

Materiality of the Diaphane. Comments on the Tugendhat House by Ludwig Mies van der Rohe and Lilly Reich¹

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The theme of my short contribution relates to the inspiring article of Monika Wagner in the international conference titled *Materiality* in Brno in 2006, where - under the title "*Material of the Immaterial*", she illustrates the importance of glass in the Tugendhat House in the context of contemporary material aesthetics and shows how an ideal of the pictorial arts, namely the self-transcendence of the material, the intertwining of surface and depth, is transferred in the Tugendhat House into the architecture.¹



Fig.2

Chartres, cathedral, north-east chapel of the ambulatory; the architectural surface and the stained glass of this chapel was restored recently. (Photo Ivo Hammer 2009)



Fig. 3

Brno, Tugendhat House 1928-30, Ludwig Mies van der Rohe und Lilly Reich, view toward east side. (Photo Fritz Tugendhat 1930)

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- ¹ Cover image: Brno, Tugendhat House, 1928-30, Ludwig Mies van der Rohe und Lilly Reich, living room used as children hospital, view towards west side (Photo Mogens Koch, 1972)
- ¹ Monika Wagner, *Immaterial Materials of the Tugendhat House within the context of the aesthetics of materials of the time*, in: Iveta Černá und Ivo Hammer (Hrsg.), *Materiality (Sborník příspěvků mezinárodního symposia o ochraně památek moderní architektury / Proceedings of the International Symposium on the Preservation of Modern Movement Architecture / Akten des internationalen Symposiums zur Erhaltung der Architektur des Neuen Bauens, Brno / Brunn 27.-29.04.2006)*, Muzeum města Brna / Museum of the City of Brno and Hornemann Institut of HAWK in Hildesheim 2008 (ISBN 978-80-86549--54-5).

DIAPHANE: CHARTRES - TUGENDHAT HOUSE, Fig. 2, 3

Perhaps the reference to the Gothic cathedrals Skelettbauten is not quite inappropriate² and the association with the famous characterization of these structures as "diaphanous", described by Jan Jantzen in 1927.³ Jantzen specifies these structures as walls of "dissolved in colored light" and uses the term "Antiponderos" (which means something like the opposite of greivic, weighty) as essential style element of the "spiritualized area". The windows are in fact both donor of light and image plane. In Chartres, for example, there are the translucent 'tapestries' and their spiritual messages, whereas in the Tugendhat House the physical nature itself becomes an image, the branches of the plants of the winter garden appear as lead came of Gothic stained glass windows, the colorful leaves as the colored glass.

MATERIALITY

Given the exuberant literature on Ludwig Mies van der Rohe (LMvDR) in general and on the Tugendhat House in particular, it may be justifiable to ask if there is anything new I can offer you. In fact, there are many astute analyses of the spatial structure and the design and its importance in the history of architecture. The few publications that deal at all with the materials, such as the apparently little-known publication by Yilmaz Dwezior on the glass in the context of Mies van der Rohe architecture⁴ relate more to iconographic questions as to the tangible materials of structures and the materiality of architecture.

Our Western culture, dominated by Christian culture neglected the matter in philosophical as well as in practical terms and gives primacy to the spirit, to the idea. And the currently growing emphasis on the evidence in cultural studies and specifically in aesthetic discourse has hardly been matched by a concrete scientific engagement with the material base of artefacts.⁵

2 Konrad Werner Schulze (Glas in der Architektur der Gegenwart, Stuttgart 1929) refers to the historic tradition of construction using glass.

