turn architecture into a symbol of cultural decline.⁵³ In addition, this notion has been seen as inconsistent with Mies’s buildings because the latter were supposedly based more on effects and appearance than on revelation and truth.⁵⁴ Moreover, the notion that architecture is simultaneously dictated by the brute facts of technology and by the fugitive notion of the time has been considered illogical because of its reliance on two incompatible doctrines: positivism and historicism.⁵⁵ Similarly, the search for a singular architectural expression of the age has been considered outdated because post-1960s culture has prioritized debate and dialogue over perfection.⁵⁶ Finally, the notion that architecture emerges from “the careful fitting of two bricks” has been considered oversimplified for failing to convey the artistic realm of “building-art.”⁵⁷

Mies openly acknowledged that the concept of architecture adopted by him was not original. Once he explained, “I cannot tell you at the moment where I read it, but I know I read it somewhere, that architecture belongs to the epoch.”⁵⁸ He added, “These thoughts are by no means new. They are in fact as old as the movement of new building itself.”⁵⁹ For example, Mies noted that Viollet-le-Duc’s nineteenth-century book *Entretiens sur l’Architecture* had already promoted the idea of architecture as the honest fulfilment of the purpose and the constructive means of the epoch.⁶⁰ Other

such precedents can be identified among Mies's contemporaries. Before the publication of Mies's first journal article in 1922, Hermann Muthesius had already promoted in his book *Stilarchitektur und Baukunst* (1902) the replacement of the Latin-based word 'Architektur' with 'Baukunst' thus encouraging Otto Wagner to change the title of the fourth edition of his book *Moderne Architektur (Modern Architecture, 1896)* to *Die Baukunst unserer Zeit (The Building-art of our Time, 1914)*. This new title summed up the concept of architecture that had been advocated by various other progressive architects who believed that the general oblivion of architecture's intrinsic relationship to its time had brought about a widespread decline in architectural quality.⁶¹

Notwithstanding his unpretentious discourse, Mies made some unique contributions to the aforementioned concept of architecture. For example, Mies rearticulated this concept through his own words, which he slowly elaborated to achieve clear, strong, and accurate statements. Mies explained, "Accuracy is not the conception, but you must have the clearest expression to get at the essences. Take a sentence ... 'Architecture depends upon its time; it is the crystallization of its inner structure.' I worked on these sentences for weeks. It is not just saying things. It is thinking them."⁶² Such a meticulous approach to writing calls for an intense appreciation of the meaning of each word. For example, in his statement "The building-art begins with the *careful* fitting of two bricks," the word 'careful' can refer not only to precision and perfection, but also to symbolic and artistic intent, thus reinforcing Mies's notion of architecture as 'building-art.'⁶³

In addition, Mies elaborated and refined the concept of architecture generally associated with the modern movement by drawing upon unique philosophical foundations. The other architects that also promoted this concept only rarely or never referenced medieval philosophy. Mies, on the other hand, frequently referenced the philosophy of Thomas Aquinas, thus unexpectedly indicating that this medieval philosophy could substantiate and validate a modern conception of true architecture.

Philosophical Foundations

Indeed, the philosophy of Thomas Aquinas validated Mies's view that true architecture involved a close relationship between the subject - the architect - and the external objective reality - the social, economic, and technological developments; and that true architecture realized and represented this reality. Furthermore, Thomas Aquinas's philosophy validated the notion that - also in architecture - immutable, absolute truths and mutable, relative truths coexisted, and had to be reconciled. Architecture had to maintain its essential characteristics, which had endured throughout history, but still adapt to a changing reality and respond to the imperatives of the time.⁶⁴ Thus, while Mies proclaimed that architecture was "alive, changing, new,"⁶⁵ he also warned, "some people think that you should always be doing something new, they ask for more and more novelty - not essential things. The essential is what architecture is about."⁶⁶

