

## The Dutch Origin of Mies van der Rohe:

Mies' Dutch experience and how berlage contributed to Miesian architecture

# THE DUTCH ORIGIN OF MIES VAN DER ROHE: MIES' DUTCH EXPERIENCE AND HOW BERLAGE CONTRIBUTED TO MIESIAN ARCHITECTURE

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## Abstract

This thesis aims at depicting the Krölller-Müller commission which involved Ludwig Mies van der Rohe (1886-1969) and Hendrik Petrus Berlage (1856-1934), followed by a research of the Berlagian origin in Mies. Firstly, Mies' short stay in the Netherlands in the summer of 1912 when he was dealing with the Krölller-Müller project is represented in a detailed manner, with a series of details given, to show extensively Mies' activities and some events during this certain period which are closely associated with Mies. Mrs. Krölller-Müller played a critical role in the whole Krölller-Müller project, because she was the one who shifted the whole commission from Peter Behrens to Mies. Secondly, the significance of the Krölller-Müller project to Mies is explained, from the aspect of Mies' own attitudes, and more importantly the whole case as the trigger of Mies' further dedication to Berlage's thoughts and works. Some letters of Mies and related people are given as evidences of Mies' huge investment in the project. Finally, an analysis of Mies' Berlagian origin is carried out by comparing Berlage's thoughts and architecture to the counterpart of Mies'. This analysis is divided into two categories, first the European period of Mies and from the tectonics he learned from Berlage, and second the American period and what he learned from Berlage's theories. After this analysis, it is clear that Mies could have been inspired greatly by Berlage, and based the frame of his own architectural philosophy on Berlage's argument where he emphasized a style - 'unity in diversity', or the existence of a universal principle, which is very consistent with Mies' homogeneous grid system.

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## Introduction

Mies van der Rohe, as one of the most influential figure in the modern architecture movement, once had a short Dutch experience in the summer of 1912, which later proved to have profound meaning to his career as an architect. At that time, he was entrusted to design the Kröller-Müller museum by Anton Kröller-Müller and Helen Kröller-Müller, taking it over from Peter Behrens, who he had worked for and broke up with during the Kröller-Müller commission. Some famous names in the modern architecture history are involved in this case, including Behrens, H.P. Berlage, and Henry Van de Velde.

Mies' proposal for the Kröller-Müller museum was his closest attempt to achieve his breakthrough towards modern architecture, before his first real modern project with a reliable date, the Friedrichstrasse Office Building in December 1921.<sup>1</sup> After this project, no more signs of Mies' try at modernism can be seen in his architecture for nearly ten years. With this uniqueness in the timeline of his architecture practice, the Kröller-Müller affair, together with his experience during his short stay in the Netherlands, is worth researching. Therefore, the first topic of this thesis is to discover more details of this certain period of Mies.

More ironically, Mies always gave the greatest admiration to Berlage, the Dutch architect who defeated Mies in the final judgement of the commission, confessing that he 'learned a lesson' from him 'just by looking at his buildings'<sup>2</sup>, the most important of which Mies visited was Berlage's Amsterdam Exchange. The lessons Mies learned from Berlage remained a major source to him both in his breakthrough period in 1920s and his American era. Moreover, Mies even regarded Berlage as his guide,<sup>3</sup> which means that Berlagian theory could have inspired Mies to build his own architectural theory and methodology, later known as 'clear construction'. In fact, the core argument of Berlage's theory, 'style is unity in diversity'<sup>4</sup> is highly consistent with Mies' homogeneous grid system, which he attempted to achieve throughout his career. Therefore, it is worth clarifying how Berlagian theory contributed to Mies' own system of 'clear construction'.

Moreover, Berlage's impact on Mies is not only theoretical, but also in practical and detailed constructions. Berlagian influences are reflected in some details of Mies' buildings, which will also be discussed later.

The research method used to write this thesis is mainly literature research. There have already been some comprehensive writings covering Mies' Dutch experience, the most detailed and extensive of which is *Mies van der Rohe: A Critical Biography* from Franz Schulze. A thorough and informative description of the part of Kröller-Müller case where Mies was associated, is given. The author also gave a discussion how and when the influences Mies received from Berlage really became visible.

A dissertation from Paul Weber in RIHA Journal 0187, 30 May 2018, gives inspirational ideas how Mies changed his architecture following Berlage's theory of transformation of archetypal forms, where Berlage suggests that artists are never capable of inventing new forms, and the only remaining approach is to

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<sup>1</sup> Schulze, Franz. *Mies van der Rohe: Critical Essays*. New York: Museum of Modern Art, 1989, p. 33.

<sup>2</sup> Puente, Moisés. *Conversations with Mies van der Rohe*. New York: Princeton Architectural Press, 2008, p. 54.

<sup>3</sup> Rohe, Ludwig Mies van der, draft letter, 1927. Quoted in: Neumeyer, Mies van der Rohe. *The artless word*, p. 324-325, here 324.

<sup>4</sup> Berlage, Hendrik Petrus. *Thoughts on Style: 1886-1909*. Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 1996, p. 140.

evolve primal forms,<sup>5</sup> which is a novel perspective to research Mies' Berlagian origins. However, in this thesis, a different aspect will be taken, trying to describe the connection between Berlage's 'unity in diversity' theory and Mies' lifelong pursuit of his homogeneous grid system.

## 1. The Kröller-Müller commission and Mies' short Dutch Experience

### 1.1 The background and beginning of Kröller-Müller commission

Before his destined entrust by Anton Kröller-Müller and Helen Kröller-Müller to design their private villa in 1912, Mies van der Rohe had worked for the German master architect Peter Behrens for 4 years. Behrens, together with Karl Friedrich Schinkel, the most important German architect of the 19th century, was two major sources of Mies in his early years. The early works of young Mies were generally residences in neoclassical style, which show Schinkel's influence on him, but during his apprenticeship of Behrens, the transformation of his style to modernism began.

The design of the Kröller-Müller museum was originally assigned to Behrens in 1911, where he was commissioned to design a villa, functioning at the same time as the showroom for their art collections, on a large dune land they previously purchased near Wassenaar, a prosperous suburb area of The Hague. To give Behrens this assignment, Mr. and Mrs. Kröller-Müller paid a visit to him in Berlin. One month after this genial meeting, Behrens finally secured this contract and began his design.<sup>6</sup>

The idea of building a museum and private villa for themselves, was originally put forward and mainly advocated by Anton Kröller's wife, borne Helene E. L. J. Müller. Mrs. Kröller-Müller developed her artistic taste and temperament under the guidance of H. P. Bremmer, a Dutch art critic who was introduced to her in 1906-1907 as her art mentor. The role Bremmer played in the whole Kröller-Müller case was critical, because it was him who invited Berlage to compete against Mies and finally turned down Mies' proposal in the final judgement. Mr. Kröller-Müller, as a businessman who found himself more interested in business than art, was less involved in the whole process than his wife. The capricious temper of Mrs. Kröller-Müller as well as her strong personal artistic taste paved a convoluted trail for the development of Kröller-Müller Museum, as the main reason why the design and the architects involved changed so many times, intertwined with the changed fate of young Mies van der Rohe.

