

The Facades^{of} Business Premises of the 1950s

Problems of Conservation Using the Example of West Berlin

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Dirk Dorsemagen was born in Düsseldorf, Germany, on the second of November 1971. His architecture and art history studies took him to Stuttgart, Venice (Italy) and Berlin. In Berlin he taught for two years at the Master Studies of Landmark Conservation at the Institute of Building Archaeology at the Technical University. At the same time he achieved his doctorate degree with the financial support of the German Research Society (DFG) in the college of art history – building archaeology – landmark conservation of the University of Bamberg and the Technical University of Berlin examining "The façades of commercial premises of the fifties: problems of conservation using the example of West Berlin". Recently he was employed by the Foundation of Prussian Palaces and Gardens Berlin Brandenburg as architect for Rheinsberg Palace.

THE RECONSTRUCTION OF WEST BERLIN

Already before World War II in the 1920s the area around the Kaiser-Wilhelm-Gedächtniskirche south of Zoo Garden had turned into a centre of the westward expansion of Berlin dating from the late 19th century. The boulevards of Kurfürstendamm and Tauentzienstraße, which were designed to resemble the Champs d'Elysées in Paris, became representative shopping streets with buildings for culture and amusement. Yet to form a West City equivalent to the historic centre of Berlin, there were too few administration buildings in West Berlin at the time.

Fig. 1: Map of Berlin showing the destruction in 1945.

- Buildings destroyed by blasting;
- Buildings destroyed by fire;
- Damaged buildings that are repairable.

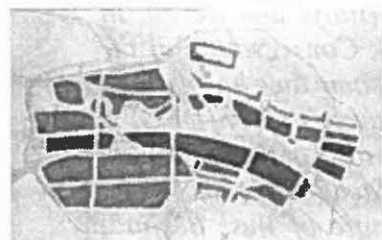


Fig. 2: 'Kollektivplan', 1946 by Hans Scharoun. Plan to reconstruct Berlin in the shape of a band following the valley of the river Spree and separating the town into strictly residential, commercial and industrial areas.



Fig. 3: Block F of the Stalinallee in East-Berlin (1957-60). Stalinistic architecture with neo-classical and national elements.



Fig. 4: Model of the Ernst-Reuter-Platz, 1954 by Bernhard Hermkes. Urban design following the idea of Mies van der Rohe's design for the Alexanderplatz in the 1920s.



Fig. 5: Zentrum am Zoo, 1955-57 by Paul Schwebes and Hanns Schoszberger, inspired by Le Corbusier's concrete architecture.

THE ECONOMIC SITUATION AFTER THE END OF THE WAR



In May 1945 Berlin was not only Germany's largest expanse of ruins, but it was also politically split up. The allied occupation forces divided the city into four sectors. The isolation of the three west sectors soon resulted in a political and economic division into a western and an eastern sector.

In the area of West Berlin war destruction caused a total loss of a third of all dwellings. Eighty percent of the remaining dwellings were damaged and only twenty percent were intact (Fig. 1). Until 1945 the number of inhabitants had strongly decreased through evacuation and death. But soon after the war most of the evacuated Berliners returned. A lot of refugees from the eastern sectors of Germany and Berlin came into West Berlin so that housing shortage and hunger were the biggest problems in the first post-war years.

The beginning of reconstruction was a lot more difficult in Berlin than it was in the other western sectors of Germany. In Berlin and the other Soviet occupied areas all banks were closed and the holdings - even those of the public - were blocked by the invasion of the Russian troops. Even when the Western allies took over West Berlin, that did not change. In contrast to West Germany the former capital lacked money to purchase the necessary building materials for new constructions. Thus the first building activity was only the necessary clearing work. Sixty to seventy five million cubic metres of debris had to be removed in all of Berlin - in West Berlin about forty five million cubic metres.

To fix damaged dwellings the allies distributed building materials so that between 1945 and 1950 almost 50,000 dwellings, which had not been badly damaged, could be restored and reused.

TOWN PLANNING

Most of the architects and politicians considered the vast destruction as a chance to "clean up the sins of former town planning". Karl Mahler who was secretary of urban planning in the administration of West Berlin described the aims of urban renewal in 1953:

"In Berlin there was and still is today a terrible mess of residential, business and industrial areas. ... To get rid of that mess and to achieve a clear division is the duty of future development. ... A certain help for that is the big destruction of the town during the war, although in a lot of cases the destruction did not affect areas, where it could have been most helpful for an urban renewal. Yet we do not only have to put in order the use of the different town areas, but at the same time clear the densely populated areas and achieve a ventilation of the town with public gardens."

