Modern Architecture and Modern Furniture

Modern architecture and Modern furniture originated almost during the same period of time. Modern architects needed furniture compatible with their architecture and because it was not available on the market, architects had to design it themselves. This does not only apply for the period between 1920 and 1940, as other ambitious architectures had tried before to present their buildings as a unit both on the inside and on the outside. For example one can think of projects by Berlage, Gaudí, Mackintosh or Horta or the architectures of Czech Cubism and the Amsterdam School. This phenomenon originated in the 19th century and the furniture designs were usually developed for the architect's own building designs and later offered to the broader consumer market, sometimes through specialized companies. This is the reason for which an agreement between the architect and the commissioner was needed, something which was not always taken for granted.

By Otakar Mácêl

The museum of Czech Cubism has its headquarters in the Villa Bauer in Libořice, a building designed by the leading Cubist architect Jiří Gočár between 1912 and 1914. In this period Gočár also designed Cubist furniture. Currently the museum exhibits the furniture from this period, which is not actually from the Villa Bauer house itself. This is because the commissioner of the original building thought that it was already special enough and once it was completed he fired the architect and decorated the house himself.[1]

Gerrit Rietveld did not have to deal with this kind of problems in Utrecht during the furnishing of the *Schröderhuis* [figure 1]. Rietveld worked on the design and the furnishing of the house close together with the wife of the commissioner. The *Schröderhuis* is a reference key point of *De Stijl* together with the Red–Blue chair that is part of the interior [figure 2]. The house and chair constitute a unity, the spatial construction consisting of colored patterns, lines and geometric shapes. It seems like Rietveld tried to create a unity by matching the furniture with the house.

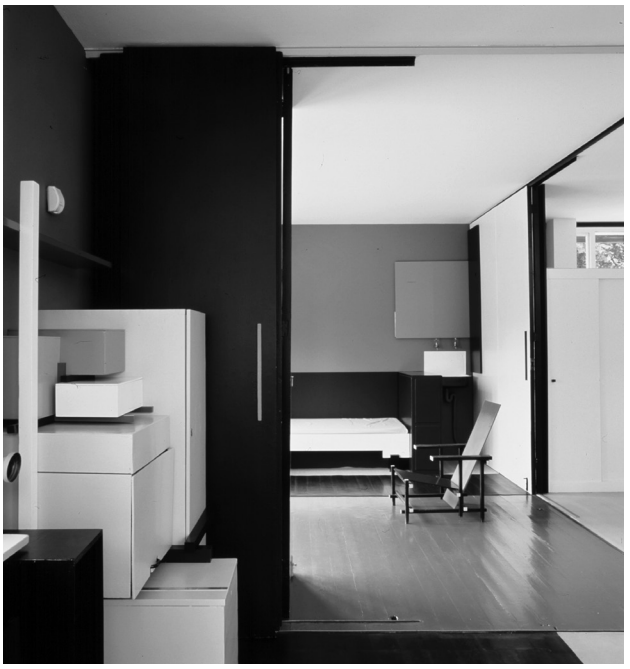
In practice this did not work out because the chair was designed in 1919 and the original one did not have color[2]—color appeared between 1922 and 1923.[3] Although the chair was part of the interior, the chair can also appeared on the balcony as seen in pictures taken between 1920 and 1930.[4] The reason is that Ms. Schröder was not always enchanted by Rietveld's creations. Which is then the relation between the house and the chair? In 1963, Rietveld said "When I had the opportunity to create a house with the same intentions I had realized in that chair, I immediately jumped at it".[5] The chair was not primarily designed to fit in the interior, but a previous epitome of *De Stijl* principles that culminated in the *Schröderhuis*.

The chair was there before the architecture, which was not so surprising because Rietveld was an interior designer. The same can be said about the "father" of Modern functional design, Marcel Breuer. With the influence of Rietveld he designed Modern wooden chairs during his studies in 1922 in Weimar—chairs which were not designed for a specific building. He was not an architect but an interior designer and he became the head of the furniture workshop of the Bauhaus. Between 1927 and 1933 he designed Modern interiors and his first house, Harnischmacher in Wiesbaden, was realized in 1932. His name is mostly linked with the functional interior icon, the tubular steel furniture. In 1925 he designed his first steel furniture; a *fauteuil* called the Wassily chair[6] and a stool. Both pieces were developed in the educational workshop of the airplane factory Junckers because at the Bauhaus workshop they only worked with wood. The chairs were initially placed in the Bauhaus in Dessau designed by Walter Gropius [figures 3, 4]. Still the question arises; was the furniture specially designed for the building? The fauteuil was probably not but it is not clear with the stools which were situated in the auditorium. In the end Breuer founded his own company, Standard Möbel, in Berlin between 1926 and 1927, because he did not want his steel furniture to be linked with the Bauhaus.