Moreover, by defining 'time' as something intrinsic to things that change,⁶⁷ Thomas Aquinas's philosophy also reinforced Mies's view that time, technology, and architecture were intrinsically integrated; and that only a relationship which touched the essence of the time could be real.⁶⁸ This view was especially emphasized by Mies in his discourse through the concept of "civilization," which he defined as a state of social culture marked by advances in all areas that were a by-product of good, simple and honest work, and of a unity of creative thought and action.⁶⁹ Mies explained that the civilization was constantly changing, even if very slowly, being partly in the past, partly in the present, and partly in the future. Moreover, the civilization contained diverse and even contrasting forces. To Mies, true architecture stemmed from this complex and dynamic objective reality by focusing on the most significant, deciding, permanent forces, and by using these forces in the right way. Architecture was the place where the unleashed forces of the civilization were mastered and built into a new order; where historical forces found their true fulfilment, reached their highest potential, and became visible, giving rise to a new world.⁷⁰

Finally, Thomas Aquinas's philosophy also validated Mies's approach to architecture, in which truth could be expressed symbolically, that is, metaphorically, figuratively. Thomas Aquinas explained that to put forward anything by means of similitudes or comparisons with material things was useful, necessary, and natural because human beings attained to intellectual truths through sensible objects.⁷¹

Conclusion

This clarification of Mies's concept of true architecture through its philosophical foundations is relevant because it substantiates the claim that Mies developed his architectural positions with notable validity and consistency.⁷² This clarification also brings into question the aforementioned criticism of Mies's concept of true architecture by showing that this concept was consistent with its distinctive philosophical source; that this concept was based on a unique, thoughtful choice of words; and that this concept fostered the development of an architecture that was up-to-date, purposeful, symbolic, and civilizing.

Moreover, this clarification lays the basis for a reconsideration of Mies's legacy, including the relationship between his architectural philosophy and his buildings that more closely acknowledges his own standards. For example, as previously mentioned, renowned authors have dismissed Mies's official explanations by considering that they corresponded little to his buildings. However, this criticism relied on the assumption that, to Mies, true architecture was merely bare, exposed building materials and components in accordance with the transmission of load.⁷³ This assumption neglected his philosophical background, and the peculiar meaning that Mies attributed to keywords such as 'construction', 'structure' and 'building-art'. Indeed, this meaning was more complex than the aforementioned authors assumed, being consistent with the symbolism and artistic expression that these authors identified in Mies's buildings.⁷⁴

While this consistency with his buildings increases its credibility, Mies's architectural philosophy can still be considered relevant and valuable on its own independent merits, as it addresses profound questions facing the seekers of truth in architecture, such as what constitutes true architecture and how it can be achieved. Indeed, Mies warned that one should not confuse principles with their application.⁷⁵ He believed that the application of profound principles, as opposed to rigid stylistic formulas, was affected by peculiar circumstances, which led to different solutions for each case.⁷⁶ Thus, he could not have considered his projects as ultimate solutions. He explained, "Many people have said that Seagram's is the end of the road – you can't go any further; but to me it is only the beginning. I am sure that other people can start from there and go very far indeed."⁷⁷ Ultimately, Mies invited others to test his ideas, "do it yourself and see what comes out. That is the only proof ... where you really can make an experience."⁷⁸

Author's note:

This paper is part of a larger research project that examines the architectural philosophy of Ludwig Mies van der Rohe. This research project derives from the doctoral thesis 'Theoretical Projects, Nature & Significance through the Case Study of Mies van der Rohe's Work' (2012), which the author completed at the University of Melbourne, Australia, with scholarship support from the University of Melbourne and from the Norman MacGeorge Bequest.

Endnotes

- 1 Franz Schulze, *Mies van der Rohe: a Critical Biography* (Chicago: University of Chicago Press, 1985), 94.
- 2 Fritz Neumeyer, *Mies van der Rohe: Das kunstlose Wort: Gedanken zur Baukunst* (Berlin: DOM publishers, 2015 [Siedler, 1986]); Fritz Neumeyer, *The Artless Word: Mies van der Rohe on the Building Art* (Cambridge, Mass.: MIT, 1991); Detlef Mertins, *Mies* (London: Phaidon Press, 2014).
- 3 Mertins, *Mies*, 7-9, 468 n.10.

