

Schinkel's Order

Rationalist Tendencies in German Architecture

Germany can be viewed as the natural home of the Rationalist impulse. Two of Germany's most influential architects, Karl Friedrich Schinkel and Mies van der Rohe, have been admired the world over for their sense of tectonic order and purist form.

Werner Durth and Roland May trace a modern history of the tendency, which began with the early 20th-century rediscovery of Schinkel and has been continued to the present in the work of OM Ungers.



Defining Rationalism

Writing about the German Rationalist architecture of the last century is a difficult task. On the one hand the term 'Rationalismus', though rarely used in German architectural history, can be used for what internationally is referred to as Neorationalism. And on the other, until recently it has often been synonymous with Functionalism in referring to a short period in the first half of the 20th century.

Nevertheless, it should be emphasised that Rationalist tendencies can be found throughout the last century in German architecture. Consequently, the discussion here will assume two basic characterisations of Rationalist architects. The first is a profound belief in the meaningfulness of order in architecture. The second was given as early as 1923 by Adolf Behne in his book *Der moderne Zweckbau* (The Modern Functional Building), where he made a clear distinction between the Functionalist who 'wants what is absolutely fitting and unique for the particular case', and the Rationalist who aspires to build 'what is most fitting for general need, the norm'.¹

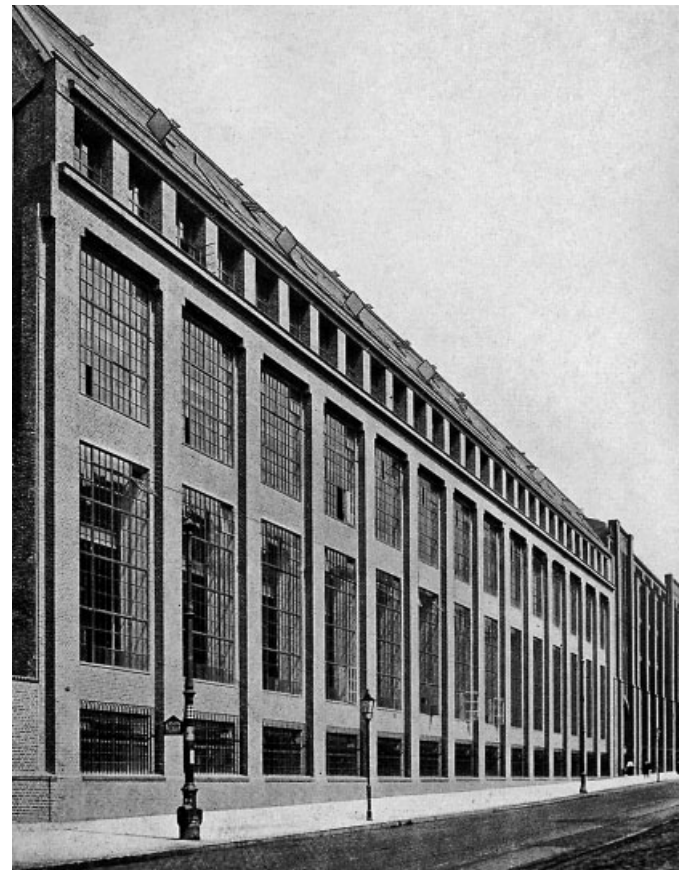
Schinkel: the Last Great Architect

Discussion of 'Rationalist traces' in German architecture cannot avoid the presence of Prussia's enlightening Karl Friedrich Schinkel, since the majority of the leading figures of both German Modernist Rationalism, and later Neorationalism, referred to his example. The origins for this retrospection in modern German architecture date back to the first decade of the 20th century. Many architects united in condemnation of eclecticism and Art Nouveau, which were seen as symbols for a fragmented and individualistic society identified with the rise of industrialisation. The search for a new purity and harmony tended to return (inevitably) back towards the period 'around 1800'² – a time that was increasingly seen as the last age of a harmonious society, and one that offered an unquestioned paradigm in the forthright persona of 'the last great architect', as Schinkel was described by Adolf Loos.

However, this view of Schinkel was myopic from the start. Scarcely anybody paid regard to the impulsive romantic who envisaged aspiring Gothic cathedrals, or the classicist concerned with the delicate ornamentation of his buildings. Rather, it was the reduced cubic forms of a 'Prussian' purity and order, emphasising structure and tectonic assembly like his Berlin masterpieces Neues Schauspielhaus (1818–21) and Altes Museum (1823–30), that attracted attention almost a century later. In particular his Bauakademie (1832–36), developed from a grid plan reminiscent of the mechanical Rationalism of JNL Durand, stood out as a model for the architecture to come.