As her interest and passion for art accumulated with more tutelage she received from Bremmer, Mrs. Kröller-Müller gradually purchased a growing number of art works, the majority of which were from Vincent van Gogh, at that time still a controversial figure. Bremmer was also very interested in his paintings and supported Mrs. Kröller-Müller in gathering more of them. By the time Mies took over the project, the number of her van Gogh collection already became very large, as Mies ones said in retrospect to two interviewers about his staying at the accommodation provided by Mrs. Kröller-Müller in The Hague during his assignment: "About fifty van Goghs were hanging there. I became a van Gogh expert in spite of myself; there was no way of avoiding the pictures."<sup>7</sup>

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<sup>5</sup> Berlage, Hendrik Petrus. *Thoughts on Style: 1886-1909*. Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 1996, p. 138.

<sup>6</sup> Schulze, Franz. *Mies Van Der Rohe : a critical biography*. New York: Museum of Modern Art, 1985, p. 58.

<sup>7</sup> Rohe, Ludwig Mies van der, Horst Eifler, Ulrich Conrads, Gert Günter Hoffmann, and Irene Kern. *Mies in Berlin: zum 80. Geburtstag von Ludwig Mies van der Rohe (on the 80<sup>th</sup> birthday of Mies)*. Berlin: Commissioned by Ullstein

Mrs. Krölller-Müller's zeal for visual art was obvious and intense, influencing everyone around her. For example, Mr. Krölller-Müller, her husband who had been a layman of art, was made interested by his passionate wife, and became in favor of her plan to build the museum, after her returning from a travel in Florence, where she was in awe of the role the Medici family had played in the creation of all those art works and architectures in Florence.<sup>8</sup> Salomon van Deventer, an employee of NV Müller & Co (the family business of the Krölller-Müllers) who was integrated into the Krölller-Müller family, came very close with Mrs. Krölller-Müller, and was deeply moved by her enthusiasm of arts, eventually assisting her in realizing her Krölller-Müller museum. He wrote in a book recording the whole story of Krölller-Müller museum: "She has shaped me, making me do whatever I can to help her in the implementation of her plans. Those plans have correspondences, and the constant work invested to it ultimately gave them fixed forms. The result is what we now know as the Hoge Veluwe National Park with St Hubert and the Rijksmuseum Krölller-Müller."<sup>9</sup>

Those who were influenced by Mrs. Krölller-Müller also included, of course, Mies himself. The real reason for Mrs. Krölller-Müller's unsatisfactory with Behrens' design remained only known to herself. She wrote in a letter to van Deventer: "I saw the 'why' of the great differences that existed between us (she and Behrens) in the construction of the house. He is still grumbling, staggering, hesitant with considerations towards life, I no more."<sup>10</sup> This unsatisfactory later led to her turning the assignment completely over to Mies, who was at that time an assistant of Behrens, though, but fully championed by Mrs. Krölller-Müller. This transfer of the main architect's role to Mies from his master due to Mrs. Krölller-Müller's preference for him accelerated his independence and rupture with Behrens.

## 1.2 Berlage's involvement and Mies' defeat

In spite of Mrs. Krölller-Müller's faith in Mies, Bremmer wasn't so fascinated by him, who was at that time only 26 years old and still a newbie in architecture business with no large-scale projects realized. Instead, he admired Berlage, by 1912 already a famed architect with many achievements in the Netherlands. Consequently, suggested by Bremmer, Berlage was invited to compete against Mies with his own version of the museum design.

Berlage's intervene in the Krölller-Müller museum case made a far-reaching difference to Mies. The methodology of Mies highly agrees with that of Berlage's, which will be described in detail later in this thesis. Already when he was still working for Behrens, he held highest esteem for the Dutch master, which even lead to dispute between him and Behrens. Mies didn't hide his admiration for Berlage in front of Behrens, who thought all of Berlage's work passé. Mies replied to Behrens' comment that he was deceiving himself to say so, which annoyed Behrens and made him look as if "he would have liked nothing better than to give me one in the face."<sup>11</sup> This anecdote could be another cause for Mies' breaking away with Behrens. All of these suggest that Mies' Dutch experience served as a trigger for him to study Berlage's thoughts and works, if he hadn't got much knowledge about them before he came to the

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GmbH and manufactured by Pallas, 1966. Quoted in Schulze, Franz. *Mies van der Rohe: a critical biography*. New York: Museum of Modern Art, 1985, p. 61.

<sup>8</sup> Deventer, Salomon van. *Krölller-Müller, De Geschiedenis Van Een Cultureel Levenswerk*. Haarlem: H. D. Tjeenk Willink, 1956, p. 41. Translated with Google Translate.

<sup>9</sup> Ibid, p. 38.

<sup>10</sup> Helene, Krölller-Müller. *Letter to Salomon van Deventer*, March 18, 1911. Quoted in Ibid, p. 45-46.

<sup>11</sup> Eifler-Conrads interview, Quoted in Schulze, Franz. *Mies Van Der Rohe : a critical biography*. New York: Museum of Modern Art, 1985, p. 61.

Netherlands in the summer of 1912, and he must have studied the lectures and monographs of Berlage, which he had many opportunities to access.

Despite his rupture from Behrens, Mies' own design of the museum was to a great extent a revised version of Behrens', both presenting a composition of cubic volumes in neoclassical style. The similarity between both proposals were huge, which makes the motive behind Mrs. Kröller-Müller's rejection of Behrens' design and reception of Mies' even more unclear. She wrote in the same letter to van Deventer on March 18, 1911 where she complained about Behrens, that:

he likes long perspectives. He believes it is his task to enlarge the face of the house, while I want to see it against a background. I want to feel it a closed off. If it were a painting, or could I paint, I would always do it against a surface, because the openness of the thought lies not seemingly deceptive space.<sup>12</sup>

However, the designs of Behrens didn't reflect what Mrs. Kröller-Müller referred to as 'long perspective'. Her rejection seemed more of her strong ego and vague criteria. To make things more intriguing, Mies' design bore much resemblance to Behrens', which made Mrs. Kröller-Müller's motivation even more difficult to explain.



