

Re-Covering Mies van der Rohe's Weissenhof: The Ultimate Surface

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I would like to re-examine the multiple roles played by Ludwig Mies van der Rohe at the 1927 *Weissenhof* housing exhibition in Stuttgart, focusing on his own apartment block as a didactic constructed manifesto rather than as an innovative solution to the housing problem. Mies served as first vice-president of the *Deutscher Werkbund*, originator of the *Weissenhof* exhibition. Mies was also director of the *Weissenhof* housing estate and the indoor exhibition hall, in charge of selecting the participating architects for the exhibition of housing, regulator of the final appearance of the buildings, site designer of the overall housing plan, architect of the largest housing block on the site, exhibition designer with Lilly Reich of the Plate-Glass Hall, and author of several statements on the overall exhibition and his own housing block. Literally unable not to take a critical stance in his multiple roles, Mies played these positions against each other and in response to the German housing condition.¹

As simultaneous author, narrator, protagonist, and supporting character, Mies's work at *Weissenhof* engaged several seemingly disparate issues: As director, curator, and site architect he controlled the appearance of the housing units while allowing for freedom of expression, and he balanced the desire for German representation and nationalism with an initial proposal for an international architecture. As architect of his own housing block he juxtaposed "rationalization and typification" with flexibility and creativity; exterior expression of the new with a traditional interior typology; the individual house versus *zeilenbau* housing; the temporary demonstration of how one should live with the permanent housing commissioned by the city of Stuttgart; a specific architectural solution and a speculative generic building; and steel cage structure with what Theo van Doesburg termed "the ultimate surface."

In Mies's policy statement for the *Weissenhof* exhibition catalog, he conveyed the fundamental disparity between architectural rationalization and freedom:

... I thought it necessary, in spite of such current slogans as "rationalization" and "typification," to respond to the challenge posed in Stuttgart by raising tasks out of an atmosphere of the unilateral and the doctrinaire. I have attempted to illuminate the problem comprehensively and have, for that reason, invited the respective representatives of the modern movement to take up positions in regard to the housing problem. In order to permit each one as much freedom as possible to execute his ideas, I have set neither guidelines nor given programmatic orientation.²

Although he wrote of allowing freedom of expression, Mies regulated the exterior appearance of the housing complex and tried to strictly limit the number of participants, similar to Hitchcock and Johnson's selection of representatives of their modern movement for



Fig. 1. Weissenhof, view from the north.

Zustand der Weissenhofsiedlung 1927

- 1- 4 Ludwig Mies van der Rohe (Am Weissenhof 14-20)
- 5- 9 J. J. P. Oud (Pankokweg 1-9)
- 10 Victor Bourgeois (Friedrich-Ebert-Straße 118)
- 11 Adolf G. Schneck (Friedrich-Ebert-Straße 114)
- 12 Adolf G. Schneck (Bruckmannweg 1)
- 13 Le Corbusier mit Pierre Jeanneret (Bruckmannweg 2)
- 14-15 Le Corbusier mit Pierre Jeanneret (Rathenaustraße 1-3)
- 16 Walter Gropius (Bruckmannweg 4)
- 17 Walter Gropius (Bruckmannweg 6)
- 18 Ludwig Hilberseimer (Rathenaustraße 5)
- 19 Bruno Taut (Bruckmannweg 8)
- 20 Hans Poelzig (Rathenaustraße 7)
- 21 Richard Döcker (Bruckmannweg 10)
- 22 Richard Döcker (Rathenaustraße 9)
- 23 Max Taut (Bruckmannweg 12)
- 24 Max Taut (Rathenaustraße 11)
- 25 Adolf Rading (Am Weissenhof 22)
- 26-27 Josef Frank (Rathenaustraße 13-15)
- 28-30 Mart Stam (Am Weissenhof 24-28)
- 31-32 Peter Behrens (Hölzelweg 3-5)
- 33 Hans Scharoun (Hölzelweg 1)

Die Häuser 16-20, 22-25 sind nicht mehr in alter Form aufgebaut.
Haus 21 wurde nicht wieder aufgebaut.