3 Hans Jantzen, Über den gotischen Kirchenraum, Freiburg 1927; idem, Die Gotik des Abendlandes, Köln 1962.

4 Yilmaz Dwezior, Mies van der Rohe. Blick durch den Spiegel, Cologne 2005.

5 see z. B. Karin Hassauer - Helmuth Lethen - Elisabeth Timm (ed.), Sehnsucht nach der Evidenz, Zeitschrift für Kulturwissenschaften 1 / 2009 (Bielefeld, transcript), see especially the interview of H. Lethen with Ludwig

Monika Wagner states: "Since Plato and Aristotle, European art history has paid little attention to the materials of which of artworks are made. Aesthetic theory has long regarded material as the medium of form and not something meant to be consciously perceived as part of the meaning of the artwork."⁶

Given this situation, I find it gratifying when a scientific conference is dedicated to a specific building material like glass.

Focus of my contribution is the materiality of the aesthetic orchestration of space and its limits. First I would like to try the following definition of the term materiality:

Materiality of art is the manifestation of historical, artistic and other cultural properties in the material substance of arts, their techniques and their surfaces. Accordingly, the matter of a work of fine art is to be considered dialectically: one the one hand as a technology of matter with determined elements in a certain compound, of surface appearance (including color, structure, texture and facture), of aging and of deliberate, anthropogenic change and - on the other hand - as a matter of design with a specific subject, purpose, form, context, content and reception horizon.

The thing, the matter is indissolubly linked with the idea, it is not just an arbitrary character or sign documenting cultural ideas.⁷

Preservation and conservation of the material substrate of cultural heritage make sense only, if they are understood as authentic resource of historical, artistic and other cultural attributes and designs materialized in the fabric of the monument and its surface.

HAWK: CONSERVATION INVESTIGATION CAMPAIGN CIC

Since 2003, the HAWK University of Applied Arts and Sciences in Hildesheim, Germany - (since 2005 together with other Universities of Pardubice, Brno, Cologne, Dresden and

Jäger (p. 89-94).

6 Monika Wagner: Das Material der Kunst. Eine andere Geschichte der Moderne, München 2001; see also: <http://www.incca.nl/links/78-theory/173-archive-for-the-research-of-material-iconography>.

7 see Ivo Hammer, Materialität der Zeichen. Wandmalerei in Florenz, Vortrag 5.5.2010, Wien, Universität für Angewandte Kunst, siehe: www.angewandtekunstgeschichte.net/sites/default/files/vortrag_materialitaet_der_zeichen_1.pdf

Vienna) - has been performing a scientific conservation investigation concerning the Tugendhat House of Ludwig Mies van der Rohe and Lilly Reich. The interdisciplinary investigations were concerning the materials, techniques and surfaces of all different original materials, the materials and surfaces of later repairs, the state of conservation and the damages and - last but not least, the methods and techniques of conservation, repair and - finally - maintenance. We called it CIC (Conservation Investigaton Campaign).

But there is a paradox:

We have examined only the materials and surfaces still preserved originally. And just the original glazings are not preserved - at least as far as we know. This is even more painful in view of the fact that glass has a special meaning in architecture by Ludwig Mies van der Rohe and Lilly Reich.

TOWER FRIEDRICHSTRASSE, GLASS ROOM, BARCELONA PAVILION



Fig. 4 (top left)

Ludwig Mies van der Rohe, Bürohochhaus (high rise office building) Berlin Friedrichstraße, project to a competition, 1921

Fig. 5 (top right)

Lilly Reich and Ludwig Mies van der Rohe, Glass Room, Exposition "Die Moderne Wohnung", Stuttgart 1927



Fig. 6

Barcelona, International Exposition 1929, Pavilion of the Deutsches Reich, Ludwig Mies van der Rohe; dismantled 1930, rebuilt 1986.