Fig 1. Peter Behrens, *Design for the Ellenwoude estate in Wassenaar*, circa 1912.



Fig 2. Mies van der Rohe, *Perspective drawing for the Ellenwoude estate*, 1912.

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<sup>12</sup> Helene, Kröller-Müller. *Letter to Salomon van Deventer*, March 18, 1911. Quoted in Deventer, Salomon van. *Kröller-Müller, De Geschiedenis Van Een Cultureel Levenswerk*. Haarlem: H. D. Tjeenk Willink, 1956, p. 46.



There is one highly possible answer, that she grew in favor of Mies out of her personal emotion, or affection, to Mies. The relationship between young Mies and Mrs. Kröller-Müller was far more than simply employer and employee. By the time Mies was fully assigned the project and invited to the Netherlands by Mrs. Kröller-Müller, he was put up by her in The Hague in the Lange Voorhout 1 building, next to the head office of the NV Müller & Co.<sup>13</sup> They were in contact on a daily basis. She visited him in the studio and drove him all over the Dutch countryside to make him familiar with the environment.<sup>14</sup> Therefore, it is reasonable to infer that it was Mrs. Kröller-Müller who took Mies to see the buildings by Berlage, including the one which left the strongest impression on Mies, the Amsterdam Exchange. By contrast, Berlage himself worked in his office in Amsterdam, with only occasional meeting with the Kröller-Müllers.

The bond between Mies and Mrs. Kröller-Müller became tighter with more time he spent in the Netherlands. However, much as Mrs. Kröller-Müller adored Mies, he was finally defeated by Berlage. In the final judgement held by Bremmer, he imposed on Mrs. Kröller-Müller the superiority he attached to Berlage's project over Mies', by pointing at Berlage's model, saying 'that is art', and at Mies' saying 'not that'. It took months for Mrs. Kröller-Müller to digest her disappointment seeing Mies overwhelmed by Berlage.<sup>15</sup> Not only Mrs. Kröller-Müller was moved by Mies, but van Deventer, who was not deeply engaged in the decision making, was also impressed by Mies, and became sympathetic towards Mies. He wrote in his book: "Mies is extremely lovable as a cool person. The assignment went beyond his strength, where he had to compete with the greatest Dutch architect. For him it was a brighter disappointment."<sup>16</sup> Almost half a century later, in a letter from van Deventer to Mies, he even explained the issue once again to Mies, in consolation, that 'Maybe the great disappointment has been helpful to your future development.'<sup>17</sup> Mies' talent and personality made him a more than charismatic figure.

## 2. The Kröller-Müller commission's meaning and importance to Mies

Though never realized, Mies' design for Kröller-Müller museum was crucial in his early years, with a profound meaning to his later career. It must have been a severe hit on young Mies who was very close to his first breakthrough. To justify himself, he wrote to the famous art critic Julius Meier-Graefe for a response on his proposal for the museum, and was said to visit him in person in Paris. In a letter Meier-Graefe wrote in reply to Mies, he said:

I should like to congratulate you. I see here an uncommonly felicitous solution to the design of a house in which the essential problem has been to unite liveableness with a rational display of artworks. The need to preserve the gallery's integrity could easily lead to its isolation. Your design

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<sup>13</sup> Deventer, Salomon van. *Kröller-Müller, De Geschiedenis Van Een Cultureel Levenswerk*. Haarlem: H. D. Tjeenk Willink, 1956, p. 50.

<sup>14</sup> Schulze, Franz. *Mies Van Der Rohe : a critical biography*. New York: Museum of Modern Art, 1985, p. 61.

<sup>15</sup> Deventer, Salomon van. *Kröller-Müller, De Geschiedenis Van Een Cultureel Levenswerk*. Haarlem: H. D. Tjeenk Willink, 1956, p. 57.

<sup>16</sup> Ibid, p. 58.

<sup>17</sup> See the note no. 20 of Wolf Tegethoff's essay in Schulze, Franz. *Mies van der Rohe: critical essays*, p. 88.



has happily avoided this. Instead, the gallery seems an essential part of the architectural whole, chiefly because of its handsome asymmetrical arrangement.<sup>18</sup>

If this was not enough to confirm his great attachment to the Kröller-Müller project, a letter he wrote to Mrs. Kröller-Müller in 1913, where he expressed his giant regret for being turned down, as well as his abiding admiration for her, further illustrates that. He wrote:

...that your decision, though I expected it and though I accept it, came as a blow. I believe I allowed too much of my heart to be put into the assignment. I do understand the necessity of your decision. My feelings of admiration and appreciation, dear lady, for both you and your family, are not at all changed by the fact that my project was turned down. Indeed, the way you handled the matter and the concern you showed me only deepened these feelings.<sup>19</sup>

After returning to Berlin from the Netherlands, Mies opened his own architecture office, and worked in his consistent neoclassical style on more houses. His exploration of modernism seemed to have paused for almost a decade, until in 1921 he came up with the revolutionary design of the Friedrichstrasse Office Building, followed by a series of theoretical projects, including the Concrete Office Building, the Concrete Country house, and the Brick Country House.

In fact, the change seemed to surface already in 1919. In that year Gropius organized the *Exhibition of Unknown Architects*. When he was gathering materials for this exhibition, he wrote to Mies asking for his submission. In response, Mies wrote:

I gladly comply with your kind request and send some photos of the Kröller-Müller House in The Hague. The project was, admittedly conceived some seven years ago, and I wonder if it qualifies for your purposes. Other projects, especially those that serve the collaboration of all the arts, I do not have at hand right now. At a later date I could offer you some other projects.<sup>20</sup>

The submission was rejected by Gropius, who at that time indulged in aggressive modernism, which had already been uttered aloud in his famous manifesto in the same year:

Let us then create a new guild of craftsmen without the class distinctions that raise an arrogant barrier between craftsman and artist! Together let us desire, conceive and create the new structure of the future, which will embrace architecture and sculpture and painting in on unity and which will one day rise toward heaven from the hands of a million workers like the crystal symbol of a new faith.<sup>21</sup>

A sumptuous villa for a bourgeois couple seemed definitely out of place compared with such a utopian declaration. However, Gropius' attitude towards modern architecture was surely known to Mies. In fact, the Kröller-Müller project was not the only close modern project he had by 1919.

As early as 1914, Mies had made a conceptual housing project for himself, which played the role of the prototype for his two later country house projects. In the two existing drafts he made for the project, one

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<sup>18</sup> The letter is in Mies Archive in New York Museum of Modern Art. Quoted in Schulze, Franz. *Mies van der Rohe: a critical biography*. New York: Museum of Modern Art, 1985, p. 62-63.