The first plans designed after the war were very radical in their innovation like the so-called *Kollektivplan* presented by Hans Scharoun in 1946 (Fig. 2). He proposed a development that followed the valley of the river Spree, where the different functions of a town were separate and speedways connected the different quarters. A lot of greenery in between provided healthy surroundings. Only a few historic buildings along *Unter den Linden* from the Brandenburg Gate to the old palace would have been reminders of the past. Though a lively

public discussion followed Scharoun's plan and many other plans were proposed, the reconstruction of West Berlin did not start until 1949 when the Berlin blockade was over and West Berlin became part of the German Federal Republic using the same currency. But by then the two parts of Berlin were planning separately. In East Germany the state claimed most of the private property including real estate, so large-scale projects were planned and realised. At first East Berlin has been planned in the style of Scharoun's plan. But shortly after 1950 the architectural style of the Stalinist Soviet Union was adopted, and modern architecture banned as "formalistic and cosmopolitan", whereas the Stalinistic way to build was representative with neo-classical and national elements. The *Stalinallee* still represents this idea today (Fig. 3).

In West Berlin property and real estate remained private, so that the realisation of big building projects that would cover wide areas of the city was a lot more difficult than it was in the East. The influence the administration had was usually limited to traffic regulations. The few exceptions are the areas around Ernst-Reuter-Platz (Fig. 4) and the area surrounding the Zoo, which are the results of public competitions around 1955 and form ensembles of post-war architecture of the 1950s and 60s. The reconstruction of West Berlin on a large scale finally started after 1950 when the economy was recovering slightly, because the political circumstances allowed safe investments, and enormous subsidies were flowing in from West Germany and the Marshall Plan.

The building activity culminated after the middle of the decade with the 'economic miracle'. The most important influence on West Berlin post-war architecture was the International Building Exhibition (IBA) that opened in 1957. Its emphasis was on architecture and urban design for residential buildings, and a whole neighbourhood called *Hansaviertel* bordering central Tiergarten was rebuilt by famous international architects of the modern style. The modern architecture was understood as an immediate answer to the conservative building activity in the East, and enhanced West Berlin's programmatic role as a "window of the free world". With the attention of the world focused onto West Berlin, other private projects like the competition of the area surrounding the Zoo were realised; for instance the *Zentrum am Zoo* - the largest private building project in the 50s in West Berlin - was completed with the opening of the IBA in 1957 (Fig. 5). At the end of the decade the result of the first ten years of reconstruction was a surprising combination of the traditional urban design with closed blocks and modern ideas of "light, air and space". Despite the radical plans designed shortly after the war, the destruction led to a rather careful modernisation of the town. Most of the architects followed the contemporary principles of urban design within the plot. Wherever possible, they divided the building mass into a composition of high and low bodies emphasising important urban spots with high-rise buildings. But most of the projects reflect the neighbouring pre-war architecture by using the same height and in some cases the same façade material.

BUSINESS PREMISES OF THE 1950s IN WEST BERLIN

With West Berlin's role as a "window of the free world", the reconstruction predominantly followed modern ideas with only a few exceptions of conservative architecture that still resembled the monumental national-socialistic architecture (Fig. 6). Considering that most of the architects and building owners in the 1950s were the same as those working under the National Socialist party, they adjusted quickly to the moderate modern architecture.

Most of the few business buildings that were erected before 1950 in West Berlin present an architecture that demonstratively refers directly to the modern style of the 20s, picking up the thread that was cut during the administration of the National Socialist Party (Fig. 7). Where possible some were using the ruins of pre-war buildings, which in West Berlin usually consisted of masonry constructions. But as in earlier 1920s remodellings, these reconstructions avoided the traditional ornaments, proportions and reliefs of historicist façades such as windows in upright positions or oriels. The architects smoothed down the façades and opened the massive brick walls with steel girders, thus obtaining bigger windows and horizontal openings.

GRID FAÇADE

Almost all of the new business premises erected after the war used skeleton constructions in order to obtain flexible floor plans and plenty of natural lighting. While in the pre-war era steel was dominating the skeleton constructions, after the war steel was very expensive so that reinforced concrete took its place. Trying to express the character of the construction on the façades,

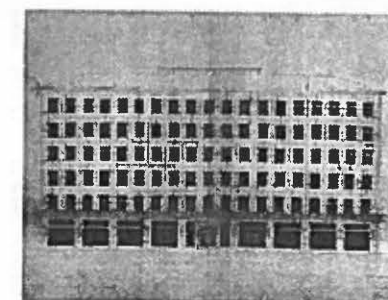


Fig. 6: Haus der Wirtschaft, 1952-53 by Kurt Enderlein, clearly related to representative architecture of the 1930s.