Since 1986, through the publication of Fritz Neumeyer, we know the dictum of LMvdR of

1933: "What would be concrete, what steel, without plate glass?"⁸

As early as 1922, LMvdR published a first fundamental argument concerning glass as building material⁹, apparently in connection with his design project for Berlin's high-rise building Friedrichstrasse in 1921.¹⁰

LMvdR writes: " Skyscrapers show the bold constructive thoughts only under construction," ...and adds, that these bold thoughts are "the necessary foundation for the artistic design" ...LMvdR specifies: "The principle of this new type of buildings shall be clear, if glass is used for the no longer supporting exterior walls. But the use of glass forces to take new ways ."... Mies also seeks - as he calls it - "to avoid dead appearance that often arises in the use of glass in large spans", and he continues: "My experiments in a glass model showed me the way, and I soon realized that with the use of glass it is not important to achieve an effect of light and shadow, but to a rich play of reflections."¹¹

These words of the artist, who worked since 1926 intensively with his peer colleague and partner Lilly Reich, suggest a topic that can bring the music of the artwork to sound, if you look at - to stay in the picture - the actual chords, their sounds, their rhythm and their performance: In other words: if you look at the play of space, materials and light, transparency and reflection of light.

You know the Glass Room of the (Deutscher Verein für Spiegelglas-Fabriken) the German Association of Plate-Glass Factories in the Exhibition of 1927, the Werkbund exhibition in

8 Fritz, Neumeier(1986) Mies van der Rohe. das kunstlose Wort. Gedanken zur Baukunst, Berlin 1986 unpublished Ms prepared for a brochure of Verein Deutscher Spiegelglasfabriken in 13.3.1933.

9 Silke Ruchniewitz, Zur Theorie des Materials in der Klassischen Moderne. Überlegungen anhand der Architektur von Ludwig Mies van der Rohe, unpublished diploma dissertation, HAWK University of Applied Sciences and Arts, Faculty of Preservation, specialization: Wall Painting / Architectural Surface, (examiners: Prof. Dr. Ivo Hammer, HAWK und Prof. Dr. Thomas Danzl, BDA Wien), Hildesheim 2008.

10 In: Frühlicht 1, 1922, Heft 4, p. 122-124

11 Contemporary literature regarding glass and architecture: Arthur Korn, Glas im Bau und als Gebrauchsgegenstand, Berlin (s.d.1928) with essay by Drechsler concerning the production of opaque glass; Konrad Werner Schulze, Glas in der Architektur der Gegenwart, Stuttgart 1929 ; Ludwig Hilbersheimer, Paul Scheerbart und die Architekten in: Das Kunstblatt 1919, pp. 271-74. (Paul Scheerbart, 1914, Glasarchitektur); Ludwig Hilbersheimer, Glasarchitektur, in: die Form, 4. Jg., 1929, pp. 521-522

Stuttgart trade designed by Lilly Reich together with LMvdR (Lilly Reich is quoted in the catalogue, contrary to the alphabet first before LMvdR)¹² and of course the Barcelona Pavilion and their importance regarding the history of glass architecture in general and regarding the development of the artistic principles of LMvdR and Lilly Reich. The Barcelona pavilion, as you may know, was not the planning basis for the Tugendhat House, which was planned since September 1928. The essential planning phase of the Barcelona pavilion took place in the turn of 1928/29, when the planning for Tugendhat House was ready for construction.¹³

TUGENDHAT HOUSE, GLASS

What do we know about the use of glass in the Tugendhat House?



Fig.7

Brno, Tugendhat House 1928-30, Ludwig Mies van der Rohe und Lilly Reich, garden facade, south-western view. Two of the windows are lowered down. (Photo Fritz Tugendhat ca. 1934)

Crystal mirror glass

The big glass walls of the living room consist of extremely large span crystal mirror glazing: on the south 3 panels of 3 x 4.9 m, 2 lateral panels the western one of 2.9 m, 2.7 m of the southern one, the thickness of the glass is about 10 mm. Two panels can roll down. The rolling mechanism is electric, the control panel buttons are situated on the west wall dining space: The window panels slip down into the basement space and sink up to floor level completely. The mechanism is still working.

¹² Karin Kirsch, Die Weissenhofsiedlung. Werkbundaustellung 'Die Wohnung' - Stuttgart 1927, Stuttgart 1987.