<sup>19</sup> Mies van der Rohe, *letter to A. G. Kröller*, 2 April 1913, Archives of Kröller-Müller Museum, Otterlo.

<sup>20</sup> Mies van der Rohe, *letter to Gropius*, February 11, 1919. Quoted in Schulze, Franz. *Mies van der Rohe: Critical Essays*. New York: Museum of Modern Art, 1989, p. 35.

<sup>21</sup> Gropius, Walter. *Program of the Staatliches Bauhaus in Weimar*, first published as "Programm des Staatlichen Bauhauses", April 1919.

shows a symmetrical U-shaped volume with two wings surrounding the courtyard, while the other is an asymmetrical composition of two cubic volumes, which has a more modern look and resembles the layout of the Kröller-Müller project. The project itself with its aim of designing a house for the architect himself, also suits better in the Gropius' ideas, which could have been a better choice rather than the Kröller-Müller project to submit, if it had been done with more details. Then, the reason why Mies submitted the Kröller-Müller museum could be his pride in the project itself, as well as the thoughts and hard work he had invested, in his best attempt to achieve this breakthrough for himself.

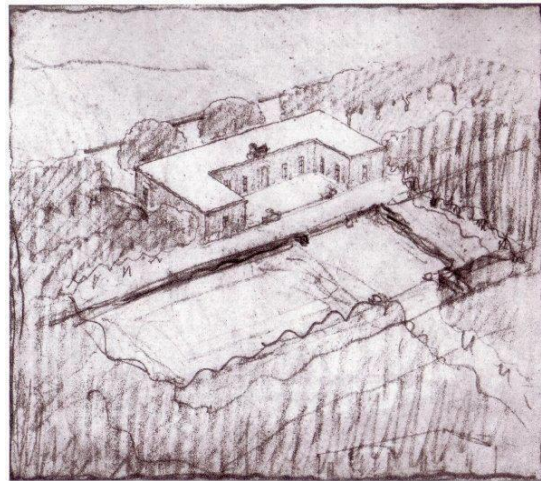


Fig 3. *House for the Architect*, Werder near Berlin. Project, 1914. Perspective drawing.

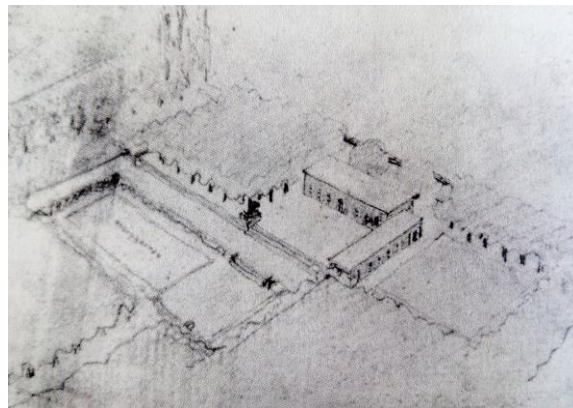


Fig 4. *House for the Architect*, Werder near Berlin. Project, 1914. Perspective drawing.

Moreover, 1919 was a year when Mies 'had broken completely with everything you had done before'. In response to this assertion, he said: "I think the break started long before. The break started when I was in the Netherlands working on the problem of the Kröller museum. There I saw and studied carefully Berlage. I read his books and his theme that architecture should be construction, clear construction. His architecture was brick, and it may have looked medieval, but it was always clear."<sup>22</sup> This word by him shows another dimension of the significance of his short Dutch experience, where he was fully exposed to

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<sup>22</sup> Puente, Moisés. *Conversations with Mies van der Rohe*. New York: Princeton Architectural Press, 2008, p. 32-33.

the works and thoughts of Berlage, upon which he learned a lot and based his own philosophy of architecture.

### 3. The Berlagian origin in Mies' architecture and philosophy

#### 3.1 The two layers of Berlage's influence on Mies

The Berlagian influence on Mies' architecture as well as his philosophy can be generally divided into two categories. Firstly, before he moved to America, he tried applying the practical techniques about the use of materials or how to construct he gained from Berlage. Secondly, and more importantly, after Mies moved to America, Berlage's theory is frequently reflected in Mies' own theory, where he calls for the 'clear construction' and pursued his homogeneous grid system.

Many as the lessons Mies had learned from Berlage in his short stay in the Netherlands, such tutelage didn't show its impact on Mies as soon as he withdrew from the complicated Kröller-Müller assignment, because the projects he designed during the period from 1912 to his later breakthrough in 1920s remained mainly neoclassical housings. The systematic reflection on Berlage's theory and philosophy, where he emphasized over and over again the necessity to bring honesty to construction, the rationality of order to the architecture at that time, which he found messy and difficult to tolerate, or in his own words, 'unity in diversity', was taken by Mies no earlier before he moved to America.

Berlage once gave a remark to Rietveld: 'You people are demolishing everything that I have built-up', which could be his comment to the Rietveld Schröder house. In an interview in 1932 he criticized young Dutch architects and those from Bauhaus, for their ignorance of feeling and the exclusive technical approaches they took.<sup>23</sup> For Mies, it was also hard to agree with his contemporaries and their architecture. He once wrote: "Of all things, it was the chaotic constructivist formalism which I saw in Weimar, and the nebulous artistic indistinctness dominating that place that prompted me to once again explain my point of view in *G* - especially since, by mistake part of what I had written was not published in the first issue."<sup>24</sup> They shared disappointment by other architects at their time, and Mies later took the rational perspective of Berlage.

His exploration of the homogeneous grid system started in the Barcelona Pavilion project. At that time the system itself was still raw, which Mies tried to fuse with the T-shaped composition of walls he learned from De Stijl. Later in his American projects, the homogeneous grid system got more and more clear, in a series of projects, including Farnsworth House, the Crown Hall, Seagram Building, and the Neue Nationalgalerie in Berlin. Part of the reason could be his retrospective study of Berlage as an inspiration.

#### 3.2 Berlage's influence on Mies before he moved to America - practical or tectonic

On the other hand, in 1920s, the aggressive and experimental attitude Mies took towards his architecture urged him to utilize what he had learned from Berlage. Different from a more theoretical aspect he took

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<sup>23</sup> Singelenberg, Pieter. *H.P. Berlage Idea and Style : The Quest for Modern Architecture*. Utrecht: Haentjens Dekker en Gumbert, 1972, p. 198-199.