Although the *fauteuil* is nowadays the symbol of functional design, it was the stool which stood for a new era. The Wassily chair is in fact a translation of the Rietveld Red–Blue chair in steel tubes. The stool on the other hand is not so spectacular; it embodies the use of the industrial materials, the bendable steel makes a continuous tube line possible, which can lead to a closed yet a transparent shape.[7] All the following designs made by Marcel Breuer were designed on this principle.[8]

< **Gerrit Rietveld** with a model of the "core house".

Figure 1. The *Schröderhuis* by **Gerrit Rietveld**, Utrecht, 1924. Photo by Hay Kranen.



Rietveld Schröder House, **Gerrit Th. Rietveld**, 1924
The Rietveld Schröder House is part of the Centraal Museum, Utrecht.
Image & copyrights: Centraal Museum, Utrecht. c/o Pictoright 2012.
www.centraalmuseum.nl

Rietveld and Breuer are an exception because most designers made furniture initially for their projects. This was also the case with the model houses at the *Weißenhofsiedlung* built for the *Werkbund* exhibition *Die Wohnung* in Stuttgart in 1927. These model houses were not only an exhibition of the new architecture but also showed how it was possible to live in such an architecture: the new living.[9] A few houses showed a clean, almost empty interior with a lot of light and space, where the transparent steel furniture with shiny tubes fit perfectly with the houses.[10] For this opportunity Mart Stam, Mies van der Rohe and J.J.P. Oud specially designed their houses with this new steel furniture. Stam and Mies showed the novelty with their cantilevered chairs. Others, like Walter Gropius used the Breuer furniture, and Le Corbusier and Mart Stam used the Thonet wooden chairs. Some interiors were furnished by others; Mies van der Rohe´s houses were furnished by Arthur Korn, Heinz and Bodo Rasch, and Max Ernst Haefeli.

The houses were not always furnished just with tubular steel furniture. Besides the already mentioned Thonet chairs, the Rasch brothers also used their wood designs

Figure 2. The Red-Blue chair by **Gerrit Rietveld**, 1918–1923.

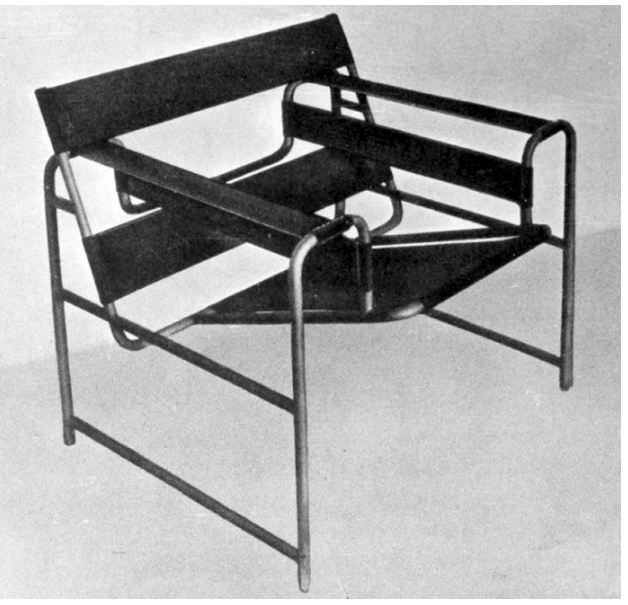


Figure 3. The Wassily chair by **Marcel Breuer**, 1925–1926.

Figure 4. The Bauhaus refectory with the stools by **Marcel Breuer**.

such as the cantilevered *Sitzgeiststuhl* chair and Haefeli presented a cast chair, the Elektron.