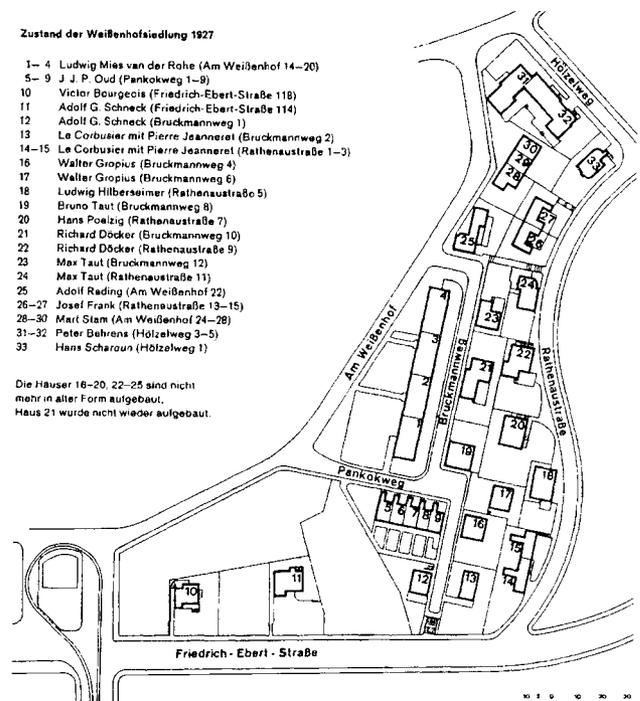


Fig. 2. Plan of Weissenhof.

did not provide an instant transformation of the rooms, as in Gerrit Rietveld's Schroeder House of 1923 where partitions could be moved at will, or as in Mart Stam's sliding entry partition in his *Weissenhof* apartment block. Mies intended the arrangement of partitions to be "flexible" only in terms of the potential to rearrange partitions to comply with different living situations. Describing Mies's apartment block, Sigfried Giedion implied more flexibility than was possible for these plywood partitions: "The inner walls can be disposed according to the liking of the tenants, in whatever manner they choose."⁷ Mies's dialogue between typification and flexibility was specifically fragmented by allowing other architects to partition and furnish the apartments. As a reinforcing undercurrent to this oppositional structure, Mies specified the typical occupant for his block as either the family of a railroad manager (representing typification?) or of an academician (representing flexibility?).⁸ By labeling the prospective occupants, Mies reiterated the key debate of the entire *Weissenhof* exhibition.

In contrast to the innovative spatial configurations of most of the other *Weissenhof* housing blocks, Mies established his apartment unit shell on a prototypical German housing plan template, dating back at least 75 years. The flexibility and creativity Mies demonstrated in his interior apartments was grounded in German tradition, innovative mainly in its absence of permanent partitions and its ability to deviate from the norm. Mies provided a shell based on two living units with established plumbing lines oriented around a central stair. A constructed and published housing project from 1849 shows a bearing wall paradigm for Mies's suggested layout in his published plans.⁹ Heinrich Tessenow, who declined Mies's invitation to build at *Weissenhof*, constructed and published a Berlin housing unit in 1913, as another paradigm for Mies. Although they are nearly identical in plan, the exterior appearance of Tessenow's building is entirely different, using sloped roofs, small recessed windows, exterior ornament, and color in the traditional *heimatstil* manner. Several more projects by Tessenow, Bruno Taut, and other German architects, used at least until 1957, reinforce this basic planning prototype. Mies employed the historical plan as a template for his own interior shell while developing his construction system and facade surface as a *sachlich* innovation.