<sup>24</sup> Letter to Werner Jakstein of September 13, 1923. Quoted in Schulze, Franz. *Mies Van Der Rohe: Critical Essays*. New York: Museum of Modern Art, 1989, p. 47.

towards Berlage in his American years, at that time he mainly adopted what he learned from Berlage's certain constructions in a more practical level. In reality, the focus of his European works was more on the composition of plan, or with massing, or with abstract qualities like monumentality, rather than his later devotion to structure or his clear construction.<sup>25</sup> Some evidences are given here.

Firstly, Mies talked more than once about what Berlage taught him in the Amsterdam Exchange, the most important of which is how he used bricks. In an interview he once said: "I was lucky enough when I came to the Netherlands to be confronted with Hendrik Petrus Berlage's work. There was construction. What made the strongest impression on me was the use of brick and so on, the honesty of materials and so on. I never forget the lesson I got there just by looking at his buildings."<sup>26</sup> And he applied such tutelage about the usage of bricks during 1925-1929, when he built three houses and the Monument to Karl Liebknecht and Rosa Luxemburg. As mentioned by Philip Johnson, he was the only remaining modern architect at that time who was using brick, which was rejected by his contemporaries for their value of the machine aesthetic. Mies 'appreciated the fact that brick was a structural material that did not need to be concealed. He appreciated the regular rhythm achieved by the repetition of a module and enjoyed the craftsmanship involved in the coursing and bonding. His admiration led him to extraordinary measures: in order to insure the evenness of the bonding at corners and apertures, he calculated all the dimensions in the brick lengths and occasionally went so far as to separate the under-fired long bricks for the over-fired short ones, using the long in one dimension and the short in the other.'<sup>27</sup> It is clear that how much devotion Mies had for Berlage and how sincere he was to learn from him, as such dedication to details is exposed in the process of making a brick building.

Secondly, in one lecture in 1905 named 'Thoughts on Style in Architecture', he wrote about his idea that the projecting elements on the walls should be limited:

The architecture of the wall is therefore limited to decoration on the plane. Projecting elements remain limited to those that are suggested by the construction, such as window lintels, water spouts, gutters, single cornices, and so on. It follows from this 'architecture of the wall', in which the vertical articulation falls away of its own accord, that the possible supports, such as pillars and columns, are not given projecting capitals, but rather that the transition is accomplished within the plane of the wall.<sup>28</sup>

This must have impressed Mies as he visited the Amsterdam Exchange, where the projecting elements on walls are reduced to the minimum, leaving only a sleek wall. The way how Mies built with bricks mentioned above already reflects the sleekness he wanted to achieve in those projects.

Later in the Barcelona Pavilion, those freestanding walls made of either marble, onyx, or travertine, are also sleek and even with no projecting elements at all. Such sleekness is achieved by the construction of the wall, where the small rectangular pieces of surface materials are attached to the frame in the middle on both size of the wall. As a result, the frame is sandwiched and therefore invisible, leaving only the even wall surface made of modules of stones. Such modular pieces bring another benefit, which is the seams on the wall, making a regular motif on the vertical orientation of Barcelona Pavilion. This vertical grid agrees

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<sup>25</sup> Schulze, Franz. *Mies van der Rohe: Critical Essays*. New York: Museum of Modern Art, 1989, p. 14.

<sup>26</sup> Puente, Moisés. *Conversations with Mies van der Rohe*. New York: Princeton Architectural Press, 2008, p. 54.

<sup>27</sup> Johnson, Philip, and Museum of Modern Art (New York). *Mies Van Der Rohe, 2nd and revised edition*. New York: Museum of Modern Art, 1953, p. 35.

<sup>28</sup> Berlage, Hendrik Petrus. *Thoughts on Style: 1886-1909*. Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 1996, p. 152.

with another idea from Berlage, where he said: “In other words, in assembling constructional elements, one should not attempt to eliminate the necessary ‘seam’. On the contrary, one should make it into a virtue, that is to say, a decorative motif. You artists should exploit, therefore, the various constructional difficulties as decorative motifs.”<sup>29</sup>



Fig 5. Walls of Barcelona Pavilion, and the motif formed by the seams.

### 3.3 Berlage’s influence on Mies after he moved to America - theoretical

Mies’ reverence for Berlage was distinct. However, he only had a few chances to talk with Berlage in person, and their topic was never architecture. Therefore, Mies was sure that Berlage wasn’t aware of his devotion to him.<sup>30</sup>

What also remains hidden, is that Mies himself never talked about the real connection between his own architectural philosophy and Berlage’s, so such connection can only be inferred from traces existing in Mies’ buildings and Berlage’s writings. Nevertheless, there is one anecdote which could suggest the image of Berlage as not only a teacher of tectonics, but also the spiritual leader for Mies.

Once, Mies, Philip Johnson and Phyllis Lambert, daughter of Seagram owner Samuel Bronfman, for whom Mies was working on the Seagram Building, met in Philip’s Glass House. During their meeting they had a conversation about Berlage, where Philip Johnson said ‘he could hardly understand what Mies appreciated so much about the Amsterdam Exchange’. Consequently, Mies left the house in fury with no reply to Philip’s words. What really made Mies so angry as to leave immediately without saying anything is no way to be known. Paul Weber assumed in his dissertation that, it is because Philip ‘had hit a particularly sensitive point; perhaps less because he had criticized Berlage’s Amsterdam Stock Exchange,

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<sup>29</sup> Berlage, Hendrik Petrus. *Thoughts on Style: 1886-1909*. Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 1996, p. 139.

<sup>30</sup> Puente, Moisés. *Conversations with Mies van der Rohe*. New York: Princeton Architectural Press, 2008, p. 55.

but rather because Mies' self-image was called into question, which apparently presupposed a special bond with Berlage, as it shone through in 1927.<sup>31</sup>

Such assumption is not groundless. Many overlapping ideas can be found between Berlage's writings and Mies' assertions. Though isn't equal to that the corresponding part of Mies' theory derived from Berlage's thoughts, it is still worth pointing out their similarities.

In the same lecture mentioned before, Berlage expressed his view that historical forms should not be reintroduced in a modern context:

Is it not, I repeat, a remarkable coincidence that a struggle has begun not only against pseudo-art—the art of bad construction and imitation—but also against the much more elevated art of the great masters of previous centuries, whose entirely serious intention it was to bring back historical styles? We attack these masters not from lack of esteem or admiration for their work, nor because we are pedantic enough to think that we could do better. Truly not, for we are nowhere near able to achieve their perfection, and it would be appropriate if our younger architects were more modest when making comparisons. No, the attack had to come as a reaction against an art that, although on a higher conceptual and critical level, must still be regarded in the ethical sense as sham art in that it attempted to reintroduce forms from earlier periods into our quite differently ordered age.<sup>32</sup>

In 1923, in the first issue of *G*, the constructivist magazine sponsored and directed by Mies, he gave his aphorism on form:

We reject all aesthetic speculation, all doctrine, all formalism.