But the Modern architecture of the 20s and 30s was mostly associated with steel tube furniture. The predilection of avant–garde architecture for this type of furniture appears from the fact that 11 of the 23 participants at the first CIAM Congress at the Château de La Sarraz in 1928 designed steel tube furniture.[11] Even art historian Siegfrid Giedion used these designs. The continuation of the *Weißenhofsiedlung* idea in Brno (1932), Breslau (1929), Stockholm (1930), Berlin (1931) and Vienna (1932) also showed steel furniture. Modern architecture and Modern interior went hand in hand. From the 20s until the beginning of the war many Modern houses were designed according to the architect´s taste[12] or by the Modern furniture that was rising in the market. Not only were the white villas furnished like this but also the social housing was furnished with Modern furniture. For example, the wooden furniture of Ferdinand Kramer and the *Frankfurter Küche* (Frankfurt kitchen) by Margarete Schütte–Lihotzky. While the avant–garde furniture was losing its exclusivity in the 30s, wooden and reed furniture was started to become very popular. The laminated wood furniture (Aalto, Breuer) was a new alternative to the tubular furniture.

What was it that the architects saw in this type of furniture? Which was the common ground between Modern architecture and Modern furniture? Initially it was the spaciousness and sober, yet elegant machinelike look, which was missing in the last furniture designs. One saw this furniture as an anonymous, industrial series of practical, hygienic and light products which at the same time were inexpensive. Actually they had the same characteristics as Modern architecture. The spaciousness and transparency was also present in the tubular furniture and the curved beech wood chairs. Not only because the chairs had a simple shape but also because of the fact that the furniture was not coated—the Red–Blue chair and the Wassily *fauteuil* can be seen as a skeleton of an English club non–coated *fauteuil*. In Modern interiors, furniture was not allowed to become a visual and physical obstacle in the space. Known are the lyrical words by Breuer about the spacious effect of the tubular furniture, as "airly pierced, drawn, as it were in the space".[13] The Barcelona Pavilion and the Tugendhat house of Mies van der Rohe

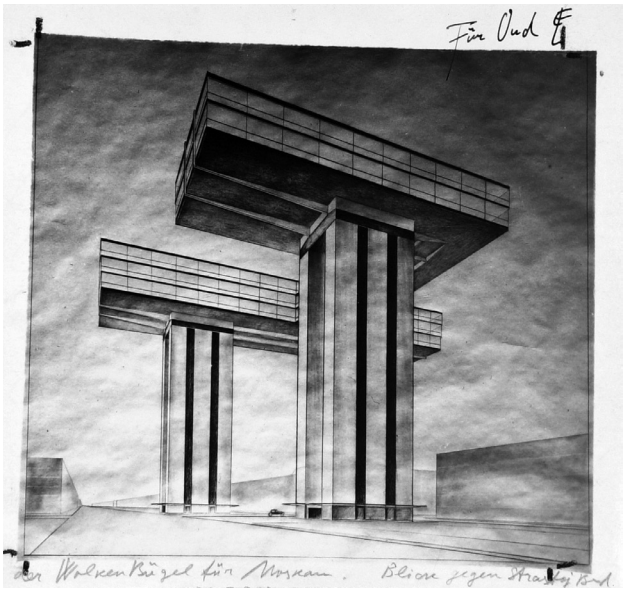


Figure 5. **El Lissitzky's** *Wolkenbügel* (iron clouds), 1923–1925.

were an example of Breuer´s interior designs. The industrial origin of the steel and beech wood furniture had more meanings. The industry, back then a symbol of progress, became the basis of industrial building and mass production of practical and cheap objects. The materials for this type of furniture; the steel tubes and the bended beech wood, were also industrial standardized products.

Through the laws of the automated machine selection, a new and practical shape without unnecessary decorations was to be provided for an anonymous serialized product. Le Corbusier's theory about good form, *object-type*, highlights this point.[14] The importance of the machine metaphor is shown in Breuer´s description of his first *fauteuil* as *"meist maschinenmässig"* (the most machine-wise).[15] Real "sitting machines" were only developed by Prouvé. The term hygiene was a twofold both in architecture and in Modern furniture. On the one hand it concerned the physical hygiene: the architecture of light and air, together with the furniture made it easier to clean. On the other hand hygiene strictly had to do with form—aesthetics—which created a clinical image. Not surprisingly, Modern interiors are sometimes compared with operating rooms.