Fig. 7: Philips-Haus, 1948-49 by Werner Weber, directly referring to pre-war modern architecture.



Fig. 8: Bayer-Haus, 1951-52 by Hans Geber and Otto Risse. Typical grid façade with horizontal and vertical groins showing the skeleton construction of reinforced concrete.

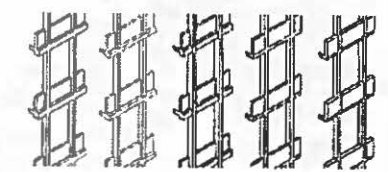


Fig. 9: Varieties of the grid façades.

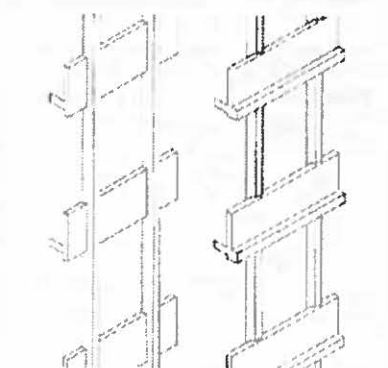


Fig. 10: Alternative skeleton façades. 'Verticalism' showing only the vertical groins. 'Horizontalism' showing only the horizontal groins.



Fig. 11: Industrie- und Handelskammer, 1954-55 by Franz Heinrich Sobotka and Gustav Müller. Representative architecture using verticalism and stone facing.

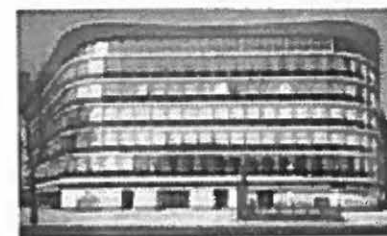


Fig. 12: Haus Hardenberg, 1955-56 by Paul Schwebes. Modern architecture using horizontalism and glass facing.



Fig. 13: Haus Königstadt (left), 1954-56 by Paul Schwebes and Hamburg-Mannheimer insurance (right), 1955-56 by Hans Geber and Otto Risse.



Fig. 14: Velisch-Haus, 1954-55 by Franz Heinrich Sobotka and Gustav Müller, façade showing an indistinct grid by altering the material and relief of the parapets.

architects in foreign European countries such as Otto Rudolf Salvisberg in Switzerland developed during the 30s and 40s a specific style along with the new skeleton constructions in reinforced concrete: the edges of the floors and the pillars were showing as horizontal and vertical bands forming a grid on the façade. An important forerunner of these "grid façades" (*Rasterfassade*) in the 1920s was the architect Max Taut, who designed the ADGB-Union building (*Allgemeiner Deutscher Gewerkschaftsbund*) in Berlin. Constructed in 1922-23 with a skeleton in reinforced concrete, the grid façade already represents the specific character of the monolithic structure and creates a unique aesthetic.

Even in Nazi Germany the development of modern architecture in foreign European countries during the 30s and 40s was present through specialist periodicals and literature. While Scandinavian architecture had a strong influence on the choice of materials and the Dutch were forerunners in modern town planning, grid façades spread over Swiss private office buildings in the 30s and 40s as described above.

Because the "radical" pre-war modern architecture was not accepted among the majority of the German people and was referred to as "cultural bolshevism", most of the post-war architects adapted the moderate modern architecture that had developed outside Germany. Especially the grid façades became very popular and dominated the commercial buildings erected in the first half of the 1950s (Fig. 8).

The grid façades appeared in numerous varieties: some emphasising the horizontal, others emphasising the vertical bands; some showing a close grid with pillars between every window and others showing a wide grid with groups of windows between the pillars (Fig. 9 and 10). The vertically structured façades were applied to more representative buildings with more conservative owners like banks or insurance companies (Fig. 11), whereas horizontally structured façades had a more modern appearance and were applied to department stores or companies with innovative images (Fig. 12). The art historian Winfried Nerdinger explains why the grid façades were also a kind of social compromise between tradition and modernity:

"The intensity with which the grid was applied as a universal organising principle from town planning to window details, shows a compulsion of order and anonymity as a compensation of the youngest past. The grid didn't create any historic references. Behind the anonymity of the grid everyone was equal."