Architecture is the will of an epoch translated into space; living, changing, new.

Not yesterday, not tomorrow, only today can be given form.

Only this kind of building will be creative.

Create form out of the nature of our tasks with the methods of our time.

This is our task.<sup>33</sup>

In Berlage's writing, he attacked on the reuse of forms from the past, even those with high culture and from previous masters. In Mies' short but fierce sentences, he regarded form as the reflection of the spirit of epoch. Both of them emphasizes the necessity to use form suitable to present time. And Mies did follow his aphorism. His five seminal projects in the 1920s were all the reflection of the spirit hidden underneath that era of huge changes, and all combined with the most up-to-date techniques in construction, which made those aggressive forms possible, including the full glass façade of Friedrichstrasse skyscraper, and the floating minimalism volume of the Concrete Office.

The comparison between Mies and his spiritual leader then comes to the core of Mies' architecture: his 'clear construction'. About this, he admitted that he accepted the idea of clear construction from Berlage:

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<sup>31</sup> For details of this anecdote, see Weber, Paul. "Mies Van Der Rohes Visueller ‚Kalkül‘ Der Erneuerung." *RHHA Journal*, 0187, May 30, 2018.

<sup>32</sup> Berlage, Hendrik Petrus. *Thoughts on Style: 1886-1909*. Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 1996, p. 133.

<sup>33</sup> *G*, No. 1 (bibl. 2), 1923.

Berlage was a man of great seriousness who would not accept anything fake and it was he who said that nothing should be built which is not clearly constructed..... The idea of a clear construction came to me there, as one of the fundamentals we should accept.<sup>34</sup>

It is uncommon for a man as taciturn as Mies to reveal himself in such a straightforward manner. In fact, what he mentioned as Berlage said 'nothing should be built which is not clearly constructed', is a quotation of Viollet-le-Duc, one of the main sources of Berlage, in his essay:

But does not this sentence correspond to Viollet-le-Duc's principal tenet, "Every form that is not determined by the structure should be rejected."<sup>35</sup>

And 'this sentence' refers to another quotation Berlage made of Gottfried Semper, the other principal source and great mentor whom he most respected together with Viollet-le-Duc:

Semper says something very original at the beginning of his observations on "the seam" (die Naht) as a necessary element in the joining together of various parts. He asks if there is an etymological link between the word "necessity" [die Not], as in the phrase "making a virtue out of necessity," and the word "seam"; and whether the phrase should really mean "making a virtue out of the seam."<sup>36</sup>

Together, the alliance of Semper and Viollet-le-Duc shaped Berlage's idea that anything dishonest to the construction should be discarded, which was inherited by Mies.

What Mies meant by 'clear construction' is not the simple exposure of structural components, or the over-emphasis on tectonic in a project. It is the homogeneous grid system, what he refers to as 'structure', that Mies was really after. Mies' grid system originated from Behrens, under the apprenticeship of whom Mies must have become familiar with such homogeneous system. Nevertheless, his own version of the homogeneous order could also be inspired by Berlage, who put forward his idea that everything in an architecture should be controlled by a universal law, in the lecture 'The Foundations and Development of Architecture' in 1908:

But I want to stress again—as a means, and only as a means. The general principle should run as follows: just as geometry itself, proceeding from a few basic forms, reveals endless variations and relationships, something already visible in nature, so should each task be solved according to an appropriate pattern, the more so because no system exists that fits each individual case.<sup>37</sup>

Here, Berlage advocated that everything should follow the general principle of geometry, but he also cautiously warned that this should only be a means, and applied to certain conditions. Similar view of Mies can be found in a letter from him to Werner Jakstein: "Really perfect form is always conditioned, is deeply rooted in the task; in fact, it is its most elementary expression."<sup>38</sup>

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<sup>34</sup> 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.

<sup>35</sup> Eugène-Emmanuel Viollet-le-Duc, *Entretiens sur l'architecture*, 2 vols. (Paris: A. Morel, 1863-1872), i: 305: "Toute forme qui n'est pas ordonnée par la structure doit être repoussée." Quoted in Berlage, Hendrik Petrus. *Thoughts on Style: 1886-1909*, p. 139.

<sup>36</sup> *Ibid.*, p. 139.

<sup>37</sup> *Ibid.*, p. 215.

<sup>38</sup> Letter to Werner Jakstein of September 13, 1923. Quoted in Schulze, Franz. *Mies van der Rohe: Critical Essays*, p. 47.



Mies' homogeneous grid system is clear and discernable, although he took much effort to apply it to his buildings with complicated construction details he designed for each project, as a means of realizing this system. The meaning of those details remain only necessary measures Mies adopted to accentuate his grid system, with no extra symbolic or spiritual meanings. This also agrees with the idea reflected in Berlage's lecture. After his emphasis on the geometrical principle quoted from his lecture above, he then quoted a word from Hegel, where he said architects should not go too far for symbolic or mystical meanings to support his warning.

Berlage's universal principle of geometry is well reflected in The Amsterdam Exchange. From the plan he made for the building, a grid system comprised of squares is used to control the overall layout of the plan. Moreover, the façade of the building is placed under a grid of 8:5 triangles, named the Egyptian Triangle.<sup>39</sup>

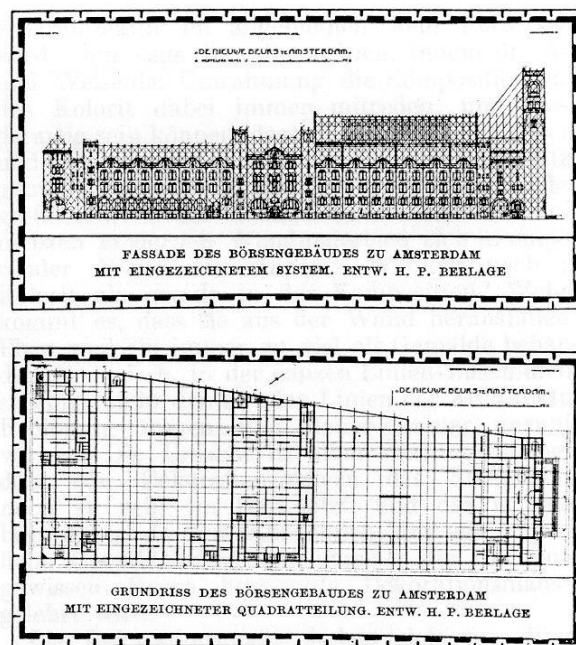


Fig 6. The proportion system of The Amsterdam Exchange.

