

**JOSEF FRANK UND OSKAR WLACH,
VILLA BEER, VIENNA-HIETZING,
1930, EAST FAÇADE**

JOSEF FRANK A OSKAR WLACH,
VILA BEER, VIEDĚŇ-HIETZING, 1930,
VÝCHODNÁ FASÁDA

Photo Foto: Julius Scherb, Vienna, 1931

White, Everything White? Josef Frank's Villa Beer in Vienna and Its Materiality in the Context of the Discourse on 'White Cubes'¹

Biele, všetko biele?

Viedenská Vila Beer od Josefa Franka a jej význam
v kontexte diskurzu o „bielych kockách“

Ivo Hammer

Vila Beer

Dom židovskej rodiny Julie a Margarete Beer, postavený vo viedenskom 13. obvode (Hietzing) na ulici Wenzgasse 12 podľa návrhu Josefa Franka v spolupráci s Oskarom Wlachom, je popri slávnych stavbách od Miesa van der Rohe alebo Le Corbusiera medzinárodne považovaný za jednu z ikonických budov modernizmu, ako „zrejme najvýznamnejší príklad viedenskej bytovej kultúry v medzivojnovom období“. Ilustruje snaženie Josefa Franka o „nezávislú, osvietenskú, buržoáznú kultúru domácnosti, oslobodenú od štylistických dogiem a moderných konvencií“. Jeho „kopernikovský krok smerom k inkluzívnej architektúre oslobodenej od doktrín“ (Česko, Hackenschmidt) a chápanie „domu ako cesty a miesta“ Josefa Franka (1931) sa v tomto dome mohli realizovať bez finančných obmedzení. Frank a Wlach navrhli celé interiérové vybavenie v dome do posledného detailu. Dom je preto umeleckou syntézou, ktorá odpovedá na potreby bývania uplynulej éry.

Biela Josefa Franka

Josef písal o farbe stien už v jednej zo svojich prvých esejí, vydanéj v roku 1919, o jeho vidieckom dome Bunzl in Pernitz/Rakúsko (1914): „Steny v celom dome sú biele: nielen kvôli tomu, že farba – ktorá by mala dominovať charakteru miestnosti – robí veľmi nepatrný a skromný dojem v porovnaní s veľkými vonkajšími priestormi okolia, ale najmä preto, aby od nej boli obyvatelia nezávislí a mohli sa slobodne rozhodovať o všetkom, čo do svojich izieb umiestnia: kvety a malby, koberec a nábytok.“ V roku 1931 charakterizoval Frankov študent Oswald Haerdtl farbu stien hlavného diela Josefa Franka, teda Vily Beer v štvrti Viedeň-Hietzing z roku 1930, podobným spôsobom: „Steny domu sú biele, zvonku aj zvnútra. Svetlé priestory, ozdobené kvetovými závesmi a orientálnymi kobercami, majú ďaleko od chladného dojmu (sic!) a vyvolávajú pocit pokojnej a ľahkej krásy.“

V roku 2017 vznikla vďaka reštaurátorskému výskumu materiálov použitých na stavbu Vily Beer vo Viedni a okolia budovy príležitosť nájsť dôkazy o tom, do akej miery korešponduje fyzická realita s popisom nástennej farby ako bezfarebnej bielej.

Biela ako filozofia života

V dobovom diskurze o bielej farbe v modernistickej architektúre formuloval v roku 1930 výrazný názor J. E. Hammann. Preňho bola „biela farba“ („der Farbton Weiß“) metaforou pre ducha doby

(„Zeitgeist“), významným kultúrnym faktorom, „komponentom celej dnešnej modernej filozofie života“ („Weltanschauung“).

Le Corbusier, ktorý kategoricky vyžadoval polychrómované steny a ironicky popísal nabiele omietnutý dom ako „pot à crème“ (1926), považoval bielu za chromatický komplementárny prvok a napísal – nadväzujúc na polemiku Adolfa Loosa proti ornamentu: „Ak je dom úplne biely, obrysy predmetov neomylné vystupujú do popredia; objemy sú jasne viditeľné a farby sú jedinečné. Biely náter je absolútny, všetko vystupuje ostro, ako čierne na bielom, poctivé a spoľahlivé“ (1925).

V diskurze o bielej architektúre od čias Palladia (1570) a v diskusiách o polychróme od Winckelmannovej údajne bielej bezfarebnosti antickej architektúry a klasicizmu (1764) sa biela považuje za neutrálnu ne-farbu, za metaforu, napríklad čistoty, krásy a vznešenosti. Hmota a farebné odtiene bielej, spojivá a povrchy, nezohrávali v tomto diskurze prakticky žiadnu rolu.

Architektúra modernizmu sa v kultúrnej pamäti ikonicky zapísala ako biela architektúra kvôli čiernobielej architektonickej fotografii, skôr ako sa všeobecne rozšírila farebná fotografia.

Deštruktívne predsudky

Prevládajúca predstava bielych kociek ako architektúry dvadsiatych a tridsiatych rokov 20. storočia tak isto mala dôsledky vo vzťahu k reštauračnej praxi, minulej aj súčasnej: bez ohľadu na pôvodné materiálové zloženie povrchov sa fasády modernistických budov premalovávali výraznou bielou s použitím moderných, nekompatibilných materiálov, ako je titánová biela alebo umelá živica. Zapadajú do kontextu kritiky Hitchcocka a Johnsona z roku 1932 ohľadom jasných farieb: „Ak nemá architektúra pripomínať billboardy, farba by mala byť technicky aj psychologicky trvalá.“ Pôvodné fasádne omietky a interiérové steny sa príliš často zničili, pretože mnoho odborníkov ich vnímalo ako vymeniteľný odev, nie ako integrálnu súčasť autentickej architektúry.

Historická technológia: Sfarbená biela

Za posledných 15 – 20 rokov konzervatori-reštauratori realizovali štúdie napríklad v Bauhause v Dessau (1999 – 2000), Weissenhofsiedlungu v Stuttgarte (2002 – 2005), Vile Tugendhat v Brne (2003 – 2005) a v Maison La Roche v Paríži (2008).

Zistenia konzervátorov-reštaurátorov získané pri reštaurátorských štúdiách „bielych“ fasád architektúry modernizmu sa líšia vo vzťahu k mnohým technologickým parametrom bežnej vápenej malty, napríklad čo sa týka použitého piesku (ktorý čiastočne závisí aj od regiónu), cez hydraulický pomer vápna, až po štruktúru vrstiev a povrchovú textúru. Majú však niečo spoločné: nikdy neboli čisto biele, bieloba obvyklého vápenného náteru bola vždy smotanová alebo sivobiela. Vápenné malty sa obvykle miešali priamo na stavbe. Piesky väčšinou neboli premývané. Jemné kremičitany obsiahnuté v pigmentoch alebo pieskoch, t. j. zrno piesku veľkosti okolo 2 – 63 µm malo nielen farebný efekt, ale pri reakcii s hydratovaným vápnom aj hydraulický efekt. Hydraulický efekt je dôležitý základ pre pružnosť aj udržateľnosť vápenného náteru. Tradícia pravidelnej údržby pomocou tradičných, kompatibilných materiálov, alebo obnova vápenného náteru, sú súčasťou autentického vzhľadu povrchu.

Aj pri budovách tých architektov, ktorí na architektonické povrchy nepoužívali chromatickú farbu, ako Ludwig Mies van der Rohe a Josef Frank, a tak isto v dielach Le Corbusiera sú svetlé tóny nazývané „bielou“ výsledkom sfarbeného materiálu.

Hmota Vily Beer

Pôvodná fasádna omietka bola ošúchaná a vyhladená drevenou doskou, aby vznikol drsný povrch. Žltobiele krytie, pravdepodobne pigmentované jemnozrnným pieskom, je také tenké, že sotva pokrýva štruktúru. Tento nález sa dá relatívne presne porovnať s fasádnou omietkou Vily Tugendhat v zmysle štruktúry, textúry, štýlu a predovšetkým odtieňa bielej.

V interiéri pozostáva dôsledná príprava povrchu steny a stropu zo štuky s jemne vyhladenou sadrou, s pridaným glejom a značným podielom jemného kremičitanového piesku veľkosti zrna približne 300 mikrónov a trochu dolomitického vápenca. Farba zrna jemných kremičitanov dodáva jemne vyhladenej omietke celkovú žltobielu farbu. Kazeínová farba sa aplikovala (aspoň v dvoch vrstvách) na proteínovú medzivrstvu (kazeínový alebo rastlinný glej) s podielom oleja („tempera“), vyplnenú kriedou a sadrou (bolonská „krieda“), pigmentovanú jemnými

kremičitanmi veľkosti pieskového zrna alebo svetlými okrovými pigmentmi a zinkovou bielou. Použitie vysoko nepriehľadnej titánovej bielej (analýza Roberta Linkeho, rakúsky Federálny pamiatkový úrad – Bundesdenkmalamt) technicky koreluje s estetickým zámerom Josefa Franka dosiahnuť rovnomerný a čistý „biely“ povrch. Pokiaľ je známe, ide o prvé použitie tohto pigmentu v Rakúsku.

Tak isto iné interiérové komponenty ako okenné rámy, dvere, vstavané skrine a kuchynské skrinky, vyrobené z rôznych materiálov, boli natreté svetlým žltkastým odtieňom bielej s dôkladne vyhladenými povrchmi.