- 4 Thomas Aquinas, *The Summa Theologica of St. Thomas Aquinas*, ed. Kevin Knight, trans. Fathers of the English Dominican Province (London: Burns Oates and Washbourne, 2008 [1920]) part I, q.16, a.1-2; <<http://www.newadvent.org/summa/>>. Translation modified.
- 5 Ludwig Mies van der Rohe, "Interviewed by Katharine Kuh," in *The Open Eye: in Pursuit of Art*, ed. Katharine Kuh (New York: Harper & Row, 1971), 33-4; Mies van der Rohe, "Conversation," in *Conversations with Mies van der Rohe*, ed. Moises Puente (New York: Princeton Architectural, 2008), 52-3, 46-7; Mies van der Rohe, "I Really Always Wanted to Know about Truth," *Chicago Daily News* (27 April 1968), 4; Mies van der Rohe, "Where Do We Go from Here?" *Bauen + Wohnen* (14 January 1960): 391.
- 6 Ludwig Mies van der Rohe, "Speech at the Arts Club of Chicago," 2 April 1959, Papers of Ludwig Mies van der Rohe, Manuscripts Division, Library of Congress.
- 7 Richard Padovan, "Mies: The Correspondence of Thing and Intellect," in *Towards Universality: Le Corbusier, Mies and De Stijl* (London, New York: Routledge, 2002), 146-73.
- 8 Thomas Aquinas, *The Disputed Questions on Truth*, ed. Joseph Kenny, trans. Robert W. Mulligan, James V. McGlynn, and Robert W. Schmidt (Chicago: Henry Regnery Company, 1952-4), q.1. <<http://dhspriority.org/thomas/QDdeVer.htm>>; Aquinas, *The Summa Theologica of St. Thomas Aquinas*, ed. Kevin Knight, trans. Fathers of the English Dominican Province (London: Burns Oates and Washbourne, 2008 [1920]) Part I, q.16, a.8. <<http://www.newadvent.org/summa/>>
- 9 Ludwig Mies van der Rohe, "Appendix: Manifestos, Texts, and Lectures," in Neumeyer, *The Artless Word*, 336.
The translation of the word 'Baukunst' can be 'art of building', 'building art' or 'building-art'. This paper uses the latter translation because it is closer to the original, and because it conveys more accurately Mies's view that true architecture integrated building with art, and that building preceded art in being more basic.
- 10 Ludwig Mies van der Rohe, "Texts," 241 (translation modified); Mies van der Rohe, "Anhang: Manifeste, Texte und Vorträge," in Neumeyer, *Mies van der Rohe*, 299; Mies van der Rohe, "Interview with students of the Architectural League, New York," n.d. (ca.1951), page 20, Papers of Ludwig Mies van der Rohe, Manuscripts Division, Library of Congress.
- 11 Ludwig Mies van der Rohe, "Texts," 325, 338; Mies van der Rohe, "Conversation," 66; Mies van der Rohe, "Interviewed by Peter Carter," *20th Century* (Spring, 1964): 140.