¹³ Wolf Tegethoff, Ein Wohnhaus der Moderne im Spannungsfeld seiner Zeit, in: Daniela Hammer-Tugendhat und Wolf Tegethoff (eds.), Ludwig Mies van der Rohe. The Tugendhat House, Wien-New-York 2000 (DHT/T 2000), p. 53



Fig. 8
Brno, Tugendhat House 1928-30, Ludwig Mies van der Rohe und Lilly Reich, winter garden, southern view.
(Photo de Sandalo 1930)

Fig. 9
Brno, Tugendhat House 1928-30, Ludwig Mies van der Rohe und Lilly Reich, Ernst und Herbert sitting in front of the rainshed window (Detail).
(Photo Fritz Tugendhat 1936)

The east wall of the winter garden consists of four panels, two of them even bigger than the glass panels of the south wall: 3 x 5.52 m. These big panels were stupendously flat, there is no optical un-evenness (fig. 1). The last glazing was destroyed in 1985. The optical evenness could only be changed with the raindrops on the glass ... The photograph of Fritz Tugendhat is showing the children and Herbert Ernst approx in 1936, two years before the family had to leave the house to escape the upcoming German Nazis. (Fig.x)



Fig. 10, a-b (left)
Brno, Tugendhat House, Ludwig Mies van der Rohe und Lilly Reich, fragments of most probably original glazing (9,8 mm). slightly greenish, found 2010 by UNISTAV.
(Photo Ivo Hammer)



Fig. 11 (right)
Brno, Tugendhat House, Ludwig Mies van der Rohe und Lilly Reich, Dessau Table in front of the Onyxwall, plate glass and steel.
(Photo Fritz Tugendhat ca. 1931) Brno,
Fig. 12

Tugendhat House 1928-30, Book storage regal of Fritz Tugendhat, design of Lilly Reich; private property Zurich, rose wood, steel and plate glass.
(Photo Archive Daniela Hammer-Tugendhat)

During the reconstruction works in 2010 a piece of plate glass was found, which might be

part of the original big panels (10 mm thickness). The glass has a slightly greenish tone. Regarding the clear glass panels we should not forget the Dessau Table in front of the onyx marble wall (an original piece of this glass is property of Knoll International, New York).¹⁴



Fig 13
Brno, Tugendhat House 1928-30,
Ludwig Mies van der Rohe und Lilly
Reich, Living Room, view towards
the entrance: the backlit glass wall,
glazed entrance door and vitrine
with dark glass sliding gates (design
of Lilly Reich).
(Photo Fritz Tugendhat ca. 1931)



Fig 14
Brno, Tugendhat House 1928-30,
Ludwig Mies van der Rohe und Lilly
Reich, sleeping room of Fritz
Tugendhat, windows with plate
glass, book storage regal with
sliding glass gates.
(Photo de Sandalo 1930)



Fig 15, 16
Brno, Tugendhat House 1928-30,
Ludwig Mies van der Rohe und Lilly
Reich, sleeping room of Grete
Tugendhat (left) and Living Room,

14 Nina Franziska Schneider and Wolf Tegethoff, Catalogue of the original furniture of the Tugendhat House, in: Daniela Hammer-Tugendhat und Wolf Tegethoff (eds.), Ludwig Mies van der Rohe. The Tugendhat House, Wien-New-York 2000, p. 152 (no 15).

view towards the terrace door
(right).
(Photo de Sandalo 1930)



Fig. 17
Brno, Tugendhat House, 1928-30, Ludwig Mies van der
Rohe und Lilly Reich, Living Room, library desk, lamp
with base of a glass bowl filled with water.
(Photo Fritz Tugendhat 19

12 doors, 1 m wide, were glazed (2 of winter garden, entrance staircase, entrance terrace, kitchen entrance, entrance hall, door to the terrace, doors of sleeping rooms towards the terrace). As we can recognize in the photograph e.g. of the room of Fritz Tugendhat, the glazing of the doors and windows consisted of plate glass. All the steel framing is original. The glass sliding doors of the bookshelf in the room of Fritz Tugendhat probably consisted of plate glass, they are not preserved, the actual ones are copies.