Výnimkou z tohto jasného estetického kontinua architektonických povrchov je vstavaný kredenc v jedálni a police v knižnici, ktoré podobne ako podlahy a lavice priznávajú prirodzenú farbu použitého dreva, zintenzívnenú transparentným lakom. Vnútorne krídla dvojítych okien sú natreté zvonku (jemne nazelenalou) svetlosivou, podobne ako exteriérové okenné rámy. Kozuby v hale, obývačke a spálni otca sú ozdobené rôznofarebným mramorom a mosadzou. Podlahy v niektorých súkromných izbách dodnes pokrýva pôvodná zelená guma.

Svetlé steny a stropy mramorového vzhľadu poskytovali vznešené a zároveň striedme pozadie pre živé, pestrofarebné mobilné vybavenie, navrhnuté priamo pre dom, ako napríklad závesy a nábytok, a tak isto pre kvety a iné predmety, ktoré obklopovali obyvateľov v ich každodennom obytnom priestore.

Záver

Históriu farieb modernistickej architektúry je potrebné prepísať. „biele kocky“ v skutočnosti nikdy neboli biele. Predstavu bielej ako metafory pre „Weltanschauung“ hnutia modernizmu, zafixovanú v kultúrnej pamäti kvôli čiernobielej architektonickej fotografii a písomne zaznamenanú ako úmysel samotnými architektmi, prekonávajú dôkazy poskytované farebnou bohatosťou realizovaných architektonických diel. Umenie je vždy viac než len zámerom umelca, v neposlednom rade kvôli prirodzenému charakteru – alebo dokonca „nepoddajnosti“ – použitých materiálov.

Villa Beer: History

The house of the Jewish family of Julius and Margarete Beer, built in Vienna, 13th district (Hietzing), at Wenzgasse 12, designed by Josef Frank and Oskar Wlach in the years 1929 – 1930, is internationally, alongside the famous buildings of Mies van der Rohe or Le Corbusier, one of the iconic buildings of the Modern Movement², “probably the most important example of Viennese living culture of the interwar period.”³ It exemplifies the endeavors of Josef Frank, who aimed toward “an independent, enlightened, bourgeois domestic culture, free from stylistic dogmas and fashionable conventions”. His “Copernican Step in the direction of non-doctrinal, inclusive architecture”⁴ and his understanding of “the house as path and place” (1931)⁵ was brought to realisation in this house without financial restrictions. The Villa Beer, at first glance, does not seem monumental; it is nevertheless quite an opulent one-family house with 800 square metres of living space. Including the basement, it counts 60 rooms on four floors and a mezzanine, the latter dividing the service area horizontally into two spaces with lower ceiling heights. In the spacious living hall, the mezzanine serves as a music gallery.⁶ Josef Frank and his partner, Oskar Wlach, also designed all of the house’s interior furniture in every detail: the mobile furnishings, seating, tables, curtains, etc. were manufactured by *Haus und Garten* (House and Garden), a company founded by the two architects along with Walter Sobotka in 1925.⁷ The house thus represented an artistic synthesis that answered the housing needs of a



VILLA BEER, VIENNA-HIETZING,
1930, WEST FAÇADE

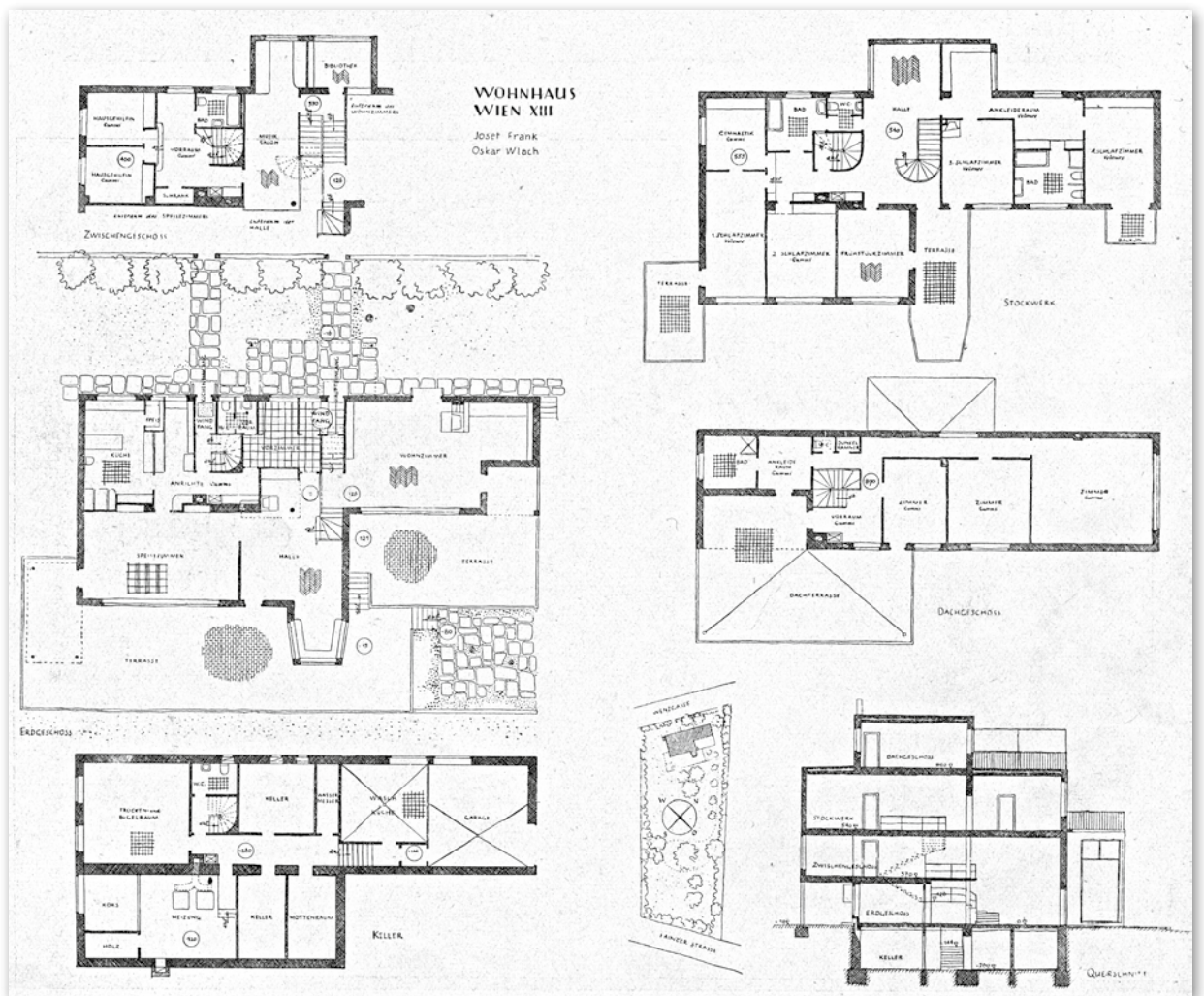
VILA BEER, VIEDĚŇ-HIETZING (1930),
ZÁPADNÁ FASÁDA

Photo Foto: Julius Scherb, Vienna, 1931

VILLA BEER, VIENNA-HIETZING,
1930, PUBLICATION PLANS

VILA BEER, VIEDĚŇ-HIETZING, 1930,
PUBLIKOVANÉ PLÁNY

Source Zdroj: Innendekoration, 42(10),
1930, p. 360





VILLA BEER, VIENNA-HIETZING, 1930, MAIN HALL, VIEW TO SOUTH-WEST, INCLUDING MUSIC GALLERY

VILA BEER, VIEDEŇ-HIETZING, 1930, HLAVNÁ HALA, POHLAD NA JUHOZÁPAD, VRÁTANE HUDOBNEJ GALÉRIE

Photo Foto: Julius Scherb, Vienna, 1931



VILLA BEER, VIENNA-HIETZING, 1930, DINING ROOM, VIEW TO THE NORTH SIDE; THE WALL SHOW SOME IRREGULARITIES, PERHAPS DUE TO THE FACTURE

VILA BEER, VIEDEŇ-HIETZING, 1930, JEDÁLEŇ, POHLAD NA SEVERNÚ STRANU; NA STENE SA PREJAVUJÚ ISTÉ NEPRAVIDELNOSTI, ZREJME V DÔSLEDKU STAVEBNÉHO POSTUPU.

Photo Foto: Julius Scherb, Vienna, 1931

bygone era. Julius Beer, together with his father Sigmund (1850 – 1912) and his brother Robert, was manufacturer of rubber products since 1904. From 1920 to 1931 he was managing director of Berson Kautschuk GmbH. In 1930 he had to mortgage the house,⁸ and after 1932, lack of money forced him to rent parts of it. Before 1938, the famous artists Josef Tauber, Jan Kiepura, Marta Eggerth and Marcel Prawy lived in this house. In 1938, the insurance *Allianz und Giselaverein* acquired the house and the furnishings at auction.

Under Nazi rule, Julius and Margarete Beer had to emigrate to the USA in 1940. In 1941, the textile entrepreneur Hermann “Harry” Pöschmann acquired the house, and from 1946 to 1952 rented it to the secret service of the British army. The Villa Beer has in the course of its history been divided several times into as many as five apartments. Currently owned by a private foundation, the house will hopefully be acquired by the Austrian state in the near future and made into a museum in its own right, open to the public.