- 12 Mies van der Rohe, "Texts", 328.
- 13 Mies van der Rohe, "Texts", 311, 327.
- 14 Mies van der Rohe, "Texts", 325.
- 15 Mies van der Rohe, "Texts", 252-256, 262, 290, 323, 325, 328.
- 16 Mies van der Rohe, "Texts", 327.
- 17 Mies van der Rohe, "Texts", 325.
- 18 Mies van der Rohe, "Texts", 339. Mies van der Rohe, "Interviewed by Graeme Shankland," *The Listener*, 62, n.1594 (15 October 1959): 621; Mies van der Rohe, "After 50 Years, Mies Stands Near Architectural Dream," *Richmond Newspaper* (13 April 1966); Mies van der Rohe, "Mies in Berlin Interviewed by Ulrich Conrads," 1966, 4, Papers of Ludwig Mies van der Rohe, Manuscripts Division, Library of Congress.
- 19 Mies van der Rohe, "Interviewed by Carter", 140; See also: Mies van der Rohe, "Building Details", n.d., Papers of Ludwig Mies van der Rohe, Manuscripts Division, Library of Congress; Mies van der Rohe and M.W. Newman, "Ludwig Mies van der Rohe: Portrait of a Master Architect," *Chicago Daily News* (5 November 1966); Mies van der Rohe, "Texts", 325.
- 20 Myron Goldsmith, "Notebook: Sketches and Notes on Mies, Nervi," 1951-1955, File 32-011T-116, Myron Goldsmith Archive, Canadian Centre for Architecture Archive; Mies van der Rohe, "Conversation", 57.
- 21 Ludwig Mies van der Rohe, "Interview for the journal *Modern Hospital*," March 1945, Papers of Ludwig Mies van der Rohe, Manuscripts Division, Library of Congress; Mies van der Rohe, "Interviewed by Shankland," 621-622; Mies van der Rohe, "Texts", 259; Mies van der Rohe, "Conversation", 73.
- 22 Mies van der Rohe, "Texts", 327.
- 23 Ludwig Mies van der Rohe, "Commencement Speech, Some Thoughts on Civilization," 25 January 1958, The Mies van der Rohe Society. <http://www.miessociety.org/speeches/commencement-speech/>.
- 24 Mies van der Rohe, "Texts", 338. Similarly, Mies ("Building Details") stated, "Architecture begins when two bricks are put carefully together."
- 25 Ludwig Mies van der Rohe and H.T. Cadbury-Brown, "Meeting with Ludwig Mies van der Rohe at the Architectural Association, London," *Architectural Association Journal*, 7-8 (July-August 1959): 36.
- 26 Mies van der Rohe, "Texts", 245-7, 311, 316, 324-5; Mies van der Rohe, "Interviewed by Carter", 140-3; Mies van der Rohe, "Six Students Talk with Mies" (Student publication, North Carolina University School of Design, 1952); Franz Schulze & Edward Windhorst, *Mies van der Rohe: A Critical Biography, New and Revised Edition* (Chicago: University of Chicago, 2012), 247.
- 27 Mies van der Rohe, "Interviewed by Carter", 142; Mies van der Rohe, "Texts", 316.