Mies also referenced his own previous work in Berlin, the *Afrikanischestrasse* housing from 1925-26, as a prototype for his *Weissenhofsiedlung*. Mies transformed this urban two by two-part scheme into his extra-urban project outside of Stuttgart, retaining its overall appearance and configuration. Mies straightened the U-shaped four block Berlin scheme, preserving its apartment unit arrangement, flat roof, plaster skin, rhythmic horizontal fenestration, and lack of ornamentation. He used a steel cage structural system at *Weissenhof*, rather than the load bearing wall system of the *Afrikanischestrasse*. The horizontal but truly punched windows at *Afrikanischestrasse* evolved into near ribbon window at *Weissenhof*. Mies left his exhibition building unfinished, or off-white, in contrast to the light brown facades at *Afrikanischestrasse*. In the development of a new and innovative type of housing, Mies relied directly on a basic German housing prototype and took advantage of his own public housing work in Berlin as a hedgehog-like evolution rather than a fox-like revolution.

At *Weissenhof* Mies also followed the German *zeilenbau*, or row housing formula introduced by Otto Haesler in 1923.¹⁰ As another development of the German housing prototype, Mies reiterated the basic *zeilenbau* program of three stories, flat roof, *sachlich* syntax, and paired apartments on central stairs. Mies even oriented his long block just east of the north-south axis in typical *zeilenbau* alignment, and fitted into the site topography. The minimally fenestrated end facades indicate the potential extension of the building to the north and south, dependent on the dimensions of the site. Mies's block mimics projects such as Ernst May's *Praunheim* development outside of Frankfurt from 1926-27.¹¹

While Mies emphasized the modular expandability of his apart-

ment building, he also articulated its four units as independent entities. Mies's building was described in the official program as House 1, House 2, House 3, and House 4, indicating its modular character while splitting it into four individual segments. Like automobiles moving along an assembly line, Mies suggested the Fordism of his units with four basic types, each available in various models and colors with a package of options.

In relation to both house and housing, one of the two end "Houses," detached from its *zeilenbau* organization, could function independently, and formally resembles Le Corbusier's Villa Stein at Garches from the same year. Each cubic block building has three stories, a partially open roof terrace, white exterior stucco facades, ribbon-type windows, projecting balconies, and varying free plan floors. The side facades of Villa Stein, like the corresponding facades of Mies's *Weissenhofsiedlung*, contain minimal windows in an almost blank facade, equally suggesting their respective potential expansion to larger housing units. As both house and housing, Mies simultaneously referenced the contemporary villa as well as the early twentieth century mass housing situation.

Mies took advantage of the temporary condition of the exhibition and its public exposure to didactically convey another plea for modernity. The contemporary German housing crisis took on secondary significance to advertising the new or the modern to the international public. Mies described the purpose of the *Weissenhof* exhibition as, "to set out in a new direction, because it is clear to me that a new dwelling has consequences beyond its four walls."¹² The ominous backdrop quality of Mies's block acted as a billboard advertising rationalization and typification to the public. The exhibition visitor could penetrate the enormous wall to examine the counter-issue of flexibility and creativity within. Rather than disengaging public and private domains, the building's west billboard wall (proclaiming its monumentality and autonomy like an undecorated shed version of Robert Venturi's Football Hall of Fame building-board) marked the threshold of the public exterior and the public interior during the time of the exhibition. Mies's troped wall, simultaneously conveying association and estrangement, became almost dysfunctional after the exhibition when the public was no longer permitted to experience the flexible interior as dependent upon the typified exterior. The highly articulated west facade mediates between a large-scale *sachlich* advertisement and a minor representation of interior repetitive living units. The monolithic appearance of the west facade, propped up on a leveling plinth to neutralize the sloping site, provides the primary text for the entire *Weissenhof* exhibition.