Neoclassicism Revisited

The new Neoclassicism³ in German architecture around 1910 was undoubtedly centred in Berlin, with the precursor of



Peter Behrens, AEG factory for railroad materials, Berlin, 1912
Behrens' factory buildings for the AEG combined the legacy of Neoclassicism and the logic of engineering.

Modern architecture, Peter Behrens, as one of its main protagonists. Behrens' architecture owed much to Schinkel, especially in villas like Haus Wiegand in Berlin-Dahlem (1911/12). But he went much further. As co-founder of the Deutscher Werkbund, a liberal society that aimed to harmonise the relationship between art, crafts and industry, Behrens was also one of the first architects to draw on the rational world of the engineer for the renewal of architecture. His designs for office buildings and factories brought together both these 19th-century legacies and gave form to the paradigmatic challenge of building (*Baufaufgabe*) in the 20th century.

Behrens' work distinctly influenced two young architects who were working in his office during this dynamic period of change: Ludwig Mies van der Rohe and Walter Gropius. While Mies initially continued to follow the Neoclassical tradition, for example in the famous design for the Villa Kröller-Müller (1912/13), it was Gropius who had already in 1911 set a new benchmark with the Fagus Factory in Alfeld. This plain edifice not only showed the flexible combination of a skeleton frame structure with glazed curtain walls, but also emphasised an

Karl Friedrich Schinkel, Altes Museum, Berlin, 1830

Schinkel's masterpiece, strongly appreciated by Mies van der Rohe, was the perfect venue for the exhibition 'Mies in Berlin' in 2001/02.



Max Taut and Franz Hoffman, Trade Union Offices, Berlin, 1923

Despite some Expressionist elements, this office building is one of the first examples of German Rationalist architecture.

appreciation of technological beauty that would become essential for the further development of Rationalist architecture in Germany.

In the following years Gropius became the leading figure in an intense debate about the aesthetics of rationalised industrial structures realised by engineers. One of his most important supporters was Hermann Muthesius who played a key role in the first Werkbund exhibition at Cologne in 1914. While Gropius represented the 'new spirit' with a spectacular model factory (and office) building, Muthesius

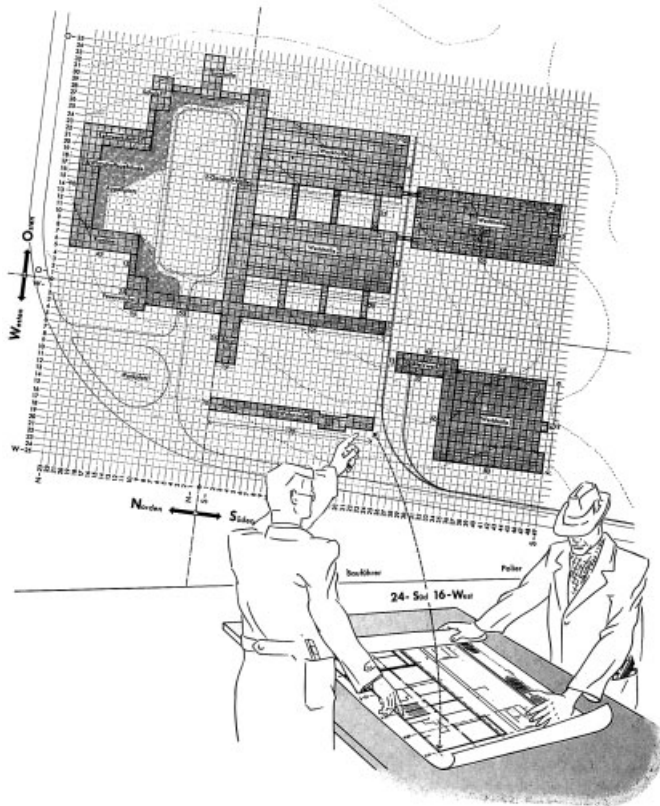
postulated that only by standardisation (*Typisierung*) may 'a prevailing, reliable taste ... find its way'.⁴ The outbreak of the First World War not only aborted the exhibition but also, temporarily, this discussion.

Sobriety and Standardisation

Shocked by the demonstration of the apocalyptic power of modern technology, in 1918 even Gropius reverted to peaceful, craft-orientated utopias that marked the short but intense phase of German Expressionist architecture. This

formal and material excess was soon balanced by the formation of the Neues Bauen – the origin of what would later conquer the world as the International Style. However, at first the outstandingly sober forms produced by Gropius, or, especially, Max Taut, in the competition for the Chicago Tribune building (1922) did not readily find international acceptance. Yet in the same year Taut started work on his Trade Union Offices in the heart of Berlin which – despite some Expressionist flourishes – expressed a standardised reinforced concrete structure in the stacked frames that constituted its facades.