- 28 Mies van der Rohe, "Texts", 326.
- 29 Mies van der Rohe, "Interviewed by Carter", 138; Mies van der Rohe, "Texts", 241.
- 30 Mies van der Rohe, "Texts", 325.
- 31 Mies van der Rohe to Mr Henry Strutz, 5 February 1960, Papers of Ludwig Mies van der Rohe, Manuscripts Division, Library of Congress.
- 32 Mies van der Rohe, "Texts", 252, 255, 247, 305.
- 33 Mies van der Rohe, "Texts", 245-7, 316-17, 324.
- 34 Mies van der Rohe, "Architectural League," 19.
- 35 Mies van der Rohe, "Interviewed by John Peter," 1964, tape 2, pages 8, 13, John Peter Collection, Sound Division, Library of Congress; Mies van der Rohe, "Texts," 335-6; Mies van der Rohe, "Interviewed by John Peter," 1955, 8, 13; Mies van der Rohe, "Conversation", 59; Peter Carter, *Mies van der Rohe at Work* (London: Phaidon, London, 1999 [1974]), 178.
- 36 Mies van der Rohe, "Conversation", 61.
- 37 Mies van der Rohe, "Architectural League", 8; Mies van der Rohe, "Interviewed by Carter", 140, 143; Mies van der Rohe, "Conversation", 44; Mies van der Rohe, "Arts Club of Chicago", 2; Mies van der Rohe, "About Truth", 4; Mies van der Rohe, "An Architect for his Time: Mies van der Rohe," *Show, The Magazine of the Arts* II, no.10 (October 1962); Caldwell, "As I Remember".
- 38 Ludwig Mies van der Rohe to Mr Douglass V Freret, 8 February 1960, Papers of Ludwig Mies van der Rohe, Manuscripts Division, Library of Congress; Mies van der Rohe, "Texts", 328.
- 39 Ludwig Mies van der Rohe, "Mies at 77 Explains," *Chicago Scene* (February 1964): 29.
- 40 Mies van der Rohe, "Arts Club of Chicago"; Mies van der Rohe, "Texts," 324, 326; Mies van der Rohe, "Interviewed by Carter", 138; Mies van der Rohe, "Conversations", 35; Mies van der Rohe, "Six Students."
- 41 Philip Johnson, *Writings* (New York: Oxford University, 1979), 229.
- 42 Mies van der Rohe, "Texts", 331.
- 43 Mies van der Rohe, "Conversations", 46.
- 44 Mies van der Rohe, "Where Do We Go", 391.
- 45 Mies van der Rohe, "Texts", 323, 325, 338-9; Mies van der Rohe, "Interviewed by Kuh", 38; Mies van der Rohe, "Architectural League", 2,3, 8, 15; Mies van der Rohe, "Conversations", 31,40, 56; Mies van der Rohe, "Interviewed by Carter", 138, 141; Mies van der Rohe, "Interviewed by Shankland", 621; Mies van der Rohe, "Architectural Association", 40; Mies van der Rohe, "Building Details"; Mies van der Rohe, "Interview Mies van der Rohe," *Interbuild*, 6, no. 6 (June 1959): 11; Mies van der Rohe, "Notes of Informal Office Meetings by Jack Bowman", 24 December 1959, 11 March 1960, Papers of Ludwig Mies van der Rohe, Manuscripts Division, Library of Congress.
- 46 Mies van der Rohe, "Conversations", 40.
- 47 Ludwig Mies van der Rohe, Peter Carter, "Mies van der Rohe: An appreciation on the Occasion, this Month, of his 75th Birthday," *Architectural Design*, 31, no. 3 (March 1961): 97, quoted in Ransoo Kim, 'The 'art of building' (Baukunst) of Mies van der Rohe' (PhD Thesis, Georgia Institute of Technology, 2006), 252.
- 48 Mies van der Rohe, "Texts", 278, 299, 301, 304, 331; Mies van der Rohe, "Interviewed by Carter", 143; Mies van der Rohe, "Where do we go", 391; Mies van der Rohe, "Interviewed by John Peter", 1955, Box 5 RPA 00183, 16, John Peter Collection, Sound Division, Library of Congress; Alfred Caldwell, "As I remember conversation by Mies", 19 June 1956, Papers of Ludwig Mies van der Rohe, Manuscripts Division, Library of Congress.
- 49 Mies van der Rohe, "Texts", 325 (translation modified). Mies's original statement in German: "Baukunst ist die Sinngebung eines historischen Geschehens. Echter Vollzug seiner inneren Bewegung. Erfüllung und Ausdruck seines Wesens." *Kunstlose*, 1986, 389.
- 50 Mies van der Rohe, "Texts", 336.
- 51 Mies van der Rohe, "Texts", 325.
- 52 Francesco dal Co, "Excellence: The Culture of Mies as Seen in his Notes and Books," in *Mies Reconsidered: His Career, Legacy, and Disciples*, ed. John Zukowsky (Chicago: The Art Institute of Chicago, 1986), 84.
- 53 Philip Bess, *Till We Have Built Jerusalem: Architecture, Urbanism, and the Sacred* (Wilmington, Delaware: ISI Books, 2006), 87-8.
- 54 For example, Edward R. Ford stated, "In the discussion of Mies's buildings, little attention was given to his brief but well-known writings. Simply put, this is because there is little if any correspondence between the writings and the buildings." See Edward R. Ford, *The Details of Modern Architecture* 1 (Cambridge: MIT Press, 1990), 287. Similarly, while quoting Mies, Wolf Tegethoff argued, "Mies's clumsy attempts in the preliminary plan [of the Glass Skyscraper] betray the fact that 'the structural concept as the essential foundation of the artist's design' has not been seriously tackled at all, let alone solved." See Wolf Tegethoff, "From Obscurity to Maturity: Mies van der Rohe's Breakthrough to Modernism," in *Mies van*

