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Iron in the Soul



1929 Barcelona Pavilion reconstruction by Mies van der Rohe ⁱ

The German Pavilion in Barcelona, one of the world's most famous architectural set pieces, is a structure that is barely architecture; being neither villa nor monument. Mies van der Rohe took the opportunity of the commission to distil a view of what architecture could be. In this moment of optimism a number of ideas were concretised and if history had been kinder a different future might have resulted. Hidden in full view is a symbol, a signature of sorts, one that remains stubbornly German. *“There is, something else, something deeper down and thus something more hidden, something that has not yet been revealed.”*ⁱⁱ -

Raphael Moneo

The Pavilion

The Barcelona Universal Exposition was held in 1929. The German pavilion was one of twenty national exhibitions. As a temporary exhibition building it was not meant to last. At the close of the exposition the building was dismantled and its parts scattered across Europe. In 1986 the structure was reimagined. From drawings, recollections and archaeology this contemporary reproduction has been the subject of overlapping enquiries. These layers have enriched and confounded both architects and critics, leaving space for further analysis.

For Mies van der Rohe the Pavilion proved to be a departure from the solidity of his brick villas; Wolf (1925-1927), Esters and Lange (1927-1930). This path would eventually lead to an illuminated, transparent, and crystalline reality, but on foreign soil. Before Mies emigrated to America these ideas were developed in his German projects. Aside from the Tugendhat House (1928-1930), there are only sketches for the Nolde House (1929), Krefeld Golf Club (1930), the Court Houses (1930s), Gericke House (1932) and finally the German Brussels Pavilion (1934). However these incomplete ‘*German*’ projects contain iconic signature, a symbol; and this symbol is introduced in the German Pavilion for the first time.

The Easel

The pavilion has been interpreted as an ideal villa though there is little evidence to support habitation. Nor did it function well as the reception pavilion for King Alphonso XIII. The infamous Barcelona chair, designed for the occasion, went unused and the specially commissioned gold signature book also went unsigned.ⁱⁱⁱ The Pavilion today is a simulacrum created from archaeology, photographs, interviews, sketches and the imagination. The truth is that the Pavilion *re*-constructed in 1984 is not the same as the pavilion constructed in 1929. Jonathan Hill^{iv} has proposed the idea that the newer pavilion is a more accurate representation of the intent of the design that the original, which did not always follow the design especially where it would not be seen. The limitations that had defined the original design required further accommodation on site. That the “*official plan*” produced by Werner Blaser under Mies’s supervision is at variance to the original adds to the layers of confusion and intent. Its late addition to the canon of high modernism may be because of these inconsistencies, as Juan Pablo Bonta said in his semiotic review of the criticism surrounding the building, “*One wonders why, if the building was so perfect, it took so long to discover it.*”^v It was never a building, or even architecture, in the strict meaning of that

word. How could a technical display, an advertisement, be architecture? Regardless of the architectural community's view the official position put forward by Dr. Von Schnitzler, the German commissioner, suggested that "...we wanted to show here what we can do, what we are and how we feel today. We do not want anything more than clarity, simplicity and integrity." "The official interpretation was establishing the meaning of a signal; it was setting up, in fact a code."^{vi}

This code was represented in the use of the word *Sachlichkeit* (thingliness), for things that are as they should be; a sort of 'matter of factness'. In this manner the pavilion belongs wholly to the contemporaneous works of Mies and Lilly Reich's work in exhibition design of the earlier Glass Room and the later Berlin Building Exposition. Franz Schulze was clear that, "As a show piece the Glass Room was more an abstraction of a residential space than a real example of one. It was not practical in any respect except as prestige advertising for the German glass industries that commissioned it."^{vii} The Pavilion's true function was an advertisement for German technical ingenuity (superiority) in the fields of stone, glass and metal; an abstracted easel where the display had been 'welded' directly to the frame.

It is in the Pavilion that we see the enigmatic cruciform column for the first time. If the pavilion was about material display and its 'matter of factness' then why was the cruciform column, that overt structural element, camouflaged with a reflective surface? Is it the same as the presentation of stone cladding overlaid on a substructure of steel frames and concrete block or is it something else? In devising and placing the cruciform column Mies was in danger of undermining the Pavilion's function. By bringing this structural element into the open risked distracting the viewer from its material substance and that of the other materials on display.

Jean Louis Cohen raised this particular concern; *“It is difficult to define what the policies of the German industrialists had in common with Mies’s decision to present his slender steel columns as if they were precious objects – a civilised echo of the skeletons of the African huts published in the books of Frobenius which Mies consulted, according to Sergius Ruegenberg”*^{viii} The columns seem redundant in space dominated by large machine polished glass panes, precision stone cladding, and glazing framed in bronze and chromium steel.