Throughout the following years Taut clarified this building concept (which after 1945 had a considerable influence on German architecture) in a series of other projects. Gropius, after the relocation of his Bauhaus school from Weimar to Dessau, went even further. Beyond a rationally planned architecture he also aimed to rationalise building processes. His first experiments were with the Siedlung Dessau-Törten (1926–28). This strategy was immediately taken on board in Frankfurt where city planner Ernst May had already implemented an extensive housing programme. May's final and most consequential project, Siedlung Westhausen (1929–31), was begun in the same year that he hosted the



Ernst Neufert, Plan of an industrial plant based on the Industriebaumaß (IBA), 1943

Neufert's basic 2.5-metre (8.2-foot) grid, developed from his 'octametre' system of 1941, is still the norm for industrial buildings in Germany.

second CIAM congress identified with the minimum dwelling ('Die Wohnung für das Existenzminimum'). The colony's rigid layout on a rectangular schema, its optimised floor plans and utilisation of prefabricated slabs, tried to give answers both to social imperatives and to the question of urban order, making it one of the most important contemporary examples of German Rationalist architecture.

Mies took a clearly different approach. Even though he broke with the Neoclassicist style around 1921, his intent to express clarity and objectivity in his buildings remained consistent. The most significant determining factor was his idea of construction or, rather, the visualisation of construction through a coherent tectonic treatment of a building's constructive elements. In this respect Mies moved increasingly towards a conception of multifunctional space. Even if this trend is most visible in the works he designed after his emigration to the US, already buildings like his famous Barcelona Pavilion (1929) could no longer be called Functionalist architecture. Although this tendency led to several quarrels within the German Modern Movement, both the Modernist architects identified with a Rationalist approach and those more associated with Functionalism (such as Hans Scharoun or Hugo Häring) formed a mutual opposition to architects preoccupied with further developing a traditional or regional architecture. Consequently, the major success for the avant-garde was the jointly organised *Weißenhof Siedlung* erected in 1927 in the context of the Werkbund exhibition 'The Dwelling' ('Die Wohnung') in Stuttgart, where the most influential traditionalist architecture school was to be found.

Nonetheless, the traditional faction of Weimar Republic architects produced numerous buildings deserving a Rationalist label. Even conservative architects like Heinrich Tessenow or Paul Schmitthenner designed purist buildings identified with straightforward geometries and standardised plans. In fact, around 1930, Modernist avant-garde architecture was already judged by many critics to be exhausted, and they identified the future of architecture in the form of moderate Rationalist buildings like Hans Poelzig's IG Farben Offices in Frankfurt (1931).

Circumstances worsened for Rationalist architects in the following years of atavistic irrationality under a Nazi dictatorship that identified with megalomaniac interpretations of Schinkel's Neoclassicism for state public buildings. Nevertheless, less noticeably young Rationalists such as Egon Eiermann maintained a broad field of activity in industrial building. Ernst Neufert, a former employee of Gropius, could even publish his best-selling *Architects Data* (*Bauentwurfslehre*), the epitome of standardisation, shortly afterwards in 1938 adopted for the rationalisation of housing construction by Albert Speer. In fact, Neufert's wartime concept of the 'octametre' system that became the basic norm for the postwar building industry could be interpreted as the most radical Rationalist contribution to German architecture in the 20th century.



Ludwig Mies van der Rohe, Neue Nationalgalerie, Berlin, 1968

The venue for the comprehensive exhibition of OM Ungers' work late in 2006, Berlin's New National Gallery became the symbolic meeting point of two generations of German Rationalist architecture.

Rationalism in the New Germany

After the war, normative Modernist architecture, partly re-imported from the US, was further consolidated, at least in West Germany. 'Officially' uncontaminated by the Nazi regime, this sober Rationalism served as an adequate architecture for a war-torn country. As early as 1930, one of its most influential protagonists, Hans Schwippert, had assisted Rudolf Schwarz in designing the exceptional formal purity of his Corpus Christi Church in Aachen. Schwippert's plain Parliament building in Bonn (1949) was later to become a central symbol of the 'new' Germany, alluding (so it seemed) in its simplicity and transparency to both humility and a democratic spirit.

A similar vein of thinking characterised the German Pavilion designed for the 1958 World Expo in Brussels (by Egon Eiermann and Sep Ruf). Pursuing a Miesian language throughout his career, Eiermann became something of a custodian for the Modernist tradition in postwar Germany, since its most important precursors had emigrated during the Nazi period. Furthermore, like the late Mies he was working with a distinct Rationalist approach, emphasising not only a strict order and the refinement of elegantly reduced construction, but the necessity to work with variations of basic types.