- der Rohe*, in *Critical Essays*, ed. Franz Schulze (New York: Museum of Modern Art, 1989), 43.
- 55 Colin Rowe, *The Architecture of Good Intentions: Towards a Possible Retrospect* (London: Academy Editions, 1994), 29.
- 56 Stanley Tigerman, "Mies van der Rohe: A Moral Modernist Model," *Perspecta*, 22 (1986): 135.
- 57 Beatriz Colomina, "Mies Not," in *The Presence of Mies*, ed. Detlef Mertins (New York: Princeton Architectural, 1994), 201, 214.
- 58 Mies van der Rohe, "Conversations", 55.
- 59 Mies van der Rohe, "Texts", 327. See also Mies van der Rohe, "Conversations", 46, 35.
- 60 Mies van der Rohe, "Texts", 327.
- 61 Stanford Anderson and Hermann Muthesius, *Style-Architecture and Building-Art: Transformations of Architecture in the Nineteenth Century and its Present Condition* (Santa Monica: The Getty Center, 1994), 1-2, 61, 76-7; Joseph Masheck, *Adolf Loos: The Art of Architecture* (London: I.B. Tauris, 2013), 126.
- 62 Mies van der Rohe, "Six Students."
- 63 dal Co, "Excellence", 83; John Barney Rodgers, "Princeton lectures," Spring, 1935, Lecture 1, pages 4-5, Ludwig Glaeser files, Canadian Centre for Architecture Collection.
- 64 Mies van der Rohe, "Texts", 241, 252, 316, 327-8; Mies van der Rohe, "Conversations", 44, 53; Mies van der Rohe, "Interviewed by Kuh", 34; Mies van der Rohe, "Interviewed by Conrads", 1; Mies van der Rohe, "Mies speaks," *Architectural Review*, 145, (December 1968): 452; Mies van der Rohe, "Speech at the National Institute of Arts and Letters, New York City," 22 May 1963, Papers of Ludwig Mies van der Rohe, Manuscript Division, Library of Congress.
- 65 Mies van der Rohe, "Texts", 241.
- 66 Mies van der Rohe, "Interviewed by Carter", 143.
- 67 Aquinas, *Summa*, part I, q.10, a.6.
- 68 Mies van der Rohe, "Where Do We Go", 391.
- 69 Mies van der Rohe, "Interviewed by Carter", 138-9; Mies van der Rohe, "Texts", 316; Mies van der Rohe, "Commencement Speech."
- 70 Mies van der Rohe, "Texts", 300-1, 326, 332, 337; Mies van der Rohe, "Notes by Jack Bowman"; Mies van der Rohe, "Conversations", 36, 40, 85; Mies van der Rohe, "Where Do We Go", 391; Mies van der Rohe, "Mies at 77", 31; Mies van der Rohe, "Interviewed by Carter", 139-40.
- 71 Aquinas, *Summa* I, q.1, a.9.
- 72 For example, Werner Oechslin stated, "A cursory overview of the discussions that took place in Germany in the 1920s reveals, however, that Mies developed his architectural positions radically, with validity and consistency, as did no other architect at the center of the cultural endeavours and intellectual discussions of that time." "Not from an aestheticizing, but from a general cultural point of view' Mies's Steady Resistance to Formalism and Determinism: A Plea for Value-Criteria in Architecture," in *Mies in America*, ed. Phyllis Lambert (New York: H.N. Abrams, 2001), 80.
- 73 For example, Edward R. Ford stated, "Given Mies' advocacy of exposed structure, one would expect to see this in the building, but in fact there is almost no exposed structure; steel columns, steel beams, and steel purlins are all hidden in slabs and walls." See Edward R. Ford, *Architectural Detail* (New York, US: Princeton Architectural Press, 2011), 148. For a similar argument, see Robin Evans, *Translations from Drawing to Building* (Cambridge, Mass: MIT Press, 1997), 232-76 and Robin Evans, "In Perspective: Conceptual vs. Actual Structure," *Perspecta* 31 (2000): 46-9.
- 74 Ransoo Kim ("art of building", 76-83) also addressed this discrepancy between Mies's and some critics' concepts of "structure".
- 75 Mies van der Rohe, "Texts", 323.
- 76 Mies van der Rohe, "Conversations", 55; Mies van der Rohe, "Texts", 252-6, 313; Dirk Lohan, "Mies Today, Some Thoughts on the Relevance of Mies van der Rohe in 1980," *A + U Architecture & Urbanism* 124 (January 1981): 186.
- 77 Ludwig Mies van der Rohe, "Conversation between Ronald Lewcock and Ludwig Mies Van Der Rohe", 7 February 1964, Avery Library at Columbia University, quoted in Kim, "art of building", 269.
- 78 Mies van der Rohe, "Architectural League", 16.