Rather than creating a specific housing complex, Mies produced

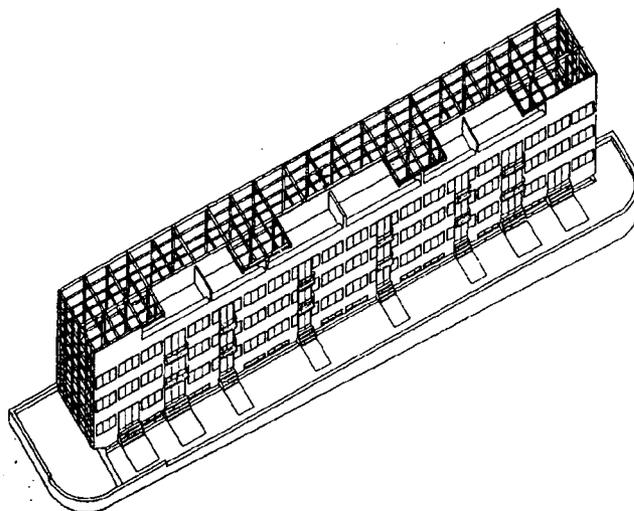


Fig. 6. Mies's *Weissenhof* building as cage and billboard (by author).

a speculative, generic, architectural manifesto. He described his project by stating, "Here, the fundamental anonymous character of our time is apparent."¹³ While the west facade privileges this anonymous and autonomous unity, the interiors were left open for other architects to develop, as in a typical speculative office building. In fact, many of the commissioned interior architects complained about the inordinate amount of light entering the space, that the ceilings were too high, the columns were prohibitive, and that the window divisions made it difficult to place partitions.¹⁴ Mies's open generic shell necessitated creativity and flexibility. Just after World War II, his housing block was converted to a children's hospital, demonstrating its further flexibility and generic quality.

Mies's *Weissenhofsiedlung* operates in a similar generic way to his previous glass skyscraper projects. His floor plans for both the *Freidrichstrasse* Skyscraper of 1921 and the Glass Skyscraper of 1922 indicate only the inordinately thin perimeter walls and the fixed elements of lobby, elevators, and stairs. The interior spaces would have been fitted out to function successfully as offices, by Mies or by other architects or interior designers as in a speculative office building today. In the glass skyscrapers and at *Weissenhof*, the surfaces of the buildings are emphasized over the interior non-spaces. The significance of each resides in its taut, smooth surface condition and open interior.

The steel cage structure Mies employed here for the first time in his career binds together interior and exterior, house and housing, speculative living units and the ultimate surface.¹⁵ Mies's cage, the iconic skeleton discussed by Colin Rowe in his essay "Chicago Frame,"¹⁶ is the structure for the building, both physically and in terms of *gestaltung* (or forming). It resides independently within the floors, roof, and walls of the building, paying slight attention to the

plan configuration it enframes, or as Rowe has described the frame as co-opted by the International Style, "... an autonomous structure perforates a freely abstracted space, acting as its punctuation rather than its defining form."¹⁷ Mies's steel cage at *Weissenhof* becomes the traditional German *fachwerk* skeleton, with masonry, in this case standard bricks turned sideways, or glass infill set between the framing members. Mies wrote in 1927 that the "steel web" was the "basis of all artistic design."¹⁸ Mies permitted the *penitimento* of the steel cage to barely read through the thin plastered walls. The steel skeleton is revealed most prominently as thin white strips barely interrupting the almost-ribbon windows. The narrow gaps suspend the continuous reading windows just enough to call attention to themselves and reveal the trace of the steel they conceal. Mies utilized the steel cage surface image as well to formally articulate multiple local symmetries in the facade and to subdivide the monolithic wall presented to the public.

The unpainted finish surfaces, both inside and out, could barely contain the steel structure that would later break out of its enclosure in Mies's American work. The architect, painter, *De Stijl* polemicist, and critic Theo van Doesburg focused on the thin veil of epidermis on Mies's block in his review of the *Weissenhof* exhibition. Van Doesburg concentrated on what he called "the ultimate surface," stating that, especially in the context of an exhibition, only the surface is important for people and directly influences the morale of the inhabitant. Van Doesburg wrote:

The ultimate surface is in itself the result of the construction. The latter exposes itself in the ultimate surface. Bad construction leads to bad surface. Good construction produces a sound surface with tension.¹⁹

Van Doesburg here articulates the primary message of Mies, communication of a modern *sachlich* ideal on the surface of the tightly stretched wrapper conveying surface tension (*gespanntheit*) and enveloping the steel cage. On the interior, Van Doesburg also pointed out the ceiling surface attenuated by Mies's doors, which stretch from floor to ceiling, writing, "The traditional space between ceiling and doors was abandoned."²⁰ Mies's a-material unfinished surfaces were the primary elements to convey his program of engendering a new conception of non-spatial facade, so attractive to Hitchcock and Johnson in their campaign to further this agenda as the International Style exhibition and text in 1932.²¹ Even the horizontal "ultimate surface," the flat roof ("platter roofed" according to Kurt Schwitters)²² Mies stipulated for all the buildings at *Weissenhof*, acted as a tautly stretched membrane ideologically dominating the interior apartments.