Aside from the different accentuation of the grid façades, the choice of material offered another possibility to express either a more conservative, or modern attitude of the architect and owner. Wooden windows in combination with stone facings (mostly Travertine and lime stone), were read as traditional, whereas steel windows, exposed concrete and glass or ceramic facings appeared on consequently modern façades (Fig. 13). Bricks, as the traditional material for massive constructions, did not play a role as facing material on commercial buildings of the 50s in West Berlin. The tons of bricks that were gained from the ruins were reused to restore damaged masonry buildings, or were grinded and used as additions for concrete.

INDISTINCT GRID

Towards the middle of the decade, criticism of town-dominating grid façades increased, and some architects tried to avoid monotony by designing façades with a so-called "indistinct grid" (*Verwischter Raster*). The fields of the grid were shaped alternately in colour, material, size and/or position (Fig. 14). Especially the Berlin studio of Paul Schwebes and Hans Schoszberger, who along with the Berlin studio of Franz Heinrich Sobotka and Gustav Müller were the busiest architects in the private reconstruction of West Berlin, designed a variety of buildings with vivid grid façades following the example of Le Corbusier's exposed concrete architecture. The fields of the grid façades of the *Zentrum am Zoo* for instance had different sizes and steel window panels, which took up the full height between floors with opaque glass parapets of alternating colour. They were either even with the outline of the building or set back about a metre (Fig. 5).

CURTAIN WALL

The tendency around the middle of the decade to group the windows in a wide grid and shape window panels with full height between floors, shows the attempt to maximise the portion of glass and light, and to push back the quantity of vertical groins and massive parapets (Fig. 15). In some buildings, the pillars are set back at a distance behind the façade so that only the edges of the floors

break through the regular sequence of steel windows.

So the step towards a façade of steel frames and glass fillings, like a curtain covering the skeleton construction as a non-load-bearing exterior wall, without any elements of the construction visible, was very easy. In 1955 the first three curtain walls in Berlin were under construction clearly following the American examples developed by Mies van der Rohe and Skidmore Owings & Merrill. But the construction principles and details were very different among the early West Berlin curtain walls. The curtain wall of the Institute of Mining and Metallurgical Engineering of the Technical University completed in 1959 still clearly shows its origin in window construction, because it is an addition of standardised steel window frames whose joints are covered with sheet metal (Fig. 16). Contrary to this, the curtain wall of the KaDeWe-Passage also follows the American examples construction-wise: a system of aluminium panels of full height between floors with black spandrel glass, are joined together with the aluminium profiles fitting into one another (Fig. 17). These profiles were developed especially for the purpose of curtain walls and accelerated the mounting of the façade.

With the spreading of the curtain wall in the second half of the decade, lightweight materials like glass and sheet metal were favoured to save weight and therefore costs. While the earlier grid façades were monolithic constructions with the facing materials sticking to the underground in a bed of mortar, the curtain walls were mounted constructions that stimulated prefabrication. Over the years the curtain wall constructions were improved by maximising the size of the panels to speed up the mounting, and reducing the amount of joints to achieve better durability. A new era started when, towards the end of the decade, the floor plans of office buildings changed towards open-plan offices in combination with total air conditioning. In the following decades curtain walls were dominating façade constructions on office buildings, many of them without any openings for natural ventilation at all.

Although most of the valuable commercial buildings of the 1950s are classified as historical monuments today, we are facing an enormous loss of historic substance. One reason for this is the politically promoted concentration of building activity in the centre of Berlin favouring the historic pre-war town plan, others are a pressure to modernise, a change in the use of the buildings and last but not least, technical imperfection. On the one hand restorations often cause alterations due to the application of new techniques and materials and on the other hand reshaping that exceed necessary repairs lessen the documentary and architectural value. Buildings of that era react extraordinarily, and are sensitive to the smallest changes in detail (Fig. 18A and 18B).

While the protection of monuments offers possibilities to fight changes by law, technical imperfections are still unsolved. Special problems of conservation are usual, amongst them: poor heat and sound insulation of façade and windows, as well, defects in the façade's facing materials because of constructive faults or faults in the execution. Matching substitute materials for necessary repairs are no longer available most of the times, or can only be provided at great expense.

To help save the heritage of the 1950s architecture of the German reconstruction, my doctoral thesis 'The Façades of Business Premises of the 1950s: Problems of Conservation Using the Example of West Berlin' examines the original constructions and materials and their specific problems of conservation using as examples, fifty West Berlin commercial buildings. The thesis gathers several possibilities to solve these problems that were gained over the years by architects and curators working on monuments.

Windows with their large panels, delicate frames and typical kinds of winding or sliding leafs play an important role in 1950s architecture. That applies to the single windows in the grid façades of the early 50s, to ribbon windows and windows spanning from floor to floor, as well as to the curtain walls of the late 50s. Therefore window constructions and their specific problems are dealt with in a separate part of the thesis (Fig. 19).