Josef Frank’s White

In 1924, in one of his earliest essays, Josef Frank already wrote about the white color of the walls of his Bunzl House in Pernitz, Austria (1914): “The walls are white throughout: not only because a color – intended to dominate the character of a room – makes a very small and scant impression in comparison to the large areas of the outdoor surroundings, but mainly in order to make the occupants feel independent of it and to allow them freedom of choice in everything that they wish to place in their rooms: flowers and paintings, carpets and furniture.”⁹

In 1931, Oswald Haerdtl, a student of Frank’s, characterised the color of the walls of Josef Frank’s Villa Beer in similar terms: “*The walls of the house, outside and inside, are white. Far from giving a cold impression (sic!), these bright surrounding surfaces, enlivened by floral curtains and oriental rugs, give a sense of serene and light beauty.*”¹⁰

Wolfgang Born, author of a contemporary publication devoted to the Villa Beer, wrote in that same year, 1931: “*The color impression that this house gives is determined by the pure white of the walls...*”¹¹

White as a Philosophy of Life

In the contemporary discourse on the white of Modern Movement architecture,¹² J. E. Hammann, in 1930, formulated a pointed opinion in the journal *Die Form*. For him, the “color white” (“*der Farbton*”



LUDWIG MIES VAN DER ROHE AND LILLY REICH, TUGENDHAT HOUSE, BRNO 1930, SOUTH-EAST-FACADE; THE PHOTO HAS BEEN RETOUCHE TO ELIMINATE ELEMENTS OF THE FACTURE AND AGING ON THE PLASTER SURFACE

LUDWIG MIES VAN DER ROHE A LILLY REICH, VILA TUGENDHAT, BRNO 1930, JUHOVÝCHODNÁ FASÁDA. FOTOGRAFIA BOLA RETUŠOVANÁ, ABY SA VYHLADILI STAVEBNÉ NEDOSTATKY A OPOTREBOVANIE POVRCHU OMIETKY VEKOM.

Photo Foto: Rudolf de Sandalo, 1931

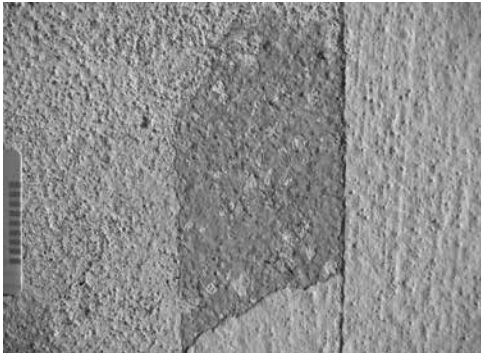
Weiß) was a metaphor for the spirit of the times (*Zeitgeist*), an important cultural factor, “a component of today’s entire modern philosophy of life” (*Weltanschauung*). With regard to the idea behind the white of the interiors, Hammann comes strikingly close to Josef Frank’s argument: one seeks to “gain space” not only “by means of large windows, gardens adjacent to the house and roof gardens, verandas and the like, but also with the help of the illusion of width created by the white painting. The human being today wants freedom, air and light; he needs distance for his thoughts and ideas.”¹³

Le Corbusier, who categorically demanded polychromy and ironically described a white-washed house as “*pot à crème*”,¹⁴ valued white as the chromatic complementing element and wrote – following the polemic of Adolf Loos against ornament: “If a house is wholly white, the outline of things stands out without the risk of error; the volumes are clearly visible; the colors are unique. The white paint is absolute, everything stands out starkly, like black on white, honest and reliable.”¹⁵ “The interior of a home must be white, but to make this white comfortable, one needs a finely tuned polychrome.”¹⁶ In the polemical article “*Le lait de chaux-la loi de Ripolin*” in *L’art décoratif d’aujourd’hui* of 1925, Le Corbusier points out that in all cultures and at all times the lime painting of the houses was customary. The lime as a color is undoubtedly neutral white for Le Corbusier,¹⁷ unrelated to actual materiality and color shading.¹⁸

The contemporary architect Richard Meyer, famous for his white buildings and influenced by Le Corbusier, sees white as an element of design, as a “neutral surface on which builds the experience of a room. It reinforces the perception of the organization and order of spatial principles.”¹⁹ In the discourse on white architecture since Palladio²⁰ and in the polychrome dispute since Winckelmann’s supposed white colorlessness of ancient architecture and classicism, white is thought of as neutral non-color, as a metaphor, for example, for purity, beauty and sublimity,²¹ but the materiality and color palette of white, the binders and surfaces used play virtually no role in the discourse.²²

The architecture of the Modern Movement has become iconically fixed in cultural memory as coloured white, due to the prevalence of black-and-white architectural photography, before the general spread of color photography.²³ As Andreas Haus suggests, these photographs visually preserve not only the design but also “the utopian and socially romantic ideas of the early post-war period and develop them with photographic perfection”.²³

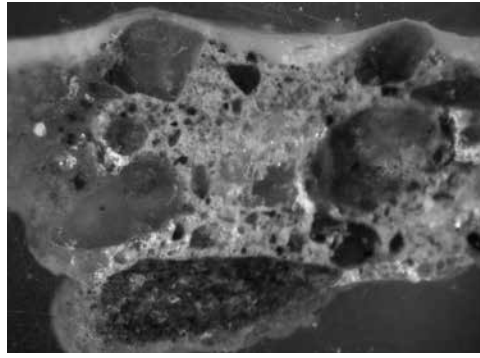
However, the photographs are not only media and projection surfaces for a cultural construct, but are also actively involved in the production of these ideas: The Brno photographer Rudolf de Sandalo (1899 – 1960) made characteristic retouching in his photos of the Tugendhat house



VILLA TUGENDHAT, BRNO, 1930, VIEW TO THE SOUTHEAST, DETAIL: PROBE DURING THE REMOVAL OF THE LATER PLASTER COATINGS (FROM RIGHT TO LEFT): PAINTING OF 1985 (WITH CEMENT AND SYNTHETIC RESIN), TWO HEAVILY PLASTERED LIME COATS (BETWEEN 1945 AND 1965), ORIGINAL SURFACE WITH YELLOWISH WHITEWASH (PICTURE LOWER EDGE APPROX. 17 CM)

VILA TUGENDHAT, BRNO, 1930, POHLAD NA JUHOVÝCHOD, DETAIL: SONDA PRI ODSTRÁNENÍ NESKORŠEJ OMIETKY (SPRAVA DOĽAVA): NÁTER Z ROKU 1985 (S CEMENTOM A SYNTETICKOU ŽIVICOU), DVE HRUBÉ VRSTVY VÁPENNÉHO NÁTERU (MEDZI 1945 A 1965), PŮVODNÝ POVRCH SO ŽLTOKASTÝM BIELENÍM (DOLNÝ OKRAJ PŘIBLIŽNE 17 CM)

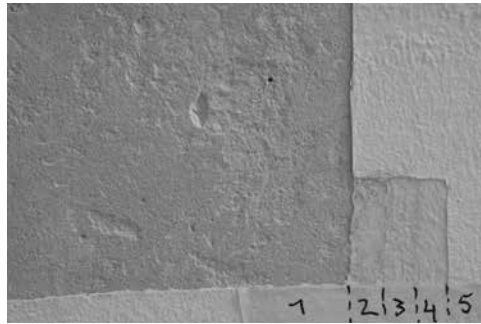
Photo Foto: Ivo Hammer, 2011



VILLA TUGENDHAT, BRNO, 1930, SAMPLES OF THE FAÇADE PLASTER, POLISHED SECTION OF THE FACADE PLASTER; STUDENT THESIS: HAWK HILDESHEIM, CHRISTINE HITZLER, 2004

VILA TUGENDHAT, BRNO, 1930, VZORKY FASÁDNEJ OMIETKY, LEŠTENÝ ÚSEK FASÁDNEJ OMIETKY; ŠTUDENTSKÁ PRÁCA HAWK HILDESHEIM, CHRISTINE HITZLER, 2004

Source Zdroj: Christine Hitzler, 2004



LE CORBUSIER, PARIS, MAISONS LA ROCHE-JEANNERET (DOUBLE-HOUSE), SQUARE DU DOCTEUR-BLANCHE IN PARIS, 1923, 2008 – 2009 RESTORATION CAMPAIGN LED BY ARCHITECT PIERRE-ANTOINE GATIER, PROBE: ARIEL BERTRAND. THE MAIN FACADE CONSISTS OF A SMOOTHED NATURAL PLASTER OF YELLOWISH LIMESTONE, LIME AND WHITE CEMENT (?); THE SURFACE OF THE PLASTER SHOWS THAT THE SURFACE IS DARKER THAN THE MORTAR MATRIX, PROBABLY DUE TO SULFATATION AND SINTERING, 2008.

LE CORBUSIER, PARÍŽ, MAISONS LA ROCHE-JEANNERET (DVOJDOM), NÁMESTIE DU DOCTEUR-BLANCHE V PARÍŽI, 1923, 2008 – 2009 REŠTAVURAČNÁ KAMPAŇ POD VEDENÍM ARCHITEKTA PIERRE-ANTOINE GATIERA, SONDA: ARIEL BERTRAND. HLAVNÁ FASÁDA POZOSTÁVA Z VYHLADENEJ PRÍRODNEJ OMIETKY ZO ŽLTOKASTÉHO VÁPENCA, VÁPNA A BIELEHO CEMENTU (?); Z POVRCHU OMIETKY JE OČIVIDNÉ, ŽE POVRCH JE TMAVŠÍ NEŽ MATRICA MÁLTY, ZREJME V DÔSLEDKU SULFATÁCIE A SINTROVANIA, 2008.