Mies's privileging of surface also provided the focus for his Plate-Glass Exhibit designed with Lilly Reich for the product display exhibition in association with the *Weissenhof* housing estate. The transparent, mirrored, and frosted glass panels of this exhibit, placed in counterpoise to opaque plywood panels, as in Mies's three *Weissenhofsiedlung* interior apartments, also emphasized material as surface within an existing shell. Mies and Reich furnished it as a residence and used linoleum on the floors, as in the *Weissenhofsiedlung*. The Plate-Glass Exhibit was an inversion of Mies's two glass skyscraper projects in relation to the ultimate surface of the *Weissenhofsiedlung*. The fixed exterior facades of the glass skyscraper projects became the fixed interior walls of the Plate-Glass Exhibit, each a fundamentally non-spatial entity favoring surface articulation. Mies continued his privileging of surface over space, especially in the vertical surface, the ultimate surface, as the generator and focus of his architecture regardless of building scale, function, status as temporary or permanent, project or building, or all of the above as at *Weissenhof*.

Colin Rowe has characterized Mies's Glass skyscraper as, "... not only the project for an office building but also the advertisement for a cause."²³ An altered inversion of Rowe describes Mies's *Weissenhofsiedlung* as "not only the advertisement for a cause, but



Fig. 7. Mies's *Weissenhof* building in construction.

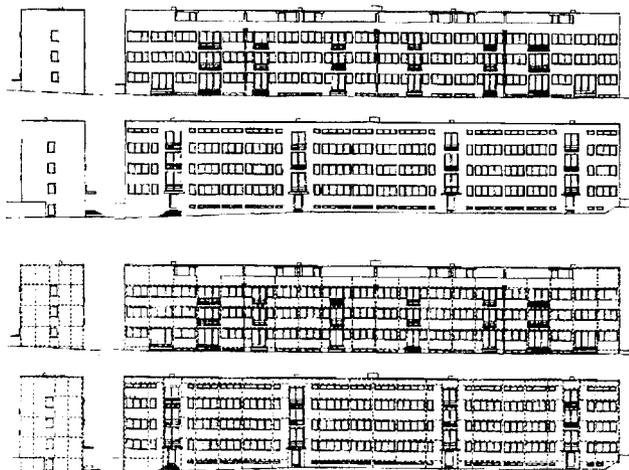


Fig. 8. Mies's *Weissenhof* building elevations and indication of steel frame (by author).

also the project for a housing exhibition." Sigfried Giedion perhaps best portrayed this condition in *Space Time and Architecture*, "The Weissenhof Housing Settlement ... which the Werkbund had entrusted to Mies van der Rohe, is perhaps the clearest indication of the change that had taken place within the all-too-thin layer of the elite."²⁴