There is another important statement made by Berlage in his lecture 'Thoughts on Style in Architecture', that architects should first study the skeleton, and then, in addition to a logical construction, the cladding of the structure must not be a loose covering on the structure itself, but instead should be closely related to the inner building and 'is ultimately a form of decorated construction'<sup>40</sup>

A decorated construction, is the very precise description of Mies' architecture. Apart from the basic load-bearing structures in his buildings, whatever components he attached to the structure can be seen as

<sup>39</sup> Singelenberg, Pieter. *H.P. Berlage Idea and Style : The Quest for Modern Architecture*. Utrecht: Haentjens Dekker en Gumbert, 1972, p. 110.

<sup>40</sup> Berlage, Hendrik Petrus. *Thoughts on Style: 1886-1909*. Santa Monica, CA: The Getty Center for the History of Art and the Humanities, 1996, p. 136.

ornamentations deeply rooted in his homogeneous grid system as means to adhere to or accentuate its existence.

Let us take his famous Crown Hall for example. On the façade of Crown Hall, there are two types of steel I-beams, one of which bears the building's vertical load, while the other of which is totally separated from the ground, thus only acting as an ornamentation. Both of the I-beams are strictly located at the end of the axes which are part of the homogeneous grid system. The second type of I-beam's complete isolation from the ground makes itself pure accentuation of the grid system, removed of its structural function. This perfectly agrees with Berlage's statement that a building should be a decorated construction, and all ornamentations should be deeply rooted in the building's overall system. The method of placing I-beams as termination of axes to accentuate the grid system originated in Farnsworth House, but what differentiates Farnsworth House from Crown hall is that, in Farnsworth House, all the I-beams are structural components with the extra function as ornamentation to mark the existence of the grid system, which is the counterpart of the first type of I-beams in Crown Hall. Such method is fully evolved by Mies in his late glass skyscraper projects in America, where the I-beams on the facade are all freed from the duty as load-bearing structure, and become the pure accentuation of the grid system, which is the counterpart of the second type of I-beams in Crown Hall.<sup>41</sup>

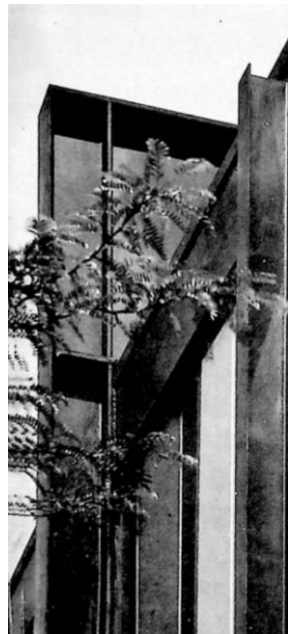


Fig 7. Two types of I-beams in Crown Hall.

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<sup>41</sup> For detailed analysis of Mies' grid system and its ornamentations, see Tang, Feng long. *"Yun Zhi"De Zhi Xu Yu"Qing Xi De Jian Zao": Mi Si Fan De Luo = Homogeneous Structure and Clear Construction: Mies van der Rohe*. Beijing: China Architecture Education Press, 2012.

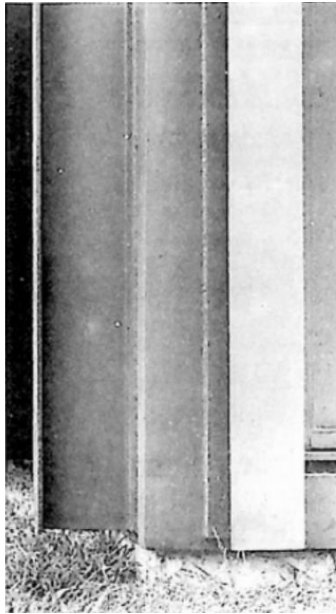


Fig 8. The separation from the ground.

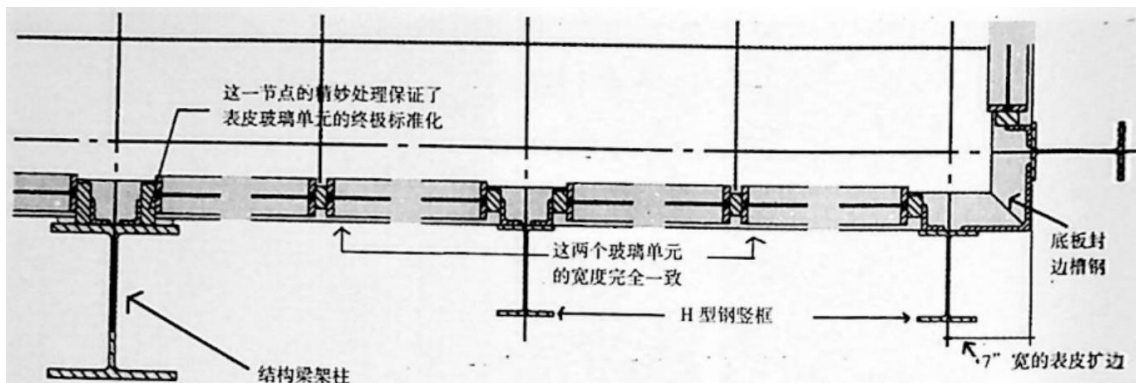


Fig 9. Plan of details of Crown Hall.

Finally, let us take another detail from Mies, which has its highly similar counterpart in the Amsterdam Exchange. At the corner of the plan of Alumni Memorial Hall at Illinois Institute of Technology, an intricate detail was implemented, to address the homogeneity of the grid system even at its planar ending at the corner. The detail itself consists of the structural column made of I-beam embedded in concrete, and two ornamental I-beams which stands in the orientation of the X and Y axes of the grid system. Such complex construction makes the detail self-symmetric in 45 degrees, which perfectly reflects the symmetric nature of the homogeneous grid system on both X and Y sides. Such construction of details which might seem incomprehensible and over-complicated to others exists in many Mies' buildings.

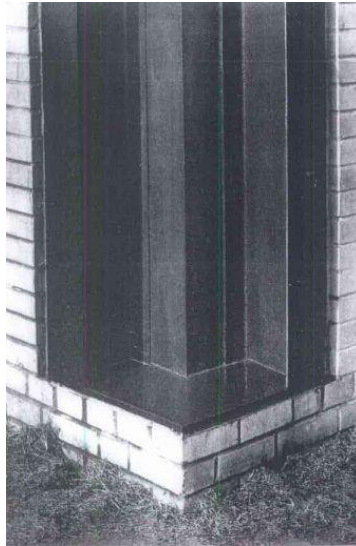


Fig 10. The detail at the corner of Alumni Memorial Hall.