Tubular furniture aesthetics have rarely been elated, although all their properties are certainly aspects of the machine aesthetic. Only Charlotte Perriand, co-designer of Le Corbusier's tubular furniture, was excited with the polemic with John Gloag on tubular furniture: "[...] Aesthetic value. Metal plays the same role in furniture as cement in architecture. It is a revolution [...]. A new lyric beauty regenerating by mathematical science."[16]

The link with architecture and its aesthetic preference could also express itself in a different way. For Mart Stam, a "hardcore" functionalist, the shape of the cantilevered chair was not determined purely functional. During the development of his chair at the firm Arneold in Schorndorf, he kept using thin tubes and sharp bends, making the chair sag with the first try-out and thus having to strengthen it. The cubicle shape had to correspond with its rectangular-shaped architecture. Later, during the process on the product rights of the chair (1931), the jury decided that, because of its sleek and rectangular shapes, it was an original. This was seen as the epitome of the *Neue Schachlichkeit*.[17] Besides this personal relation between the chair and the architecture epitome, the cantilevered chair and the general endeavor for mobility and denial of gravity, also played a key role in architecture, for example in the *Wolkenbügel* and the *Lenintribune* by El Lissitzky [figure 5] or the *Peterschule* by Hannes Mayer in Basel.[18] Another example of an alignment between furniture and architecture is the work of Mies van der Rohe, which was in fact the opposite of the work by Mart Stam. The *fauteuil* and the stool of Mies van der Rohe which were designed for the German Pavilion in Barcelona could be compared with his architecture. On the one hand the spatial continuity and on the other hand the walls and the layout of the furniture that was fixed and immobile. The furniture—the construction of which is open and transparent—suggests movement even if it is not there. The chairs were not foldable because the different chair pieces were welded together. The second parallelism relates to Modernity and tradition. The Pavilion is Modern with references of *De Stijl* and Suprematism but at the same time it has references to the classic tradition. The Modern material of the furniture with its bended lines of chromed steel is based on a tradition that dates from Ancient Egypt.[19] Besides, the Pavilion and the chair had a representative role. The remakes of the chair are still used in that way.[20]

Modern, functionalist furniture was connected since the beginning directly with architecture although this was only visible in the interiors of Modern architecture. Only a few manufacturers produced this steel furniture, so some architects such as Breuer, Eysselinks, Herbst, Hoste or Prouvé founded their own furniture companies although they were not all successful. With the acceptation of this new architecture around 1930, the new (steel) furniture became more popular but at the same time, the connection between furniture and architecture began to decrease. In 1929 the Dutch metal works Gispen was able to start developing steel chairs in 1929 thanks to the commission to furnish the Van Nelle Factory in Rotterdam. However, tubular steel chairs became more and more fashionable after 1930 and despite the economical crisis,

Gispen no longer depended solely on commissions by the avantgarde. The use of this furniture became broader than that of the functionalistic interiors. The number of sales of the furniture manufactures Thonet and Mauser, originated in Germany, shows that the increase of sales continued after 1933 until the end of the 30s, despite the fact that Modern architecture was officially in decline.[21] This means that the steel tubular furniture became popular [figure 6] among the consumers and was not associated with functionalistic architecture. The dream of avant-garde architecture, with the use of new materials and throughout a serialized production that they wanted to make as inexpensive and practical furniture for the different layers of the society, was reached once the connection with the avant-garde was broken. The chairs of curved beech wood had no problem with this: since their origins in the 19th century they had never been connected to a specific architectural language.