Opaque or translucent glazing

A special problem - regarding the knowledge of the original material - are the opaque or semi-translucent glasses of the Tugendhat House.

The glass wall of the entrance hall is partly bent, the steel perimeter frames with columns have a span of 3 x 1,72 m. The photographs of the entrance wall show a glossy surface and a certain opaqueness which allows to appear in a general way the chiaroscuro of the interior, that is the the dark and bright parts of the entrance hall.



Fig. 14
Brno, Tugendhat House 1928-30, Ludwig Mies van der Rohe und Lilly Reich, street facade, view from north side.
1932 ca.

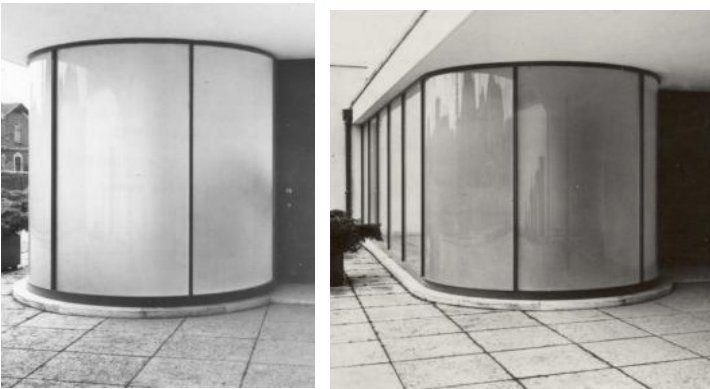


Fig 15, 16
Brno, Tugendhat House 1928-30, Ludwig Mies van der Rohe und Lilly Reich, street facade, view from west side
19 31 ca.

In one photograph it seems to be so translucent that the difference between the wall of the corridor and the void of the entrance hall can be perceived; consequently a person passing by in the corridor e.g. from the entrance hall to the children's room could perhaps be recognized as a moving shadow. On the other hand there is the oral tradition of milk glass, reported by Grete Tugendhat¹⁵, which apparently meant glass made opaque by additives and not by etching.

The question of the material of the entrance wall is also a question on the surface of the inside: was it dull as an etched glass, or was it smooth and shiny? ¹⁶ The Glass Room of the Stuttgart Exhibition of 1927, mentioned above, is an essential precondition for the design of the Tugendhat House - and gives evidence to the importance of Lilly Reich. Philip Johnson

¹⁵ DHT/T (2000), p. 5-9.

¹⁶ By examination of the found piece of glass through the glass specialists DI Milan Knap in Teplice, because of the color of the glass it can be accepted as certain that the glass is of Czech origin, probably Chudeřice or Retenice. Most likely, the glasses of that size were polished with sand and thus matted (frosted). Maybe the translucence was still regulated by a wax layer; friendly information by Dr. Dagmar Cernouskova, Brno, see also: Drexler, Arthur, Architecture Opaque and Transparent, in: Interiors and Industrial Design, Oktober 1949, Reprint in Whitney, David/Kipnis, Jeffrey (hrsg.), Philip Johnson. The Glass House, New York 1993, S. 2-7.

writes the following regarding the "Glass Room" materials: "...white chamois leather chairs and black leather, rosewood tables, black and white linoleum floor, bright and gray opaque walls of etched glass...". And as for his design for a commercial building in Berlin, LMvdR writes in a letter to S. Adam, the owner of the company, among others: "... and while the ground floor of clear glass, all other floors made of frosted (mattiertem) glass."¹⁷

We do not yet know how exactly the opaque glass walls of the Tugendhat House were designed and manufactured and whether all had the same kind.