Pathology

After the Pavilion and Tugendhat Villa, the column made a temporary appearance as part of the architect’s exhibition House for the Berlin Building Exposition (1931). Aside from the incomplete works it disappears before it reemerges in the National Gallery, Berlin, (1962-1968). It seems that these columns are indelibly linked to the German condition. In the crystalline future that Mies discovered in America he resorted to using “I” or “H” sections for his columns. Perhaps the “I” was to be his American signature whereas the “+” would remain his German signature. In Chicago, home to Frank Lloyd Wright’s centrifugal departure from the box, ironically Mies adopted a classical compositional method in contrast to his own centrifugal strategy of the Barcelona Pavilion. Wright himself had commented on the pavilion; *“Someday let’s persuade Mies to get rid of those damned little steel posts that look so dangerous and interfering in his lively designs.”*^{ix}

It is often considered that these *“damned little steel posts”* were central to the composition but the evidence points to their late addition. *“The preparatory drawings indicate the emphasis that was placed on walls enclosing space, as well as **the late addition of eight metal columns.**”*^x Due to their insubstantial character, their inconsistent tectonic performance, their gilded expression and their historical resonance; the columns have been at the heart of criticism directed towards the pavilion.

With little time for rumination, to dwell on the ideal, they appear to be superfluous additions and yet central to the experience. The surviving drawings are clues to this feverous period; sketches make way for detailed instructions for arrangements and patterns, which remain, tantalising, incomplete. We know from the record that limits were translated into opportunities. The most famous anecdote concerns the Onyx wall. Mies commandeered a block of Onyx^{xi} that had been set aside for vases for the North German Lloyd Line. He instructed the masons as how to strike the stone to produce the necessary veneers that would provide the pavilion's distinctive dimension, that of its section. The bookended Onyx provided a horizon line that bisected the space at 1560 mm. The resultant 3120mm high space was sandwiched between a polished travertine floor and a white plaster ceiling.

The pavilion and its reproduction is the result of this and other pragmatic solutions, serendipitous finds unified by a remarkable vision. This is an argument about the details, the real intention rather than the unintentional real. The architect had little time for design wandering or excessive exploration. Werner Blaser explained that “*nothing was superfluous; everything was subordinated to the whole*”.^{xii} Only that which is necessary, central and subordinated to the whole should remain. This is why these “*damned little steel posts*” are a cause for concern, falling as they do between visibility and invisibility, a mythical horizon in the ambiguity of symmetries that Robin Evans alluded to in his essay ‘Paradoxical Symmetries’. Evans goes on to identify an equally paradoxical structural situation. “*Either the walls are interfering with the roof, or the columns are interfering with the walls. When you look at the pavilion instead of its plan, when you see those little steel posts, cruciform and cased in chrome so as to dissipate their meagre substance into attenuated smears of light, you cannot seriously regard them as the sole means of support (which they are not), or even as the principal means of support (which they are).*”^{xiii}

This statement cannot be wholly true due to the number of ghost columns located within the walls, which in part support the roof. Separating the wall from the ceiling would have exposed the illusion. Regardless of their substance or lack thereof, the cruciform column has become the pavilion's and to a latter extent Mies's iconic signature.

Structural inconsistency did not seem to concern Mies as the column was experimented with in a variety of compositions. It remained an idiomatic figure in plan and perspective, present but not substantial enough to convey strength or power. Structural purity was never consistent in the architect's oeuvre with the exception of works like the Farnsworth House. The pathology of the Cruciform Column finds variety in form and appearance their invisible core is their most consistent character. In sketches a single column is presented as a totem around which the space rotates, at least before we get to the Brussels Pavilion (1934).

Critics like Frampton believe that *“An analysis of the Barcelona Pavilion must always commence with the eight free standing columns, which, together with the free standing planes, constitute the most active spatial elements of the composition.”*^{xiv} It has been implied that their introduction was unnecessary *“in construction terms, the columns were free-standing in front of wall areas, demonstrating that they could have been displaced; walls must not be solid, they can also be glazed and optically extend the space outwards.”*^{xv} In bringing the structure out into the open, from behind the curtain of display, provided the architect with an opportunity to make the structural rational more transparent. Once in the open, the choice of structure available at the time would have included steel girders, cast iron columns or other possible structural elements. However there appears to be a wilfulness to make something else, something particular. In 1856 the Museum of Science and Art in London had stanchions of both circular and *“H - shaped cross sections”*.^{xvi} Instead of taking existing elements of structure: circular, ‘I’ or ‘H’ sections; Mies opted to construct a new type of column.