Author Autor: Ariel Bertrand, 2008

commissioned by Ludwig Mies van der Rohe. These retouchings dampen light phenomena, especially shadows and irregularities, which could give hints to the materiality of the surface and could disturb the continuity of the surface. Through the retouching, the photographer even eliminated traces of aging and construction errors like cracks.²⁴

Destructive Prejudices

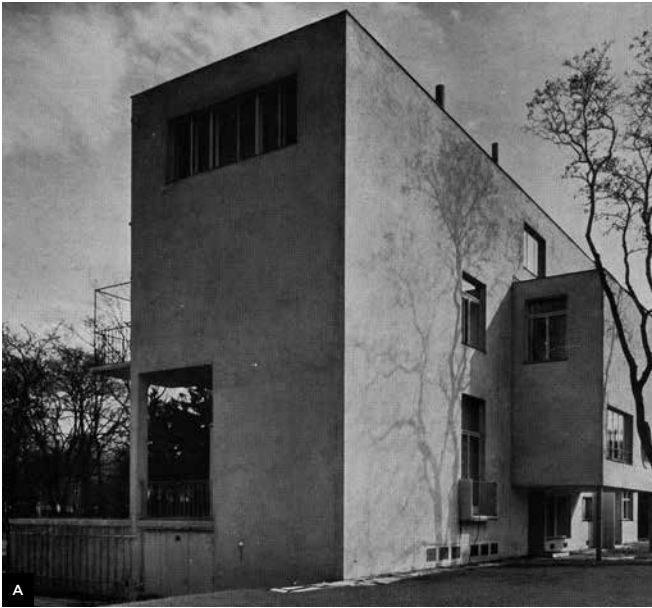
Until 20 years ago, the stereotypical idea of white architecture for the period continued to prevail even in the case of the façades of the masters' houses in Dessau, the former residences of Lyonel Feininger, Wassily Kandinsky and Paul Klee. Here, the preservation authorities and architects opted against carrying out conservation-science studies and thus canceled the possible destruction of the original polychrome.²⁵

The prevalent idea of white cubes²⁶ for the 1920s and 1930s has also had consequences affecting preservation practices, both past and present: without regard to the original material composition of the surfaces, façades of the Modern Movement era have been repainted in a garish white using such modern, non-compatible materials as titanium white and artificial resin.²⁷ More often than not, the original plaster surfaces of the façade and the interior walls have been destroyed, because many professionals perceive them as interchangeable garments.²⁸

The heritage inspectors often are more concerned with the color of a façade, with unintentional humour called 'Schauwert' (show value), than with the authentic materiality.

Historic Technology: Colored White

In the last 15 – 20 years, conservators/restorers have carried out studies of the Bauhaus (1999 – 2000)²⁹, for example, and of the Weissenhofsiedlung in Stuttgart (2002 – 2005)³⁰, the Tugendhat House (2003 – 2005)³¹ and Maison La Roche (2008)³². These studies have shown that the stereotypical idea of white cubes has a relation to a culturally constructed category but does not correspond to physical reality. The white cubes, for the most part, were plastered with lime mortar and usually painted with lime wash.



JOSEF FRANK AND OSKAR WLACH, VILLA BEER IN VIENNA-HIETZING, 1930; A) FROM NORTHWEST. ON THE NORTHERN FAÇADE, THE TRACES OF THE FACTURE CAN BE SEEN: SCAFFOLDING BORDERS, IRREGULARITIES; B) ROOF TERRACE, SUNBATHING NICHE, CEILING, ORIGINAL FAÇADE SURFACE WITH REMNANTS OF FOUR LATER OVERCOATS AND SALT EFFLORESCENCE, YELLOWISH LIMESTONE PIGMENTED WITH FINE SILICATES ON GRATED LIME PLASTER

JOSEF FRANK A OSKAR WLACH, VILA BEER VO VIEDNI-HIETZING, 1930; A) ZO SEVEROZÁPADU. NA SEVERNEJ FAŠÁDE JE VIDNO STOPY PO OPRACOVANÍ: OHRANIČENIE LEŠENIA, NEPRAVIDELNOSTI; B) STREŠNÁ TERASA, VÝKLENOK NA OPALOVANIE, STROP, PŔVODNÝ POVRCH FAŠÁDY SO ZVÝŠKAMI ŠTYROCH NESKORŠÍCH VRSTIEV A SOLNÝM VÝKVETOM, ŽLTOKASTÝ VÁPENEC PIGMENTOVANÝ JEMNÝMI KREMIČITANMI NA ZDRSNENEJ VÁPENNEJ OMIETKE

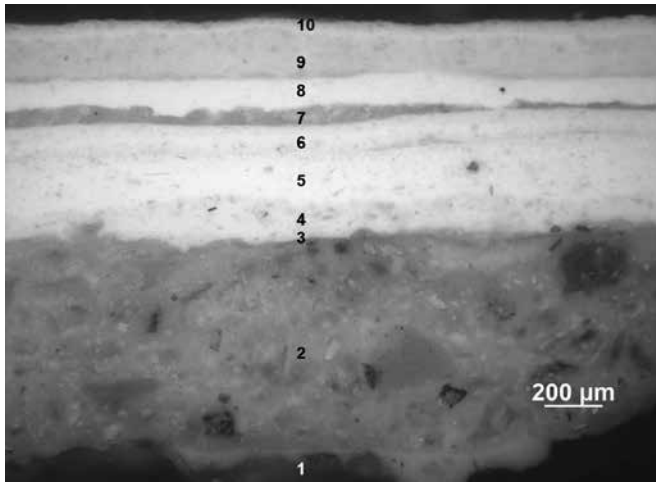
Photo Foto: A) Julius Scherb, Vienna, 1931, B) Laboratory analysis. DI Dr. Robert Linke, Federal Heritage Office 2017



The authors of the landmark exhibition *The International Style* at MoMA, New York in 1932, already pointed to the materiality of the surfaces (which was forgotten for a long time in the following discourse despite the recent material turn³³): “*The ubiquitous stucco, which still serves as the hall-mark of the contemporary style, has the aesthetic advantage of forming a continuous even covering.*”³⁴ With reference to Le Corbusier’s double-house in the Weissenhofsiedlung in Stuttgart (1927) they state: “... *the majority of wall surfaces remained white*”. With a sensitivity that we now perceive as extraordinary, they also discuss the color shade of white as a material color: “*The color of natural surfacing materials and the natural metal color of detail is definitely preferred. Where the metal is painted, a dark neutral tone minimizes the apparent weight of the window frame. In surfaces of stucco, white or off-white, even where it is obtained with paint, is felt to constitute the natural color.*”³⁵

Before the building-material companies and their laboratories in the 1960s began to market finished products with man-made “modified” and “optimized” materials that could be processed quickly and without special craftsmanship, the idea of craft precision was a more or less natural part of building.³⁶ With the abolition of ornamentation and ornamental structuring of the surface in the Modern Movement’s architecture, the demands on craftsmanship actually increased. Coating an undecorated wall with traditional “impeccable” techniques is, as Otto Rückert notes in *Die Form* 1931, a much more difficult task than a wall “structured by pilasters and divided into fillings”³⁷ In view of the real conditions of building production, the goal of “*machine aesthetics*”³⁸ could only be achieved with practiced and precise craftsmanship. And yet, it is possible to see in historical photographs – also in technical print reproductions – a certain liveliness of the surfaces, irregularities that are to be interpreted as traces of the manual production, called *facture*, and – what is often forgotten – of natural aging.³⁹

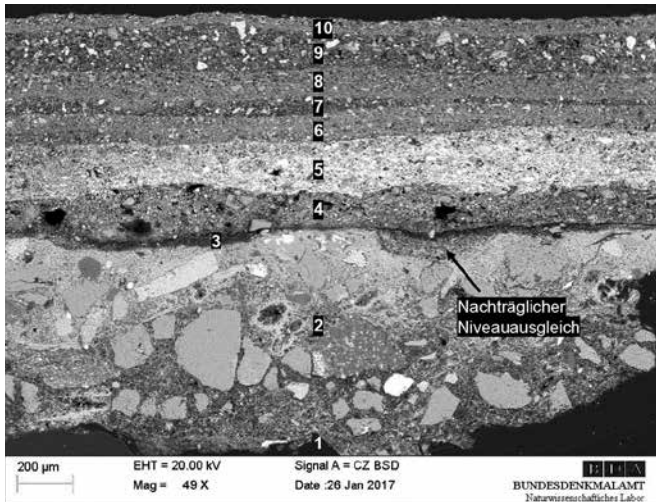
The findings of conservators-restorers obtained in conservation-science studies of the “white” façades of Modern Movement architecture are different with regard to many technological parameters, for example with regard to the sands used (which partly also depends on the region), or to the hydraulic proportion of the lime mortar, the layer structure and the surface texture.