The famous wall of opaque glass illuminated from the rear was situated in the area between the semicircular Makassar wall of the dining space and the entrance to the living room, it had - like all other glasses - a steel frame. In front of this backlit wall the family used to sit very often. The 46 cm deep wooden box behind the glass pane has two wooden back doors, it is lined with white-laquered metal, the lighting is top mounted, providing uniform distribution of the light from the ceiling lights to the mat glass surface.

Two opaque glass panes in the lower terrace serve to protect the privacy of the family, the separation wall on the west side serves as a windbreak, the other glazing separates the terrace from the pantry.



Fig 17 (left)
Brno, Tugendhat House 1928-30, Ludwig Mies van der Rohe und Lilly Reich, Living Room, (backlit) opaque glass wall.
(Photo de Sandalo, Detail, 1930)



Fig. 18 (top right) and 19
Brno, Tugendhat House 1928-30, Ludwig Mies van der Rohe und Lilly Reich, pantry with mat window (18); garden terrace, mat separation glass wall on the west side (19)
(Photo Fritz Tugendhat ca 1934)

¹⁷ Quotation according Y. Dwesior, op. cit., notes 207 and 237 (translation: I.H.).

Milk glass

In the context of opaque glass also includes lining of the inside of the hanging cabinets with polished white milk glass, thickness: approx 6 mm, surprisingly not rounded on the front (except a non-ground, probably later glass panel). Tegethoff (2000) considers that the top of the cabinet, now covered with glass, also originally had a cover made of clear plate glass.

Colored glasses

Colored glasses are used in the Tugendhat House quite rarely and in furniture only. The only preserved as original are the glasses of the sliding doors of the vitrine, after a design by Lilly Reich. The vitrine is restituted property of the Tugendhat family, she is currently situated in the Moravian Gallery in Brno. The glasses look almost black, Tegethoff describes them as "mouse gray"¹⁸ and they reflect very strongly, with a chrome frame strip, and cream-white painted wooden body, the black interior with polished pear wood veneer (like the table of the dining area!).¹⁹

The Bamberg side table with top consisting of black smoked crystal glass (MR 130 and MR 140) and a chromed steel frame is used 4 times in the Tugendhat House: entrance hall, in front of the backlit wall, near the Chaiselongue and in the bedroom of Grete Tugendhat.



Fig 20 (left) and 21
Brno, Tugendhat House 1928-30,
Ludwig Mies van der Rohe und Lilly
Reich, 20: Vitrine of the Living
Room, (temporarily in the depot of
the Moravian Gallery, Brno); 21:
hanging bedside of Fritz Tugendhat.
(Photo: Ivo Hammer, 2011)

¹⁸ Referring perhaps to an expression LMvdR used in his letter to S. Adam, see note 17.

¹⁹ cf. Justus Bier, 1929, quoted in Dziejwior 2005, 67; DHT / T (2000)



Fig. 21
Brno, Tugendhat House 1928-30, Ludwig Mies van der Rohe und Lilly Reich, Living Room by night; the silk curtains on the glass walls seem to be semi-translucent.
(Photo de Sandalo 1930, Detail)

TUGENDHAT HOUSE: CONTEXT OF MATERIALS

I now turn to the context of the materials. How are the materials, surfaces and colors of the related to the glasses? I would like to contextualize the glass, the diaphane and reflecting par excellence, with other materials used to create the exterior and interior space

Facade sun protection

One of three claims that Grete and Fritz Tugendhat had raised in the discussion of the plan of her house on New Years Eve 1928 in the studio of LMvdR was the adequate sun protection for all windows. Probably this is referred to the blinds and the shutters (the curtains were probably already present).

Each wall panel is fitted with canvas awning with folding arm and canvas spring retracting spindle operated from the exterior. The color of the canvas awning was somewhat of a gray with bright stripes in the tone of the natural canvas, we don't have original pieces of the tissue.²⁰ The roller blinds of the sleeping rooms of the family-as far as we know - were painted with a color similar to the steel frames of the windows, that is a blueish gray at the exterior side and a yellowish white at the interior side. The quality of the curtains is not known precisely, may be the same as the ones in the Living Room, that is a natural colour and black Shantung silk.