Compound Columns

Mies made a clear and distinct decision to liberate the structure from within the carapace, at least in terms of order. Once in the open, cast iron or steel round columns would have been possible. From the first appearance of the column they were purposefully cruciform. Forged from 10mm thick steel angles they were bound by rivets to a steel spine to form a compound column not unlike the compound columns and piers of medieval churches. This new column was finally clad in Chromium Plated Steel with a screw fixed cover plate to hide the join. The cruciform column has been subject to reinvention on several occasions. Mies approved new drawings in 1964 and 1979. Though the scale and proportion of its mirrored surface changed the fundamental core remained. Clare Newton interviewed one of the active participants, Cristian Cirici about the anomaly. *“It is curious that the reconstruction architects chose to use the incorrect cruciform column as the main graphic on the cover of their book. When asked about the detail, Cirici paused for thought but could offer no reason for this decision. Perhaps the incorrect version was selected as the graphic qualities are more powerful and better known as a symbol of the original pavilion than the later more correct version. Interestingly, postcards within the rebuilt pavilion use the later version. In an interview, Cirici spoke about a remnant of column found within the excavation which showed the column sections as 10mm angles rather than 8mm thick.”*^{xvii} Franz Schulze offers the explanation that the columns had value above that of mere structure, one which communicated the idea of structure or order. *“However, Mies’s intention for the columns was not the functional use of structure but rather the expressive use of ordered structure in the Barcelona Pavilion, the contention of objective and subjective orders was held in equipoise.”*^{xviii}

The idea that the pavilion might provide for a revelatory experience was outlined by Raphael Moneo in the introduction to Josep Quetglas's "Fear of Glass". *"There is, in his view, something else, something deeper down and thus something more hidden, something that has not yet been revealed. For Quetglas the pavilion is, simply a representative of the Germany that rose from the ashes after the First World War."*^{xix} In his essay Quetglas alludes to the fact that Mies could not know the future any more than he could know God, so Mies set about making a modern allegory; a metaphorical house of God: a Temple. Because of its camouflage Quetglas takes us on an archaeological excavation of intent to reveal the Doric Temple hidden within. So this paragon of Modernist invention, of transparency and lucidity is a paradox. Filled with hidden messages it is a surrealist series of overlapping and contradictory mirror images. As the work drifts from symbolic codes through architectural rigor to practicality, it is difficult to determine a singular motivation.

For obvious pragmatic reasons both the original and reconstructed Pavilion is filled with circumstances where adjustments were necessary to achieve a greater whole. As Franz Schulze remarks, *"It is worth observing that a working drawing, 14.22, which records the exact size of the travertine slabs of the podium and indicates that these sizes varied according to their conformity with the jointing of the vertical surfaces, cast doubt on the frequent contention that Mies employed a modular system in calculating the proportions of the pavilion."*^{xx} The objective and subjective orders are being held in equipoise only by the constant adjustment to circumstance. This may be reflective of the social balance that Mies was increasingly forced to find in his personal and professional life. It may also be reflective of the greater political situation developing in Germany at the time.

Eisernen Zeit

Mies was 42 when commissioned to undertake the design of a showcase for German Industry. Germany was heading towards a crisis which would result in the fall of the Weimar Republic in 1933 and the compensatory rise in fascism. Mies was 42 when commissioned to undertake the design of a showcase for German Industry. In 1929 months after the opening of the Pavilion, Frankfurt would host CIAM II devoted to “Die Wohnung für das Existenzminimum” (The Dwelling for Minimal Existence). Mies was maturing as an architect just in time to see the promise of this new world of steel, glass and concrete come into existence. In a sense the Republic sought out an architect who would encapsulate this new world through the medium of the pavilion. The *‘matter of factness’* of the pavilion was in keeping with this new world.