JOSEF FRANK AND OSKAR WLACH, VILLA BEER IN VIENNA-HIETZING, 1930, LIVING ROOM, EAST WALL, SAMPLE N° 1, SECTION AND REM. 1: COARSE PLASTER (BOUND WITH PROTEIN!); 2: FINE PLASTER: GYPSUM WITH SILICATE GRAINS UP TO 300 μm, SOME DOLOMITE AND QUARTZITE, COMPACTED AND SMOOTHED SURFACE; 3: IMPRIMITURE ('LÖSCHE') WITH PROTEIN (CASEIN?); 4: YELLOWISH-GRAY-WHITE GLUE COLOR, FINE SAND (SILICATES) AND CHALK AS FILLER AND PIGMENTATION, ADDITIONALLY AN EARLY FORM OF TITANIUM DIOXIDE (ANATASE), NO PATINA; 5: CASEIN OR TEMPERA PAINT (?), EXCEPT SILICATES, CHALK AND TITANIUM DIOXIDE (ANATASE), ALSO GYPSUM (BOLOGNESE CHALK') AND ZINC WHITE (!); THE IMPASTO IS SOFTENED COMPARED TO THE FIRST COAT OF PAINT, SO APPLIED THINNER, COLOR TONE CLEARLY YELLOWISH BRIGHT WHITE. THE OTHER LAYERS ARE LATER RENOVATIONS. LABORATORY ANALYSIS: DI DR. ROBERT LINKE, FEDERAL HERITAGE OFFICE

JOSEF FRANK A OSKAR WLACH, VILA BEER VO VIEDNI-HIETZING, 1930, OBÝVAČKA, VÝCHODNÁ STENA, VZORKA Č. 1, REZ A REM. 1: HRUBÁ OMIETKA (VIAZANÁ PROTEÍNOMI); 2: JEMNÁ OMIETKA: SADRA S KREMIČITANOVÝM ZRNOM DO VEĽKOSTI 300 μm, PRIDANÝ DOLOMIT A KREMENEK, STLAČENÝ A VYHLADENÝ POVRCH; 3: IMPRIMITURE (‚LÖSCHE‘) S PROTEÍNOM (KAZEÍN?); 4: ŽLTOSIVO-BIELA FARBA SPOJIVA, JEMNÝ PIESOK (KREMIČITANY) A KRIEDA AKO VÝPLŇ A PIGMENTÁCIA, DOPLNENÉ RANOU FORMOU OXIDU TITANIČITÉHO (ANATÁZA), BEZ PATINY; 5: KAZEÍNOVÝ ALEBO TEMPEROVÝ NÁTER (?), OKREM SILIKÁTOV, KRIEDY A OXIDU TITANIČITÉHO (ANATÁZY) OBSAHUJE AJ SADRU (‚BOĽONSKÁ KRIEDA‘) A ZINKOVÚ BIELU (!); IMPASTO JE ZMÄKČENÉ V POROVNANÍ SPRVOU VRSTVOU NÁTERU, TAKŽE JE NANASENÉ V TENŠEJ VRSTVE, FAREBNÝ TÓN JE JASNE NAŽLTÝ BIELY. OSTATNÉ VRSTVY VZNIKLÍ PRI NESKORŠÍCH RENOVÁCIÁCH. LABORATORNA ANALÝZA: DI DR. ROBERT LINKE, FEDERÁLNY PAMIATKOVÝ ÚRAD.

Source Zdroj: Laboratory analysis: DI Dr. Robert Linke, Federal Heritage Office 2017

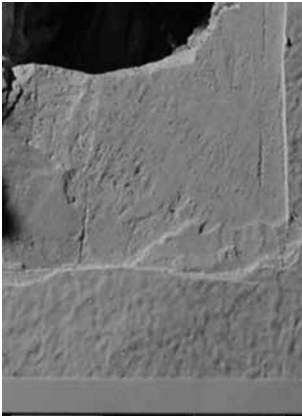


Nonetheless, they have something in common: they were never pure white, the whiteness of the lime was always “broken”.⁴⁰

In general, one can assume the following essential technical factors for the brightly colored, often purely white lime coatings of facades, including Modern Movement architecture:

The (slightly hydraulic) lime mortars were usually mixed at the construction site. The sands were mostly not washed.⁴¹ The fine silicates contained in the pigments or the sands, i.e. silt grains of the order of grain size of about 2 – 63 μm, not only have a coloring effect, but also a hydraulic effect in the reaction with the hydrated lime. ‘Dry-slaking’, i.e. mixing the fresh lime with the sand before slaking it, further stimulates the reaction.⁴² As long as the clayish portion of the sand is not too high, it results in a high quality of the lime plaster even without additional hydraulic aggregate.

The facade treatments of the Modern Movement architecture usually consist of slaked lime. For technical reasons, it is not appropriate to paint a pure whitewash of hydrated lime on the set, “dry” plaster of a facade, since it would not crystallize properly and would not withstand weathering. It is traditional practice to mix the lime wash of a facade with very fine (unwashed) sand in silt size and, in addition, if necessary, mineral pigments.⁴³ The “breaking” or “tuning” of paints by admixing complementary pigments belongs, as I know from experience, to the craft tradition of a painter familiar with historical techniques. In addition, the fine silicates apparently also accelerate the formation of calcite crystals,⁴⁴ thus binding the hydrated lime through the absorption of CO₂. Only a lime wash applied in fresco technique, thus using the fresh lime plaster, can show a radiant white in the fresh condition. However, through aging and its accompanying change of the crystal structure, it becomes yellowish. Pure lime washes (without organic binders) on already hardened



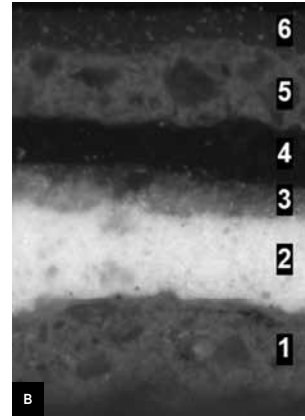
JOSEF FRANK UND OSKAR WLACH, VILLA BEER IN WIEN-HIETZING, 1930, MUSIC SALON, CEILING, SAMPLE TAKEN IN 2017 IN THE AREA OF THE LIGHT SOCKET, ORIGINAL YELLOWISH SOCKET (FIGURES ON THE PAGE 54)

JOSEF FRANK A OSKAR WLACH, VILA BEER VO VIEDNI-HIETZING, 1930, MUSIKSALON, DECKE, SONDERUNG 2017 IM BEREICH DER LAMPENFASSUNG, ORIGINALE GELBLICHE WEISSFASSUNG (OBRAZKY NA STRANE 54)

Photo Foto: HABEAS, 2017



JOSEF FRANK AND OSKAR WLACH, VILLA BEER IN VIENNA-HIETZING, 1930, PAINTS ON METAL, SECTIONS OF SAMPLES; BINDERS: LINSEED OIL OR ALKYD VARNISH; A) FAÇADE, MAIN ENTRANCE, DOOR FRAME METAL, "JAPAN RED", 1: MINIUM PRIMER WITH SOME IRON OXIDE RED, 2: PRIMER: CHALK, ZINC WHITE OR ZINC SICCATIVE / DRIP NOSE, 3: TITANIUM WHITE KRONOS (?), CHALK, 4: TITANIUM WHITE, SILICATES (FINE SAND), 5: LEAD CHROMATE AS BICHROMATE, RED, 6: LEAD CHROMATE AS (5), ORANGE RED. 7 – 16: LATER COATINGS; B) MEZZANINE, SERVICE STAIRS, UPRIGHT, LIGHT YELLOW, 1: MINIUM, IRON OXIDE, CHALK, 2: BARITE, ZINC WHITE YELLOW OCHER (ORIGINAL SURFACE).



JOSEF FRANK A OSKAR WLACH, VILA BEER VO VIEDNI-HIETZING, 1930, NÁTERY NA KOVE, SEKCIE VZORIEK; SPOJIVÁ: LANOVÝ OLEJ ALEBO ALKYDOVÝ LAK; A) FASÁDA, HLAVNÝ VSTUP, KOVOVÉ ZÁRUBNE, „JAPONSKÁ ČERVENÁ“; 1: MINIMÁLNY PODKLAD S PRÍMESOU ČERVENÉHO OXIDU ŽELEZITÉHO; 2: PODKLAD: KRIEDA, ZINCOVÁ BIELA ALEBO SINKATICKÝ ZINOK/STEKANIE; 3: TITÁNOVÁ BIELA KRONOS (?), KRIEDA; 4: TITÁNOVÁ BIELA, KREMIČITANY (JEMNÝ PIESOK); 5: CHRÓMAN OLOVNATÝ AKO DVOJCHRÓMAN, ČERVENÝ; 6: CHRÓMAN OLOVNATÝ AKO (5), ORANŽOVO-ČERVENÁ. 7 – 16: NESKORŠIE NÁTERY; B) MEZANÍN, SLUŽOBNÉ SCHODISKO, PODPERA, SVETLÁ ŽLTÁ; 1: OXID OLOVNATO-OLOVIČITÝ, OXID ŽELEZITÝ, KRIEDA; 2: BARYT, ZINCOVÁ BIELA, ŽLTÝ OKER (PŮVODNÝ POVRCH).

Source Zdroj: Laboratory analysis: DI Dr. Robert Linke, Federal Heritage Office 2017



JOSEF FRANK AND OSKAR WLACH, VILLA BEER IN VIENNA-HIETZING, 1930, WEST FACADE, MAIN ENTRANCE, METAL DOOR FRAME, DETAIL WITH REMAINS OF THE ORIGINAL "JAPANESE RED" PAINT

JOSEF FRANK A OSKAR WLACH, VILA BEER VO VIEDNI-HIETZING, 1930, ZÁPADNÁ FASÁDA, HLAVNÝ VSTUP, KOVOVÁ ZÁRUBŇA, DETAIL S POZOSTATKAMI PŮVODNÉHO NÁTERU „JAPONSKÉJ ČERVENEJ“

Photo Foto: Ivo Hammer, 2017

plaster of facades cannot, therefore, be completely white for technical reasons; the lime whiteness is always tinted by the fine silicates of sand, mostly created by a fine slurry of non-washed sand.

The garish whiteness of the titanium-dioxide-containing paints of the past decades are neither technically nor aesthetically pleasing. Indeed, they correspond to the critical words of Hitchcock and Johnson of 1932 regarding bright colors: “If architecture is not to resemble billboards, color should be both technically and psychologically permanent.”⁴⁵

With increasing knowledge of the materiality of the facade surfaces of the New Building, it becomes necessary to correct the idea of the white cubes still anchored in the cultural memory, as applied to concrete structures: the “white cubes” were never white.