Painted metal

²⁰ See a contemporary color photograph of Fritz Tugendhat: Barta, Ilsebill, Wohnen in Mies van der Rohes Villa Tugendhat fotografiert von Fritz Tugendhat 1930-1938 (mit einem Beitrag von Monika Faber), MMD Wien 2002, fig. 42.

The exterior sides of the metals, eg the frames of the windows, not only were originally coated with a bluish gray oil based paint on top of several preparatory layers, but also the finish was elaborated in an exceptional manner consisting of a clear varnish (possibly acetate of cellulose). This type of varnish application is unusual and is not necessary for protection, but has only an aesthetic intention. It gives the metal a greater color saturation and at the same time - as it were - suggests a metallic surface. Certainly, it is not unintentional that the tonal value of this paint is similar to the tone of the oxidized lead which is protecting the bases of the window frames

Facade plaster

The plastering of the masonry of the façade of Villa Tugendhat was not white. It had a light yellowish color. The surface of the plaster was smoothed with a wooden board, the sand grains embedded into the mortar gave the surface a certain roughness. A final thin lime wash followed, it was pigmented with fine particles of yellowish sand. The color shade of the painted plaster can be seen as allusion to the yellowish-white shade of the (freshly treated) travertine used to create the socle, the window parapets and the door thresholds.

Conclusion facade

In the materiality of the facade both the painted steel frames of the windows and the painted plaster we may recognize a basic aesthetic principle of the Tugendhat House: The presentation of the - as it were - 'natural' color of the material in a powerfully pronounced way and with high craft complexity. I may recall the words LMvdR wrote in the manuscript preparing a flyer to be edited by the Verein Deutscher Spiegelglas-Fabriken on March 13, 1933:²¹

21 see Silke Ruchniewitz, op. cit. (2008), p. 182 and Fritz Neumeyer (1986), op. cit.: ... "Die gläserne Haut, die gläsernen Wände erst lassen dem ... Skelettbau seine eindeutige konstruktive Gestalt und sichern ihm seine architektonischen Möglichkeiten." ... "Es sind echte Bauelemente und Träger einer neuen Baukunst. Sie lassen ein Maß an Freiheit in der räumlichen Gestaltung, auf das wir nicht mehr verzichten werden. Jetzt erst können wir den Raum frei gliedern, ihn öffnen und in die Landschaft binden. Jetzt zeigt sich wieder, was Wand und Öffnung ist, was Boden und Decke.

"The simplicity of structure, the clarity of tectonic means and the purity of material returns the luster of its original beauty."

Interior

Fritz Tugendhat wrote in 1931 in response to Justus Bier²² "At night the glass walls are hidden by (light²³) silk curtains, which prevent from the mirror effect of the glazing. " He is suggesting another function of the curtains in addition to their function as room separators. For the materiality of the interior, it is not unimportant to remember that the curtains consisted of different materials and colors²⁴: Before the winter garden, and probably also in the dining area black Shantung silk, on the south wall natural (yellowish) "silver-gray" Shantung, between Winter Garden and Onyx-marble wall a black velvet curtain, and between the onyx wall and north wall (along the vitrine) a whitish velvet curtain.

The metal surfaces of the interior were coated with industrially processed oil paint, as far as they were not refined with nickel or chrome. The multi-layer coating was creamy white. The surface of the paint of the metal was polished so smoothly that it shone dull. According to a sample found after the removal of the recent floor screed (1982-85) the surface of the interior paint of the metal had a finish of a clear varnish (possibly acetate of cellulose), like the exterior paint.

Irene Kalkofen, the former nanny to the children and the only person still alive who had lived in the Tugendhat House as an adult person, explained to me in the year 2003 that the external surfaces of the façades and the interior walls did not have any 'color' but instead appeared as "material."