1870 Grand Cross of the Iron Cross ^{xxi}

In 1813 on the cusp of an earlier period of great change Karl Friedrich Schinkel aged 31, court painter and architect was commissioned by King Friedrich Wilhelm III to create a decoration for those who would fight against France in the War of Liberation from France. This was “*intended as a temporary award,*” to be “*awarded only during times of war*”.^{xxii} The architect’s design was based on “*a simple iron cross shape framed in silver*”. It took its inspiration from a Greek Cross Pattee and from the crosses worn in the 14th century by Germanic Teutonic Knights. This combination of base metal and precious decoration has since become an iconic image of modern Germany and one intimately bound up with its formation and the sacrifice of its people. “*On 10 March 1813, seven days before the appeal “An Mein Volk” (To my People) to join the War of Liberation against Napoleon, King Friedrich Wilhelm III instituted the Iron Cross as a military decoration. Notes from the king and early sketches reveal that from the beginning the concept had been that of a decoration comparable to the Cross and Colours of the Teutonic Order. The final version goes back to a drawing by Schinkel of c.1813*”^{xxiii}

The Time of Iron, “Eisenern Zeit”, was dominated by a rise in nationalism and a call to arms which would eventually lead to the Bismarck era who appropriately underlined it with his famous “Blood and Iron” speech. “*..... the choice of iron was not so much a reflection of developing industry as it was a substitute for precious metals and symbolic of a sacrifice made for the fatherland. That same year the crown had appealed to the wealthy to contribute their jewels to help subsidize the national cause. The iron jewellery which they were issued as a form of receipt often bore a small cross with a head of the king and inscriptions such as “Gold gab ich für Eisen 1813.” Between 1813 and 1815 it is estimated that over 11,000 pieces of iron jewellery were produced, including 5,000 iron crosses.*”^{xxiv}

My sense is that even though the work on the Pavilion was hurried it was not without meaning. It was an opportunity for Mies to embody a code, a sense of order that was his and yet reflective of his place. Nothing in the Pavilion is accidental. It may be practical and expedient, it may be hurried but it is considered. The columns which appear to be superfluous carry value, a clue to an order hidden in plain sight.

Symbol

Mies van der Rohe said “...*architecture cannot be reduced to crude functionalism.*”^{xxv} In the case of the pavilion, the work certainly goes beyond any such description. We are left with an enigma: a temporary pavilion which has become permanent, an expedient easel that is monumental, and a functional shelter that aspires to art. At the heart of this enigma is the cruciform column. Its iron core wrapped in chrome echoes Schinkel’s Iron Cross. The silver corded trim of the cross has been replaced by chrome plated steel. However in the case of the Pavilion the iron remains invisible, necessary but invisible. Mies placed the column in plain sight but the secret is in the detail. One might even say that “*God is in the detail*” to use his dictum. Instead of being an aphorism, it may in this case be the truth. Mies, the son of a mason, using a Medieval technique of compound columns to forge a symbol for Germany and his new architecture from the Iron Cross of Schinkel and the Time of Iron. Can we be sure that this is what Mies intended? There is sufficient evidence to indicate that it was.

“Often, as a result, artefacts announce their previous or alternative functions rather than their current ones. Or, under critical reading, they may disclose ironies, tensions and contradictions in their messages that their originators had been unaware of.”^{xxvi}

Mies, the son of a mason, left his mason’s mark on this his German work.

ⁱ 1929 Barcelona Pavilion reconstruction by Mies van der Rohe Photographer Russ McGinn

28 September 2006 CC-BY; downloaded 16 May 2015

http://commons.wikimedia.org/wiki/File:Barcelona_Pavilion_pool.JPG

ⁱⁱ Moneo, Raphael (2001) "Introduction" in *Fear of Glass*, Josep Quetglas: Birkhauser

ⁱⁱⁱ *"The site [Mies van der Rohe] selected [for the German Pavilion in Barcelona] allowed for the transverse passage of visitors from a terrace-like avenue bordering the exhibition palaces to the other attractions. In addition, it afforded fine views of the exposition grounds and of the city of Barcelona. The building had no real program, as that term is understood and used by architects today. It was to be whatever Mies chose to make of it. The only function it had to accommodate was a reception for the King and Queen of Spain as they signed the "Golden Book" officially opening the exposition. According to Mies, the furniture designed and fabricated especially for the pavilion, the Barcelona chairs and stools, went unused during the opening ceremony. "To tell you the truth," he remarked, "nobody ever used them."*

Spaeth, D (1985) *Mies van der Rohe*: Rizzoli pp. 63

^{iv} Jonathan Hill has written extensively on the Barcelona Pavilion, see *Actions of Architecture: Architects and Creative Users*: Routledge 2003

^v Bonta, J P (1975) *Anatomy of Architectural Interpretation*: Gustavo Gill pp. 58

^{vi} Bonta, J P (1975) *Anatomy of Architectural Interpretation*: Gustavo Gill pp. 60

^{vii} Schulze, F (1985) *Mies van der Rohe A critical Biography*: University of Chicago Press pp. 142

^{viii} Cohen, J L (1996) *Mies van der Rohe*: E & FN Spon pp. 55-56

^{ix} Frank Lloyd Wright as quoted by Cohen, J L (1996) *Mies van der Rohe*: E & FN Spon pp.