Even in the buildings of those architects who abstained from the use of chromatic color in the architectural surface, such as Ludwig Mies van der Rohe and Josef Frank, the bright tones are the product of colored material. The floating, immaterial “white screens” of the facades,⁴⁶ which on the aesthetic level aim to raise the principle of mass and heaviness, the “abstraction of the material appearance” of the surfaces⁴⁷ are made of heavy material. The traces of craftsmanship, the facture, i.e. the unevenness of the wall, the irregular, lively application of the whitewash, the scaffolding boundaries, the traces of aging and weathering, are visible not only in the tangible buildings, but also in the black and white photographs, even if the photographers partially retouched these traces. The aging of limestone also means that the binder becomes more yellowish, either through the enlargement of the lime crystals in the sintering process, incrustation or gypsum, and that the weathering also leads to gradual loss of substance. The aesthetics of the surface also include the aesthetic consequences of the tradition of periodic repair by means of material-compatible interventions or the renewal of the lime paint.

The Materiality of the Villa Beer Conservation-Science Study (2017)⁴⁸

The primary objective of the conservation-science study, carried out in 2017 under the direction of Ivo Hammer, was to conduct a pilot survey of the wall surfaces with respect to heritage conservation and to establish short-term orientation for the redevelopment of this private property as a state museum. Only four days were available for on-site examination. The client's basic idea was, while limiting intervention to a minimum, to carry out the conservation/restoration of the house and to adapt it step by step to the needs of a museum – a “work in progress”, so to speak.⁴⁹ Apart from the analysis of materials, wall surfaces, ceilings, floors and built-in furniture, the research team also concerned itself with the need to calculate structural measures in terms of building security, fire protection, heating, electrical installations, sanitary facilities and adaptations necessary for the house's operation as a museum.⁵⁰ The conservators/restorers implemented their transdisciplinary research in collaboration with experts from the Federal Heritage Office (DI Dr. Robert Linke, scientific research, and DI Oliver Schreiber, responsible consultant) and the architect Mag. Claudia Cavallar. Very helpful were the research efforts of Johanna Wilk since 2012 on the interior of the Villa Beer⁵¹ and other professionals (building equipment, appliances). The study documentation included room data sheets (collectively the “Raumbuch” in German) for the 60 rooms of the house.

Façade

The fine plaster, with a grain size of about 0 – 2 mm, was found to have been rubbed and smoothed with a wooden board to create a rough surface.⁵² The yellowish-white whitewash, probably pigmented with fine grains of sand, is so thin that it barely covers the grains⁵³, a finding that can be compared with accuracy to the façade plaster of the Tugendhat House in terms of structure, texture, facture and, above all, the shade of white.⁵⁴ The varnish of the exterior window frames, the railings of the terraces and most of the metal doors are also in line with the achromatic “colorfulness” of the render of the façade: a very slightly greenish grey, a multi-layered oil paint smoothed with precision, which approximates the material color of metal. Only the entrance area was highlighted with bright colors: the Beer family's front door was painted “*Japanese red*”⁵⁵, bordered with slabs of “Cipollino”/Styrian green marble, which is also known from buildings by Adolf Loos, e.g. the Michaelerhaus in Vienna.

Interior Wall Surfaces

The careful preparation of the wall and ceiling surfaces⁵⁶ consists of a stucco with finely smoothed gypsum, with gluten glue added and a considerable proportion of fine silicate sand grains measuring up to approx. 300 microns, as well as a quantity of dolomite. The grain color of the fine silicates has the effect of giving an overall yellowish-white color to the finely smoothed plaster. Casein paint was applied (at least partially in two layers) to a protein intermediate layer (casein or vegetable glue) with some oil (“tempera”), filled with chalk and gypsum (Bolognese “chalk”), pigmented with fine silicates in silt grain size or bright ochre pigments and zinc white. Robert Linke also verified the addition of an early type of titanium white, an opaque, white pigment, which had been manufactured in the USA and Norway since 1919.⁵⁷ As far as is known, this was the first use of this pigment in Austria, perhaps not a mere coincidence. Josef Frank wanted the whiteness to appear as even, regular and “pure” as possible, in keeping with his idea of the color of interior walls, which he saw as a neutral, non-dominant background allowing a free choice of objects – and their colors – in the room: flowers, pictures, carpets, curtains and furniture. The use of the highly opaque titanium white is the technical correlate of the aesthetic intention of having a regular “white” surface. The surface is relatively smooth; individual brush strokes (“impasto”) are visible.

Nevertheless, the white-color paint of the interior walls intended by the architect, and described in contemporary publications devoted to the Villa Beer, does not match the physical evidence. As a result, the research team also considered the effects of aging and pollution. Because of the presence of the aggregates described, the white paint of the walls and ceilings was yellowish, resembling that of the Tugendhat House. However, all wall surfaces throughout the house were treated uniformly and – unlike in the case of the Tugendhat House – no distinction was made between the servants' rooms and those of the family.⁵⁸

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Also, other interior components, such as window frames, doors, fitted wardrobes and kitchen cabinets, all made of various materials, were painted in a light yellowish hue of white with thoroughly smoothed surfaces.⁵⁹ The remaining components, such as windows, doors, pillars, railings and radiators, were painted with oil or alkyd paint. The light yellowish-white paint is multi-layered and was manufactured with high-precision craftsmanship.⁶⁰

Exceptions to this bright aesthetic continuum of architectural surfaces are the fitted sideboard of the dining room and the library shelves, which, like the floors and benches, show the natural color of the wood used, intensified by means of a transparent varnish.⁶¹ The inner wings of the box-type windows are painted on the outside with (slightly greenish) light gray, as are the exterior window frames. Marbles in different colors and brass decorate the fireplaces of the hall, the living room and father's bedroom. Green rubber – still in situ – covers the floor of some private rooms.

The bright, marble-like walls and ceilings in fact provided a noble, restrained background for the lively, colorful freestanding furnishings that were planned for the house, such as curtains and furniture, and also for the flowers and other objects that surrounded the inhabitants in their daily living space.

Conclusion

We must rewrite the color history of Modern Movement architecture. The 'white cubes' were never white. The notion of white as a metaphor for the "Weltanschauung" of the Modern Movement, fixed as such in cultural memory due to black-and-white architectural photography and recorded in writing as intentional by the architects themselves, is superseded by the evidence provided by the colorful wealth of the actual works of architecture. Art is always more than just the intention of the artist, not least because of the inherent character – if not the "stubbornness" – of the materials used.⁶²

1 Revised and extended edition of: HAMMER, Ivo, 2018. 'Weiß, alles weiß?' Josef Franks Haus Beer (1930) in Wien und seine Materialität im Kontext des Diskurses über die weißen Kuben. *VDR Beiträge zur Erhaltung von Kunst- und Kulturgut*, 8, pp. 106 – 117; short version: HAMMER, Ivo and LINKE, Robert, 2018. 'White, everything white?' Josef Frank's Villa Beer (1930) in Vienna and its Materiality. In: Tostões, A. and Kosej, N. (eds.). *Metamorphosis. The Continuity of Change*. Ljubljana, 15th International Docomomo Conference, pp. 396 – 402.

2 www.baunetz.de Official website. *Alles Frank! Die Villa Beer in Wien*. [online] 30. 3. 2016 [accessed 3 March 2018] Available at: https://www.baunetz.de/meldungen/Meldungen-Die_Villa_Beer_in_Wien_4718353.html

3 ACHLEITNER, Friedrich: *Österreichische Architektur im 20. Jahrhundert, vol III/2 (Wien 13. – 18. Bezirk)*, Vienna 1993, pp. 65 – 66.

4 CZECH, Hermann and HACKENSCHMIDT, Sebastian, 2016. Josef Frank: Against Design. In: Thun-Hohenstein, Ch., Czech, H. and Hackenschmidt, S. (eds.). *Josef Frank: Against Design – The Anti-Formalist Oeuvre of the Architect*. German/English, Basel, p. 20.

5 FRANK, Josef, 1931. Das Haus als Weg und Platz. *Der Baumeister*, 8(29), pp. 316 – 323.

6 In this sense, the love of music displayed the lady of the house formed a given center for the arrangement. BORN, Wolfgang: Ein Haus in Wien-Hietzing. Von Prof. Dr. Josef Frank, Dr. Oskar Wlach, ('Haus und Garten'). Wien. *Innendekoration*, 42(10), 1931, p. 36. Margarete (sic) Beer was a pianist trained at the Viennese music conservatory and friend of Josef Tauber. BOJANKIN, Tano, 2008. Das Haus Beer und seine Bewohner. In: Meder, I. (ed.). *Josef Frank 1885 – 1967. Eine Moderne der Unordnung*. Salzburg, p. 103.

7 OTT-WODNI, Marlene, 2015. *Josef Frank 1885 – 1967. Raumgestaltung und Möbeldesign*. Wien/Köln/Weimar, p. 195.

8 Credit agreement with the insurance Allianz and Giselaverein AG including the free-standing furnishings (!), with mutual termination waiver until 1937; Bojankin, T., 2008, p. 103.

9 FRANK, Josef, 1919. Das neuzeitliche Landhaus / The Modern Country House. *Innendekoration*, 30/11, Darmstadt, December, pp. 410 – 413; (re-edition in German and English: BOJANKIN, Tano, LONG, Christopher and MEDER Iris (eds.), 2012. *Josef Frank. Schriften in zwei Bänden / Josef Frank: Writings in Two Volumes*, Wien/ Vienna, pp. 146 – 153.)