The telephone conversation with Irene Kalkofen, living in London and Ivo Hammer on

Die Einfachheit der Konstruktion, die Klarheit der tektonischen Mittel und die Reinheit des Materials tragen den Glanz der ursprünglichen Schönheit." (Archive Dirk Lohan, Chicago; there is a second draft of this text also). Translation: I.H.

22 In Die Form. Zeitschrift für gestaltende Arbeit, Heft 11, 6. Jahr, Berlin 15.11.1931, p. 437 f.

23 Fritz Tugendhat apparently thought of curtains of a light colour (shiny natural Shantung silk); in the same text he refers to heavy curtains used to separate the room partitions.

24 Grete Tugendhat, Zum Bau des Hauses Tugendhat, in: DHT(/Tegethoff (2000) p.8.

October 28, 2003 was as follows: (recorded by Christine Hitzler²⁵) -: "IK: It was not color It was natural, I do not know. It did not seem like paint. It was a modern white washed house. It seemed like material. It was a modern light house - IH: Was it white? - IK: It was not black not white. It was the light of a natural color, moderate. IH: What impression did you have regarding the color of the interior? IK: Natural color, nothing obvious, it fit with the image of the house. Everything mutually harmonized".²⁶

In fact, the color shade of the painted metal corresponded with the color of the travertine used for the winter garden, the flooring of the entrance of the hall and the base. And this - as it were - 'natural' color corresponded with the interior walls of the lustro stucco ceilings and linoleum flooring and the words. (The original stucco lustro is damaged). An effect reportedly surprising for the family²⁷ was the fact, that even a material, which is by its nature opaque, the wall of onyx marble, consisting of Aragonite, thickness 7 cm, revealed its diaphane quality during sunsets.

In a similar fashion as with the surfaces of the exterior façade of the Tugendhat House, the way of presentation is valid for the surfaces of the interior being part of the basic aesthetic principle of the building. The same intention to present natural material in a highly elaborated way and not to disturb the purity of materials by refraining of the use of chromatic colors.

Mies himself explained to his client Grete Tugendhat - as she reports in 1969 -

"how important it was to use precious materials in, so to speak, plain and unadorned modern building, (which by comparison, had been neglected in works by Le Corbusier. ..)"

But there is some ambiguity:

Whereas, at the facade, the character of the material is represented in a pronounced way by means of the roughness of the plastering, it is the the evenness and the shiny surface of the

25 Christine Hitzler, Das Haus Tugendhat von Mies van der Rohe. Der Fassadenputz und seine Oberfläche, unpublished study work, HAWK University of Applied Sciences and Arts, Faculty of Preservation, examiners: Prof. Dr. Ursula Schädler-Saub (art history) and Prof. Dr. Ivo Hammer (conservation/restoration), Hildesheim 2004.

26 Translation: I.H.

27 see Tegethoff, in DHT/T (2000).

surfaces, of the stucco lustro of the interior walls, of the Onyx wall, of the painted metal of the linoleum and its reflection of light which supports the utopical striving for the 'dematerialisation' of the Modern Movement architecture, formulated eg by Walter Gropius in 1911 when he wrote of the engineers Utopia to be able to produce "transparent steel"²⁸

The elaborated treatment of the surfaces and the gloss of the material abstract the material from their merely physical presence. The reflective chrome linings of steel pillars and the leg of the round table, the chrome chair frames and railings, the shiny table top made of black stained pear wood, the shine of the polished Macassar and the wall of the board of greenish marble of Tinos (a serpentine breccia) with its reflective surfaces contribute to the dematerialization of architectural surface, being natural materials and at the same time mirror.



Fig. 22

Brno, Tugendhat House 1928-30, Ludwig Mies van der Rohe und Lilly Reich, Living Room, Dining space with semicircular Makassar wall reflecting the light of the big glass walls and giving an image of the exterior nature.

(Photo Fritz Tugendhat 1931 ca., Detail)

Author:

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²⁸ see Monika Wagner, op. cit., p.26.