^x Cohen, J L (1996) *Mies van der Rohe*: E & FN Spon pp. 52

^{xi} "Right from the beginning I had a clear idea of what to do with that pavilion. But nothing was fixed yet, it was still a bit hazy. But then when I visited the showrooms of a marble firm at Hamburg, I said: "Tell me, haven't you got something else, something really beautiful?" I thought of that freestanding wall I had, and so they said: "Well, we have a big block of onyx. But that block is sold—to the North German Lloyd." They want to make big vases from it for the dining room in a new steamer. So I said: 'Listen, let me see it, ' and they at once shouted: 'No, no, no, that can't be done, for Heaven's sake you mustn't touch that marvellous piece.' But I said: "Just give me a hammer, will you, and I'll show you how we used to do that at home." So reluctantly they brought a hammer, and they were curious whether I would want to chip away a corner. But no, I hit the block hard just once right in the middle, and off came a thin slab the size of my hand. 'Now go and polish it at once so that I can see it." And so we decided to use onyx. We fixed the quantities and brought the stone."

Spaeth, D (1985) *Mies van der Rohe*: Rizzoli pp. 62

^{xii} Blaser, W (1993) *Mies van der Rohe – The Art of Structure*: Birkhauser pp. 27

^{xiii} Evans, R (1990) "Mies van der Rohe's Paradoxical Symmetries", *AA Files 19* pp. 58

^{xiv} Frampton, K (1986) "Modernism and Tradition in the Work of Mies van der Rohe, 1920 – 1968", in *Mies Reconsidered: His Career, legacy and Disciples*: Chicago Art Institute of Chicago pp. 41

^{xv} Berger, U and Pavel, T, (2006) *Barcelona Pavilion Mies van der Rohe and Kolbe*: Jovis pp. 21

^{xvi} Hartung, G in “Rationalism and Eclecticism; on the role of iron in Britain in the second half of the Nineteenth Century”, Available at www.icomos.org/publications/19eisen45.pdf pp. 271

^{xvii} Newton, C, (2002) “Interview with Cristian Cirici, Barcelona, 13 June 2002, The Phoenix Pavilion: interpreting the black and white memory of the Barcelona Pavilion” in *Fabrications: The Journal of the Society of Architectural Historians, Australia and New Zealand*, 152 pp. 63-76

^{xviii} Schulze, F (1985) *Mies van der Rohe A critical Biography*: University of Chicago Press pp.158

^{xix} Moneo, Raphael (2001) “Introduction” in *Fear of Glass, Josep Quetglas*: Birkhauser

^{xx} Schulze, F (1987) *The Mies Van der Rohe Archive*: Garland Publishing

^{xxi} 1870 Grand Cross of the Iron Cross.jpg Photographed 20 March 2011 http://en.wikipedia.org/wiki/File:1870_Grand_Cross_of_the_Iron_Cross.jpg CC; downloaded 16 May 2015

^{xxii} Williamson, G (1985) *The Iron Cross a history 1813 – 1957*: Blandford Press pp. 14

^{xxiii} “On 10 March 1813, seven days before the appeal “An Mein Volk” (To my People) to join the War of Liberation against Napoleon, King Friedrich Wilhelm III instituted the Iron Cross as a military decoration. This Order for services to the Fatherland in the battle against France had a simplicity and lack of material value intended to recall the hard and iron days in which it was instituted.... Notes from the king and early sketches reveal that from the beginning the concept had been that of a decoration comparable to the Cross and Colours of the Teutonic Order..... The final version goes back to a drawing by Schinkel of c.1813, showing the original reverse of the Cross, 2nd Class, with the crowned monogram

FW (Friedrich Wilhelm) above an oakleaf trefoil and under this the year, 1813. The front of the cross was originally undecorated. Only later was the reverse worn as the front.”

Snodin, M Karl (1991) *Frederich Schinkel: A Universal Man*: Yale University Press pp.103

^{xxiv} Carter, Prof. R (1981) “*Karl Friedrich Schinkel: The Last Great Architect*” Originally published as a prefatory essay in: *Collection of Architectural Designs including those designs which have been executed and objects whose execution was intended by Karl Friedrich Schinkel*: Chicago: Exedra Books Incorporated

^{xxv} Mies van der Rohe quoted by Cohen, J L (1996) *Mies van der Rohe*: E & FN Spon pp.47

^{xxvi} Mitchell, W (2008) *World’s Greatest Architect*: MIT Press pp. X