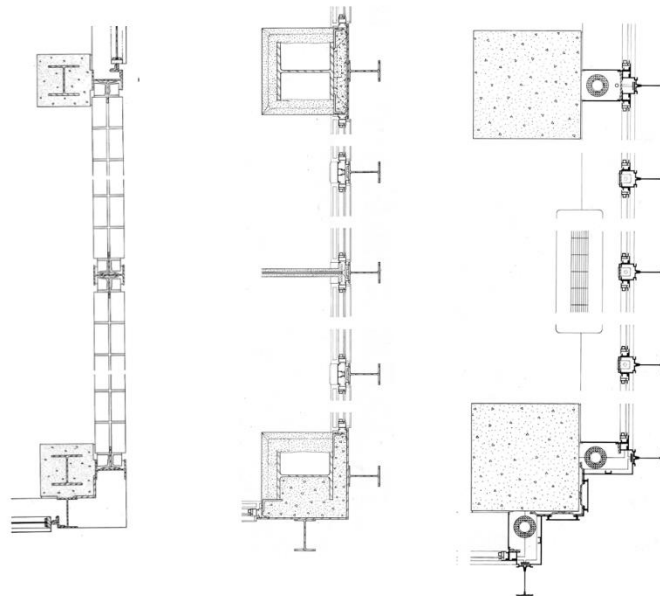


Fig 11. Similar details in Mies' oeuvre

Left: Alumni Memorial Hall. Middle: 860 Lake Shore Drive. Right: 900 Lake Shore Drive.

In the Amsterdam Exchange, the continuity of the square grid system is also accentuated at its corners with ornamentations. At the passage between the exchange halls, Berlage placed a relief of two elephants by Lambertus Zijl, who was appointed by Berlage to design the reliefs in The Amsterdam Exchange to fit in with his requirement that all decorations must suit in with the structure. The head of the two elephants are fused in a symmetric manner, which makes the relief also self-symmetric in 45 degrees - the same condition as that of Mies' details. Similar reliefs can be found all over the turnings of walls in the building. Moreover, those reliefs are deliberately made flat to stay in the profile of the wall, which is in agreement with Berlage's statement that walls should be sleek with no projecting elements. It is very

possible that the self-symmetric reliefs in the Amsterdam Exchange could be the prototype of Mies' corner details.

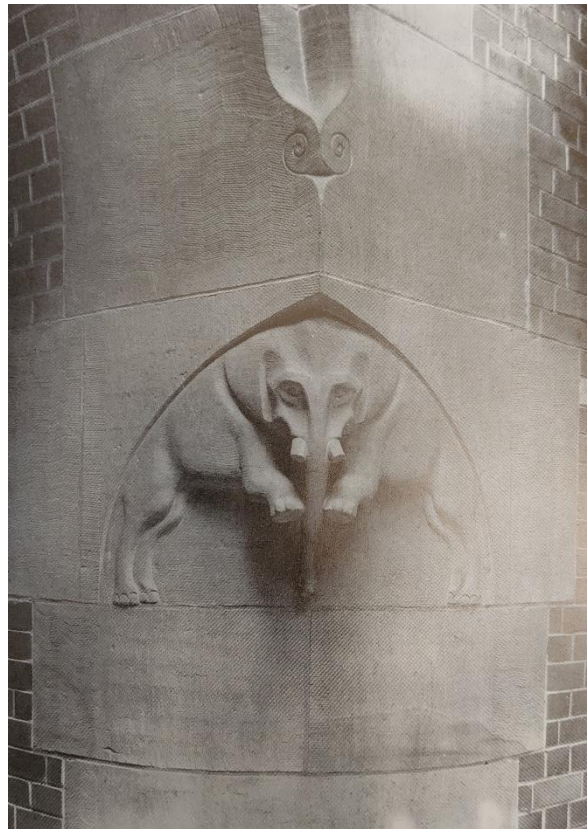


Fig 12. The self-symmetric elephant relief in The Amsterdam Exchange.

Until now, some evidences are given, to show that Mies learned from Berlage, both on the level of practical treatment to constructions, and the level of architectural philosophy. Some of the instances may not be enough to reveal that Mies had based something from himself completely on his learnings from Berlage, for lack of direct proofs from himself, but it is still relevant to put them together for comparison, and to find similarities in order to suggest the possibilities that some parts of Mies' architecture and his philosophy are really inspired by the great Dutch architect, who shared very similar views with Mies, and was already a trailblazer of modern architecture.

#### **4. Conclusion**

The Kröller-Müller project, as well as his short but deep Dutch experience, means a lot in Mies' process of becoming a mature modern architect, in many aspects.

Firstly, Mies' design for the Kröller-Müller museum was his first closest attempt of a breakthrough in modernism, which can be seen from his own attitude towards the project, and also from its special position in the timeline of his oeuvre. After the Kröller-Müller museum, it had been about a decade before his first really modern project came out. Secondly, but more importantly, Mies' short stay in the

Netherlands provided him with the chance to study the works of Berlage, which became a major source of him in later years.

The Berlagian influence in Mies' works and thoughts is intense, which can be confirmed by Mies' own words and attitude. He directly showed his high esteem for Berlage many times, in multiple interviews or personal conversations, where he even admitted Berlage as his guide. Even though he never elaborated on in what dimension and how in detail Berlage's ideas shaped his, such influence is reflected from the overlapping parts of the writings and architecture of these two men, which can be categorized into two levels - practical and theoretical. This division of the two layers of Berlagian influence in Mies is the main method used in the second half of this thesis.

There is also a division of time which corresponds with the division of practical and theoretical. Before Mies moved to America, he mainly applied the lessons from the tectonics of Berlage's architecture, especially the use of bricks and the sleekness of walls. In his American era, Mies carried out a systematic retrospection of what he absorbed from Berlage's theory and architecture. This could have played a significant role in the development of Mies' own theory, where he translated Berlage's idea 'style is unity in diversity' into his homogeneous grid system, or clear construction, which can be seen in Mies' American projects. What differs the tectonics in those projects as accentuation of the grid system from the tectonics in his European projects is that, the former is more the physical form of a metaphysical system inspired by Berlage's theory, while the later can be regarded as pure imitation of Berlage's tectonics.

To conclude, the Kröller-Müller project opened the gate for Mies to approach Berlage's system of modern architecture, which became an important origin of what made Mies so famous - his lifelong pursuit of clear construction and homogeneous grid system. It is then relevant to credit Berlage with a more prominent figure for his influences on modern architecture, although they made their indirect impact through Mies, who is probably his biggest follower.

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