10 „Le pareti della casa, fuori e dentro, sono bianche. Ben lunghi (sic!) di dare un'impressione fredda, questi chiari ambienti, rallegrati dalle tende fiorite e dai tappeti orientali, danno un senso di gaia e leggera bellezza.“ (HAERDTL., Oswald, 1931. Una nuova casa di Josef Frank. *DOMUS*, 3/43, Milan, July, pp. 48 – 54; idem: Una casa privata degli architetti Josef Frank e Oscar Wlach. *DOMUS* 4/44, Milan, August 1931, pp. 28 – 30, 77). – „Le facciate sono intonacate completamente di bianco; l'intelaiatura in ferro delle finestre e le ringhiere delle terrazze sono verniciate in grigio-verde chiaro.“ (The facades are completely white plastered; the window frames and the metal terrace railings are painted in a light greenish gray). Haerdtl, O., 1931, 4/44, p. 28 f.; translated from the Italian by I. H.

11 BORN, Wolfgang, 1993. Ein Haus in Wien-Hietzing von Prof. Dr. Josef Frank, Dr. Oskar Wlach (Haus und Garten)-Wien. *Innendekoration*, 42, p. 366. (Der farbige Eindruck dieses Raumes wird durch das reine Weiß der Wände bestimmt, auf welchem die bunten Sesselbezüge, die Vorhänge mit lebhaften Ornamenten einen heiteren, zart und persönlich abgestimmten Klang geben.) Translation I. H.

12 GAGE, John, 1993. *Color and Culture: Practice and Meaning from Antiquity to Abstraction*. London.

13 HAMMANN, J. E., 1930. Weiss, Alles Weiss. Von der Wertstellung der Farbe 'Weiss' in unserer Zeit. *Die Form*, 5, p. 122 („...die Farbe Weiß, der 'F a r b t o n' Weiß ist heute ein wichtiger Kulturfaktor, ein neuer Wert- und Zeitausdruck geworden. Er ist, farbig gesehen, ein Merkmal unserer Zeitauffassung und mit ein Bestandteil der gesamten heutigen modernen Weltanschauung. Man sucht ... mit allen Mitteln nicht nur mit den an sich gegebenen Möglichkeiten durch große Fenster, Haus- und Dachgärten, Veranden und dergl. mehr, sondern auch mit denen der Illusion des weißen Anstrichs sich Weite zu verschaffen. Der heutige Mensch braucht Freiheit, Luft, Licht: er braucht Ferne für seine Gedanken und Ideen“) Translation I. H.

14 “Entièrement blanche la maison serait un pot à crème”, *Almanach d'architecture moderne*, Paris 1926, p. 146. (I owe the kind references concerning Le Corbusier to Arthur Rüegg)

15 LE CORBUSIER, 1925. *L'art décoratif d'aujourd'hui*. p. 193: “Si la maison est toute blanche, le dessin des choses s'y détache sans transgression possible; le volume des choses y apparaît nettement; la couleur des choses est catégorique. Le blanc de chaux est absolu, tout s'y détache, s'y écrit absolument, noir sur blanc; c'est franc et loyal.” Translation I. H.

16 Concerning Maison La Roche: L'intérieur de la maison doit être blanc, mais pour que se blanc soit appréciable,

il faut la présence d'une polychromie bien réglée. (translation: I. H.) LE CORBUSIER, *Œuvre complète*, vol. 1, 1910 – 1929, Zurich 1935, p. 60; „*Dans l'ambiance de blanc cru [sic], les couleurs surnommées prennent une signification intense, qualifiée, précise: ce sont des caractères, elles deviennent des caractères*“ . In: Rüegg, A. (ed.). *Polychromie architecturale: Le Corbusiers Farbenklimaturen von 1931 und 1959*. (German, English, French) Basel 2006 (2015), p. 100.

17 I owe this kind reference to Arthur Rüegg.

18 Le Corbusier is said to even have ascribed to the white of the façades a leveling effect on class differences: TSOMIS, Yanis, 2012. Le Corbusier, L'Art décoratif d'aujourd'hui et, la loi du ripolin. Boucharenc, M. and Leroy, C. (eds). *L'année 1925. L'esprit d'une époque*. Nanterre, pp. 63 – 79: “Le blanc de chaux est extrêmement moral” (Le Corbusier); [accessed 1. 5. 2018] Available at: <http://books.openedition.org/pup0/2422?lang=en>. See also: <https://en.wikipedia.org/wiki/Ripolin>.

19 MEYER, Richard, quoted by PHILIPP, Klaus Jan and STEMSHORN, Max (eds.), 2003. *The Color White: Color Rush and Color Dropout in Architecture*. Berlin. Meyer's beautiful townhouse in Ulm is coated with an ubiquitous and banal synthetic resin paint containing titanium white on a “full thermal insulation” clad (“Vollwärmeschutz”).

20 Andrea Palladio, Die vier Bücher zur Architektur, I quattro libri dell'architettura (Italian-German), Translated from the Italian and introduced by Hans-Karl Lücke, Wiesbaden 2008. “*Von allen Farben passt keine so gut zu den Tempeln, wie das Weiß, da die Reinheit dieser Farbe und die Reinheit des menschlichen Lebens in höchstem Maß Gott angemessen ist.*” (Of all the colors, none suits the temples as well as the white, because the purity of this color and the purity of human life are most appropriate to God. Translation: I. H.). [accessed 25. 5. 2018] Available at: <http://www.maehlmann.com/architektur/palladio>

21 Johann Joachim Winckelmann, Geschichte der Kunst des Altertums, Dresden 1764; <http://digi.ub.uni-heidelberg.de/diglit/winckelmann1764/0001/image>; RAULET, Gérard (ed.), 1995. *Von der Rhetorik zur Ästhetik. Studien zur Entstehung der modernen Ästhetik im 18. Jahrhundert*. Paris.

22 BRINKMANN, Vinzenz and SCHOLL, Andreas, (eds.), 2018. *Bunte Götter. Die Farbigkeit antiker Skulptur*, München 2010. See also https://de.wikipedia.org/wiki/Antike_Polychromie. (Zugriff 24. 5. 2018)

23 HAUS, Andreas, 2015. Schwarz-Weiss. Architekturfotografie des “Neuen Bauens”. In: Wagner, M. and Lethen, H. (eds.). *Schwarz-Weiß als Evidenz: With black and white you can keep more*

of a distance, Frankfurt/M., New York, pp. 171 – 190. Translation I. H.

24 The photographs of the Tugendhat house by Thomas Ruff (1999 – 2001) with bright white façades bring about a similar de-historicization; see: HAMMER, Ivo, 2004. Zur materiellen Erhaltung des Hauses Tugendhat in Brunn und anderer Frühwerke Mies van der Rohe's. p. 14. In: Cramer, J. and Sack, D. (eds.). *Mies van der Rohe. Frühe Bauten. Probleme der Erhaltung – Probleme der Bewertung*, Petersberg,

25 DANZL, Thomas. Konservierung, Restaurierung und Rekonstruktion von Architekturoberflächen am Meisterhaus Muche/Schlemmer. GEBESZLER, August: *Gropius. Meisterhaus Muche/Schlemmer. Die Geschichte einer Instandsetzung*. Stuttgart/Zürich, 2003, p. 154.

26 The term *white cube* is probably not contemporary; it probably dates back to the essay collection of Brian O'Doherty, *Inside the White Cube*. The Ideology of the Gallery Space, San Francisco 1976

27 HAMMER, Ivo: Bedeutung historischer Fassadenputze und denkmalpflegerische Konsequenzen. Zur Erhaltung der Materialität von Architekturoberfläche (mit Bibliographie und Liste von Konservierungsarbeiten). In: Pursche, J. (ed.). *Historische Architekturoberflächen Kalk – Putz – Farbe – Historical Architectural Surfaces Lime – Plaster – Color*. International Conference of the German National Committee of ICOMOS and the Bavarian State Department of Historical Monuments – Munich, 20. – 22. November 2002. ICOMOS Journals of the German National Committee, XXXIX – Arbeitshefte des Bayerischen Landesamts für Denkmalpflege, Bd. 117, Munich 2003, pp. 183 – 214.

28 METZGER-SZMUK, Nitza, 2008. The Plaster in the ‘White City’ of Tel Aviv. History, Technologies and Dilemmas. In: Cerna, I. and Hammer, I. (eds.). *Materiality*, Brno-Hildesheim, (in Czech, English and German). pp. 68 – 72.

29 DANZL, Thomas, 1999. Restaurierung versus Konservierung? Zum restauratorischen Umgang mit historischen Putzen und Farbanstrichen an den Bauhausbauten in Dessau. *Denkmalpflege in Sachsen-Anhalt*, 2, pp. 152 – 181. The official website of the Bauhaus Dessau addresses the buildings even now as white cubic structures. [accessed 16. 5. 2018] Available at: <https://www.bauhaus-dessau.de/unesco-weltkulturerbe1.html>. Jacques Sbriglio spoke at the colloquium “Le Corbusier. L'oeuvre à l'épreuve de sa restauration” 2015 in Paris, calling earlier restorations an “iconoclastic” approach. https://www.canal-u.tv/video/institut_national_de_l_histoire_de_l_art/colloque_le_corbusier_l_oeuvre_a_l_epreuve_de_sa_restauracion_1_2.18323 (I owe that information to conservatrice-restauratrice Ariel Bertrand).

30 REICHWALD, Helmut F., 2008. Surfaces and Color Treatment of the Interior and Exterior of the Double House by Le Corbusier and Pierre Janneret. In: Cerna, I. and Hammer, I. (eds.), 2008, pp. 58 – 66.

31 HAMMER, Ivo, 2014. Materiality: History of the Tugendhat House 1997 – 2012. Conservation-Science Study and Restoration. HAMMER-TUGENDHAT, Daniela, HAMMER, Ivo, TEGETHOFF, Wolf. *Tugendhat House. Ludwig Mies van der Rohe*. Basel-Berlin-Boston- Munich-Beijing-Warsaw-Vienna 2014, pp. 162 – 223.