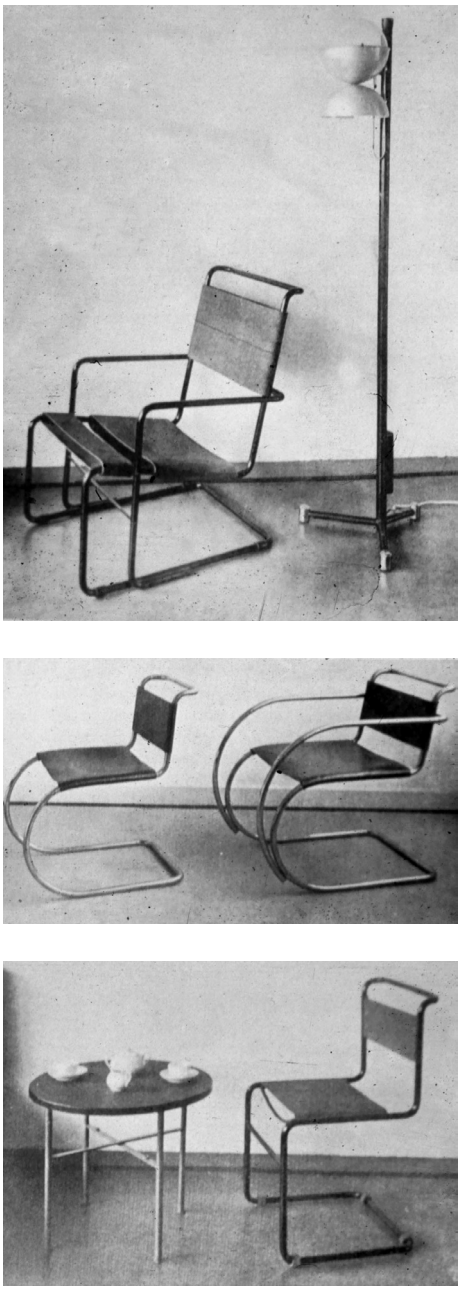


Figure 6. Chair by **M. Stam** and **Mies van der Rohe**, 1927, *Weißenhofsiedlung*, Stuttgart.

Notes

1. Probably, the choice of the architect was done due to fashionable considerations and not because they had the same taste.
2. The most recent reference in Kuper, Marijke; Reitsma, Lex, *Rietvelds Chair*, Rotterdam, NAi Publishers, 2011, 36.
3. Idem, 101-102.
4. Idem, 127.
5. Idem, 64.
6. This name is a marketing name that Gino Gavina used in the 60s when the reissue of the chair was presented. Until then the chair had been called Clubessel B3.
7. Mácêl, Otakar, *Der Hocker*, Ezelsoren, 2008, vol. I, nº 3, 101-109.
8. Geest, Zie J. Van; Mácêl, Otakar, *The Museum of the Continuous Line*, Amsterdam 1988.
9. For *Weißenhofsiedlung* see Kirsch, Karin, *The Weissenhofsiedlung*, Stuttgart, 1999 (1987) and Pommer, Richard; Otto Christian *F., Weißenhof 1927 and the Modern Movement in Architecture*, Chicago-London, University of Chicago Press, 1991.
10. For the interiors see Gräff, Werner, *Innenräume*, Stuttgart 1928.
11. These were P. Chareau, G. Guevrekian, H. Hoste, Le Corbusier, A. Lurçat, W. M. Moser, R. Neutra, G. Rietveld, M. Stam, R. Steiger and S. Giedion. For Giedion see Lepel, Peter; Spies, Oliver, *Über Möbel*, Rüti, 2001, 89-91.
12. A survey of architects and furniture manufacturers of the tubular furniture of the interwar period can be found in Mácêl, Otakar, *2100 metal tubular chairs*, Rotterdam, Van Hezik-Fonds 90 2006, 219-249.
13. Breuer, Marcel, *Metallmöbel und die neue Räumlichkeit*, Neues Frankfurt, 1928, II. jrg., nº 1, 11-12.
14. See e.g., Banham, Reyner, *Theory and Design in the First Machine Age*, London (1960) 1975, 207-213.
15. Gräff, Werner, op cit., 133.
16. Perriand, Charlotte, *Wood or Metal*, The Studio 1929, Vol. MCMXXIX, 279.
17. Mácêl, Otakar, *Der Freischwinger. Vom Avantgardeentwurf zur Ware*, Delft, 1992, 57.
18. See Vogt, Max Adolf, *"Das Schwebe-Syndrom in der Architektur der Zwanziger Jahre"*, Vogt, A. M., *Schriften. Die Hunde bellen, die Karavan zieht weiter*, Zürich 2006, 152-187; Hackenschmidt, Sebastian, "Form Follows Motion-*Stühle in Bewegung*", Ferus, Katharina; Rübeled, Dietmar, *Die Tücke des Objekts*, Berlin, 2010, 92-119.
19. Mácêl, Otakar, *"From mass production to design classics: Mies van der Rohe's furniture"*, Vegesack, Alexander Von; Kries, Matthias, ed., *Mies van der Rohe: Furniture and Buildings in Stuttgart, Barcelona and Brno*, Milano, Skira, 1998, 38-39.
20. Tegethoff, Werner, *"Der Pavillonsessel"*, Reuter, Helmut; Schulte, Birgit, ed., *Mies und das Neue Wohnen*, Ostfildern, 2008, 171.
21. Mácêl, Otakar, op.cit. 1992, 95-98. The increase in production also happened in other European countries.

Otakar Mácêl
Associate professor of Architectural History at the Technical University of Delft, Netherlands. He is the author of studies about designers such as Breuer, Mies van der Rohe, Rietveld or Stam, and also of publications on Modern furniture such as *Chairs. Catalogue of the Delft Faculty of Architecture Collection* and *2100 Metal Tubular Chairs: a Typology.*