However, it was Mies himself who built the emblematic statement of German Rationalism, the New National Gallery



OM Ungers, Friedrichstadt Passage Block 205, Berlin, 1996

After reunification, Ungers' Neorationalism became the dominant architectural style during the reconstruction of Berlin's Friedrichstadt.



Karl Friedrich Schinkel, Bauakademie, Berlin, 1836, destroyed 1961/62
Following the reconstruction of a small model facade in 2001, the erection of a complete demonstration facade in 2004 gave a new impetus to discussion about the reconstruction of the Bauakademie.

in Berlin (1968). Mies originally developed his idea of a vast glazed space under a single roof-plane in 1957 for a different purpose: the Bacardi Headquarters in Santiago de Cuba. The origin of the design revealed a strictly Rationalist approach towards a form of comprehensive objectivity. Indeed the building may be interpreted as the modern equivalent of Schinkel's Altes Museum – a building one 'could learn everything in architecture from' Mies claimed in a 1959 BBC radio interview.

Yet, the critics of this conception of Rationalist architecture became increasingly vocal. In fact, the countless gridded facades that shaped the face of German cities in the postwar period were one legacy of Rationalist architecture. Another were the vast and monotonous prefabricated housing estates in the GDR – established under the hugely influential former employee of Gropius, Richard Paulick – themselves also the logical consequence of Rationalist concepts.

It was Oswald Mathias Ungers who, since the mid-1960s, in parallel with Aldo Rossi, took a central role in criticising this banalised 'purpose Rationalism' (*Zweckrationalismus*). Surprisingly, in returning to basic forms both found the solution to their quest for a new significance in architecture. By revisiting Rationalism, now understood in relation to the historical legacy of form and the urban context, new starting points for design replaced the technological imperatives of the Modernists. Unsurprisingly, Ungers based a good part of his argumentation – as in his principle of the transformation of morphologies – on Schinkel. Nevertheless, it took considerable time for Ungers and his devotees to gain a significant influence on German architectural culture. Meanwhile he had increasingly replaced his initial

inspiration, the diversification of individual themes, with an academic examination of the square motif. Thus over the years Ungers produced buildings that in their accurate order and cold perfection demonstrated more the influence of his former Modernist teacher Eiermann than they revealed about the derivation of the architectural forms themselves.

While, especially in southwest Germany, transparent 'technoid' forms in the tradition of Mies and Eiermann continued their consistent development (despite prevailing criticism), it was again in Berlin that, from the mid-1970s, Ungers' colleague and friend Josef Paul Kleihues prepared the ground for an emergent Neorationalism. The breakthrough came with the International Building Exhibition (IBA) of 1984–87 directed by Kleihues. His leitmotif of a 'poetic Rationalism' influenced much development, especially the phase of 'critical reconstruction' of the city plan after reunification, when Berlin's building director Hans Stimmann enacted an official design code for the city centre. Certain architects, mainly pupils and former employees of Ungers, like Hans Kollhoff, Max Dudler or Christoph Mäckler, took this opportunity to produce intriguing contributions in the form of a new, severe, stone-faced architecture of the European city, finally breaking with the postwar doctrine of a transparent, 'democratic' architecture.

More recently, German architecture has not only shown once again that there is only a fine line between Rationalism and Neoclassicism, but also that it is only a short step from critical reconstruction to literal reconstruction. When in 1961/62 the government of the GDR tore down Schinkel's Bauakademie, many renowned Modernist Rationalists like Max Taut protested publicly against this philistine act. Predictably nearly all the prominent Rationalist architects of the 'second generation' are members of the Berlin International Academy of Architecture. This institution, founded in 2001, has a clear order: to reconstruct Schinkel's Bauakademie. ▽

Notes

1. A Behne, *Der moderne Zweckbau*, 1923, Ullstein (Berlin et al), 1964, p 59. Translated in *The Modern Functional Building*, Getty Research Institute (Santa Monica, CA), 1996, p 138. Behne's definition of Rationalism also played a key role in the important publication *Architettura Razionale*, M Scolari et al (eds), *Architettura Razionale*, Franco Angeli (Milan), 1973.
2. The movement 'Around 1800' owed its name to a highly influential publication by the architect Paul Mebes (P Mebes, *Um 1800*, Bruckmann, Munich, 1908).
3. Unlike that of most other countries, German architectural history refers to the architecture around 1800 as Classicism (*Klassizismus*), while Neoclassicism (*Neoklassizismus*) is exclusively used for 20th-century architecture.
4. H Muthesius, *Die Werkbundarbeit der Zukunft und Aussprache darüber [...]*, Diederichs (Jena), 1914, p 32. Translation by the authors.

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