32 Probes by conservatrice-restauratrice Ariel Bertrand, 2008; Pierre-Antoine Gatie, Restoration of the Maison La Roche. [accessed 26. 9. 2018] Available at: <http://www.fondationlecorbusier.fr/> (2009)

33 STRÄSSLE, Thomas, KLEINSCHMIDT, Christoph and MOHS, Johanne (eds.), 2013. *Das Zusammenspiel der Materialien in den Künsten. Theorien. Praktiken. Perspektiven*, Bielefeld.

34 HITCHCOCK, Henry Russel and JOHNSON, Philipp, 1932. *The International Style: Architecture Since 1922*. New York, MoMA, p. 50.

35 Hitchcock, H. R. and Johnson, P., 1932, pp. 75 – 76.

36 Hammer, I., 2003, pp. 183 – 214.

37 RÜCKERT, Otto, 1931. Handwerk und neues Bauen. *Die Form*, 6, p. 201.

38 WAGNER, Monika, 2018: *Marmor und Asphalt. Soziale Oberflächen im Berlin des 20. Jahrhunderts*. Berlin, pp. 54 – 61.

39 Hitchcock, H. R. and Johnson, P., 1932, e.g. p. 111, Le Corbusier (Maison Savoye, 1930, natural, non-painted plaster; p. 115 Weißenhofiedlung, 1927; p. 117 (Maison Stein 1928); p. 133, Otto Eisler (Brno, soubles-house 1926); p. 149, Max Ernst Haefeli (row house, Zürich 1929); p. 151, Otto Haesler (KURZAG, Bruns- wick 1930).

40 As part of a research project of the HAWK Hildesheim under the direction of Ivo Hammer, the facade plasters of a number of Modern Movement buildings were examined: Berlin, Grelstraße, Bruno Taut Siedlung (1927), 1998; Dessau, Bauhaus, Preller House (1926), 2000; Brno / CZ, House Tugendhat (1930), 2003 – 2010; 2005: Complementary studies on the craftsmanship tradition in Brno, fair grounds, buildings of the 1928 anniversary exhibition: Emil Králík, Pavel Janák, Josef Gočár (2005); 2004: Buildings by Ludwig Mies van der Rohe during the Berlin period, the houses Riehl (1907/1910), Perls (1911), Werner (1913), Urbig (1915), Mosler (1924), Eichstädt (1921/22), apartments for rent in Afrika-nische Strasse (1926), Lehmké (1932); Hammer, I., 2014, 252 p.

41 The washing of mortar sand began on a significant scale only after the Second World War, with the disappearance of traditional calcareous technology and the victory of (armored) concrete technology

42 Laboratory analysis by Hubert Pasching, 1998; see HAMMER, Ivo, 2008. Restauratorische Befundicherung an frühmittelalterlichen Wandmalereien des Regnum Maravorum. In: Daim, F. und Pippal, M. (eds.). *Frühmittelalterliche Wandmalereien aus Mähren und der Slowakei. Archäologischer Kontext und herstellungstechnische Analyse*, Innsbruck 2008, pp. 111 – 328.

43 The limewash of the interior of the St. Marien church in Salzwedel was pigmented with sand slurry, following the technology I developed on site. The limewash was smudge-resistant approx. 4 hours after painting, see: HAMMER, Ivo. Zur Restaurierung der Wandoberflächen des Innenraums der Ev. Pfarrkirche St. Marien in Salzwedel. Untersuchungen und Konzepte der HAWK Hildesheim. *Denkmalpflege in Sachsen-Anhalt, Zeitschrift des Landesamtes für Denkmalpflege und Archäologie Sachsen-Anhalt*. Nr. 2/10 (Halle 2011), pp. 44 – 63.

44 HAMMER, Ivo, 2010. Lime Cannot be Substituted! Remarks on the History of the Methods and Materials of Painting and Repairing Historical Architectural Surfaces. In: Guttmeyer, K. (ed.). *Color on historical facades from the Middle Ages to modern times: History, Research and Conservation issues* (proceedings of the international conference September 22 – 24, 2010, Królewski Castle), Warsaw, pp. 317 – 355.

45 Hitchcock, H. R. and Johnson, P., 1932, p. 76: “*The earlier use of bright color had value in attracting attention to the new style, but it could not long remain pleasing. It ceased to startle and began to bore; its mechanical sharpness and freshness became rapidly tawdry.*”

46 Hitchcock, H. R. and Johnson, P., 1932, p. 44: “*... volume is felt as immaterial and weightless, a geometrical bounded space (...) like a skin tightly stretched over the supporting skeleton (...) screen walls...*”

47 An aim of architecture formulated by the Dutch protagonist J. J. Pieter Oud, see: Haus, A., 2015, p. 186.

48 In accordance with the owner, the Dr. Johannes Strohmeier Private Foundation, commissioned by the MAK – Museum of Applied Arts, Vienna: Dr. Christoph Thun-Hohenstein, Mag. Teresa Mitterlehner-Marchesani, Mag. Martina Kandler-Fritsch, Dr. Sebastian Hackenschmidt (contact), Herbert Obermaier; HAMMER, Ivo, “Aide mémoire” reporting a conversation with MAK, ms. 17. 12. 2016.

49 Survey on site 24. – 27. 1. 2017; participants: academic conservators/restorers Ivo Hammer (director), Alexandra

Sagmeister, Lea Huck, Magdalena Schindler, Susanne Wutzig; architect: Claudia Cavallar (construction files, plans, historical photographs); heritage authority: Oliver Schreiber, Robert Linke (laboratory analysis); Preliminary report: 13. 2. 2017; report on the pilot survey: 1. 8. 2017. We acknowledge the permission given by Tano Bojankin to document his private rooms in the Villa Beer.

50 Commissioned by the MAK, a planning phase concerning, as mentioned, structural measures and calculation took place in the second half of 2017, executed by Ing. Dr. h. c. Erwin Resetarits and Mag. Claudia Cavallar. The conservators/restorers were not involved

51 WILK, Johanna, 2015. Das Haus Beer – die Bestandsaufnahme einer Innenausstattung aus den 1930er Jahren. In: Krist, G. (ed.). *Collection Care. Sammlungspflege*. Vienna/Cologne/Weimar, pp. 223 – 234.

52 The traditional bricks walled with lime mortar, stiffened at static critical points with lime-cement mortar, stamped concrete and partially reinforced concrete. Thickness of the wall: 38 cm.

53 SEEBACH, Gerhard, Untersuchungsbericht zum Fassadenputz, Mai 1999, files of the Bundesdenkmalamt (Austrian Heritage Office). Well-preserved parts of the exterior plaster can be found on the upper terrace, which has been partially transformed into an interior. The façade was renovated with a pre-fabricated mortar and silicate-resin paint containing titan white (KEIM Organosilikat) in 2015.

54 HAMMER, Ivo, 2012. The material is polychrome! From interdisciplinary study to practical conservation and restoration: the wall surfaces of the Tugendhat House as an example. In: Jean, G. (ed.). *La conservazione delle policromie nell'architettura del XX secolo / Conservation of Color in 20th Century Architecture*. Lugano, pp. 234 – 249; Hammer, I., 2014, p. 183.

55 Led chromate (according the analysis of Dr. Robert Linke). Color term: "Japanrot", see: Born, W., 1931, p. 363.

56 The approximately 1.5 cm thick coarse plaster of the walls consists of a probably unwashed quartz sand, grain approx. 0 – 20 mm, with a dolomite component. The fact that the binder of coarse plaster, according to the analysis of Robert Linke, consists essentially of protein (glucosine glue or casein) is probably exceptional. The partitions consist of traditional solid bricks ("half shoe" walls), partly of cement slag plates, reinforced with steel wire, partly also of gypsum slag plates. The ceilings are made of cast concrete (Ast-Mollins system) and suspended plaster girders made of reed mats and light metal grids ("hash grid"), cavity approx. 26 cm.

57 Kronos-titandioxide, anatase-modification, associated with Si und Ca. [accessed 3. 2. 2018] Available at: <http://materialarchiv.ch/#/detail/984/titanweiss-pw-6>

58 Perhaps a reflection of the well-known social democratic attitude of Josef Frank

59 An exception is the spiral staircase in the service area: pale yellow column and pale yellow faces of the steps, the treads covered with green rubber

60 A precision of surface treatment comparable to the Tugendhat House, Hammer, I., 2014.

61 A technique found also on the metal surfaces of the Tugendhat House. Hammer, I., 2014, p. 192.

62 WAGNER, Monika, 2008. Berlin Urban Spaces as Social Surfaces: Machine Aesthetics and Surface Texture. Representations, Berkeley, **102**(1), pp. 53 – 75; MERSCH, Dieter, 2013. Erscheinung des "Un-Scheinbaren". Überlegungen zu einer Ästhetik der Materialität. In: Strässle, T., Kleinschmidt, Ch. and Mohs, J. (eds.). *Das Zusammenspiel der Materialien in den Künsten. Theorien. Praktiken. Perspektiven*. Bielefeld, pp. 27 – 44.



**LOCATION OF SLOVENSKA STREET
IN THE CITY OF LJUBLJANA**

POLOHA ULICE SLOVENSKA
V MESTE LUBLJANA

Source Zdroj: Peter Šenk, Kaja Pogačar

**LOCATION OF KOROŠKA STREET IN
THE CITY OF MARIBOR**

POLOHA ULICE KOROŠKA V MESTE
MARIBOR

Source Zdroj: Peter Šenk, Kaja Pogačar