NOTES

- ¹ I am indebted to Professor Christian Otto for my initial exposure to the Weissenhof exhibition through his seminar at Cornell University.
- ² Ludwig Mies van der Rohe, "Forward" to *Bau und Wohnung* (Stuttgart: 1927). Quoted in Fritz Neumeier, *The Artless Word* (Cambridge, MA: MIT Press, 1991), p. 259.
- ³ Quoted in Richard Pommer and Christian Otto, *Weissenhofsiedlung 1927 and the Modern Movement in Architecture* (Chicago: The University of Chicago Press, 1991), p. 59.
- ⁴ Manfredo Tafuri and Francesco Dal Co, *Modern Architecture* (New York: Rizzoli, 1979), p. 132.
- ⁵ Mies van der Rohe, "Concerning my Block," in *Bau und Wohnung*. Quoted in Neumeier, *The Artless Word*, p. 259.
- ⁶ Mies van der Rohe, from unpublished lecture manuscript dated March 17, 1926. Published in Neumeier, *The Artless Word*, p. 252.
- ⁷ Sigfried Giedion, *Space Time and Architecture* (Cambridge, MA: Harvard University Press, 1967), p. 552.
- ⁸ Jürgen Joedicke and Christian Plath, *The Weissenhof Colony* (Stuttgart: Karl Krämer Verlag, 1984), p. 58.
- ⁹ See D. Rentschler and W. Schirmer, *Berlin und seine Bauten*, Teil IV, Band B (Berlin: 1974), p. 208.
- ¹⁰ See Kenneth Frampton, *Modern Architecture* (London: Thames and Hudson, 1992), p. 136.
- ¹¹ D.W. Dreyse, *May - Siedlungen* (Frankfurt am Main: Verlag Dieter Fricke GmbH, 1987), p. 7-12. Mies's specification for the family of a railroad manager to occupy his apartment units suggests a relationship to the transport of the prefabricated walls and services to the Praunheim site via specially laid railroad tracks.
- ¹² Mies van der Rohe, quoted in Pommer and Otto, *Weissenhof 1927*, p. 109.
- ¹³ *Ibid.*, p. 110.

- ¹⁴ See Hermann Muthesius's review of the housing exhibition in *Berliner Tagblatt*, 1927, translated in Karen Kirsch, *The Weissenhofsiedlung*, (New York: Rizzoli, 1989) Appendix D, p. 199. Also Kirsch, p. 55-76.
- ¹⁵ Alfred H. Barr, Jr., Henry-Russell Hitchcock, Jr., Philip Johnson, and Lewis Mumford, *Modern Architects* (New York: W. W. Norton & Co., 1932), p. 115.
- ¹⁶ Colin Rowe, "Chicago Frame," in *The Mathematics of the Ideal Villa and Other Essays* (Cambridge, MA: MIT Press, 1976). First published in *Architectural Review*, 1956.
- ¹⁷ *Ibid.*, p. 99.
- ¹⁸ Mies van der Rohe, in Pommer and Otto, *Weissenhof 1927*, p. 110.
- ¹⁹ Theo Van Doesburg, "Stuttgart Weissenhof 1927: Die Wohnung," in *Het Beouwbedrijf*, 1927, in Van Doesburg, *On European Architecture*, translated by C. Loeb and A. Loeb (Basel: Birkhauser, 1986), p. 167.
- ²⁰ *Ibid.*, p. 169.
- ²¹ Henry-Russell Hitchcock and Philip Johnson, *The International Style* (New York: W. W. Norton & Co., 1932). The caption for Mies's Apartment House (Philip Johnson told me in 1988, "Russell wrote the text and I wrote the captions.") reads "Supports between windows treated as part of the wall surface. Despite severe regularity of construction there is great variety in the planning of the individual apartments." (181).
- ²² See Kurt Schwitters, "Stuttgart, 'The Dwelling,' Werkbund Exhibition" in *i-10*, no. 10 (1927): 345-48. Translated by Suzanne Frank in *Oppositions* (Winter 1976-7): 80-83.
- ²³ Rowe, "Chicago Frame," p. 106.
- ²⁴ Giedion, *Space Time and Architecture*, p. 549.

FIGURE CREDITS

- Figs. 1, 2, 4: Jürgen Joedicke and Christian Plath, *The Weissenhof Colony* (Stuttgart: Karl Krämer Verlag, 1984).
- Figs. 3, 7: Richard Pommer and Christian Otto, *Weissenhofsiedlung 1927 and the Modern Movement in Architecture* (Chicago: The University of Chicago Press, 1991).
- Fig. 5: D. Rentschler and W. Schirmer, *Berlin und seine Bauten*, Teil IV, Band B (Berlin: 1974).
- Figs 6, 8: Mark Stankard.