The thesis shows that the majority of the technical problems of conservation can be solved today, thus, historical substance can be saved, if the owners and engineers involved are willing to create individual strategies for each building (Fig. 20). But it also shows the unsolved problems that require further research and attention as well as other factors that apart from the technical problems are threatening monuments of the reconstruction era. In most cases a careful restoration and good maintenance of a building is also cheaper than the total renewal of the façade, and more ingenious by means of long-term ecological planning.

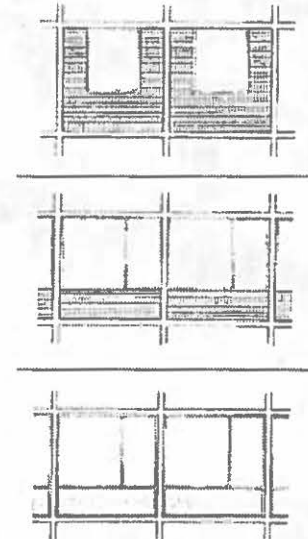


Fig. 15: Development of the grid façade towards an increased resolution of the wall.



Fig. 16: Institute of Mining and Metallurgical Engineering of the Technical University, 1955-59 by Wily Kreuer. The curtain wall is based on the standardized steel window construction.



Fig. 17: KaDeWe-Passage, 1955-56 by Hans Soll. The curtain wall is made of aluminium profiles specially designed for the use of curtain wall constructions.



Fig. 18A: Defaka Department Store, 1955-57 by Paul Schwebes.



Fig. 18B: Defaka Department Store in 1988 with a sample of a white plastic window, when the store was supposed to become an office building. Listing the building helped to avoid further changes to the façade.



Fig. 19: Haus d. Wirtschaft, 1952-53 by Kurt Enderlein (see Fig. 6). The original steel windows could be saved by adding an extra window on the inside.

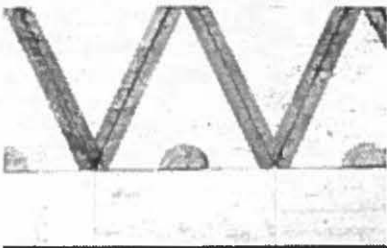


Fig. 20: Victoria-Arcal, Bilka Department Store, 1955-57 by Hanns Dustmann. The splendid stone facing could be saved by doweling every sheet of stone.

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2. The portion of destroyed dwellings in the rest of the Federal Republic amounted to about a fifth.
3. In 1943 in West-Berlin there were 979,227 dwellings and 2,854,400 inhabitants. In 1945 there were only 316,277 dwellings and 1,733,606 inhabitants left. In 1946 there were 893,288 households in 642,454 dwellings, of which a big portion was more or less damaged. In: *Berlin und seine Bauten. Teil IV - Wohnbauten. Band A Voraussetzungen. Die Entwicklung der Wohngebiete* (Berlin München Düsseldorf: Architekten- und Ingenieurverein zu Berlin, 1970), 28.
4. Rolf Schwedler, "Der Wiederaufbau in West Berlin", in: *Die unzerstörbare Stadt. Die raumpolitische Lage und Bedeutung Berlins* (Köln Berlin: Institut für Raumforschung Bonn, 1953), 180-189.
5. Rolf Schwedler, "Der Wiederaufbau in West Berlin", in: *Die unzerstörbare Stadt. Die raumpolitische Lage und Bedeutung Berlins* (Köln Berlin: Institut für Raumforschung Bonn, 1953), 183.
6. Karl Mahler, "Die Problematik der Berliner Bauleitplanung", in: *Die unzerstörbare Stadt. Die raumpolitische Lage und Bedeutung Berlins* (Köln Berlin: Institut für Raumforschung Bonn, 1953), 146.
7. For example the Bleicherhof in Zürich by Otto Rudolf Salvisberg (1939-40), in *Lexikon der Weltarchitektur* (München: Nikolaus Pevsner, Hugh Honour, John Fleming, 1992), 570.
8. Winfried Nerdinger, "Materialästhetik und Rasterbauweise", in: *Architektur und Städtebau der Fünfziger Jahre. Ergebnisse der Fachtagung in Hannover 1990*, edited by Schriftenreihe des Deutschen Nationalkomitees für Denkmalschutz, Bd. 41 (Bonn: Werner Durth, Niels Gutschow, 1990), 47.
9. The profiles for steel windows had been standardised for the different kinds of glazing and were produced in series laid down in the German standard sheet for construction (DIN).