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▼ IST DAMIT RÄUMLICHES BAUEN ZU ENDE?': HANS  
SCHWIPPERT, SEP RUF AND THE CULTURE OF BUILDING  
IN GERMAN MODERN ARCHITECTURE, 1949-59

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# **‘Ist damit räumliches Bauen zu Ende?’: Hans Schwippert, Sep Ruf and the Culture of Building in German Modern Architecture 1949-59**

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## *Abstract*

The transformations in West German architecture between 1949 and 1959 were fast-paced and comprehensive, its idiom moving away from the light, filigree style of the early post-war period towards the robust, material expression that characterized International High Modern Architecture from the mid-1950s onwards. Despite the pace and intensity of these changes, however, they cannot be ascribed to a singular rhetorical program or movement. Instead, they represent the interplay of architectural expression and building construction developments, both influenced strongly by contemporary American precedents exported to West Germany through official and popular channels. The work of Hans Schwippert and Sep Ruf, friends and professional affiliates throughout the period studied, offers important insights into the pathways these transformations took through rhetoric, construction, reception and architecture expression. In the years between their early affinities in the podium discussion and exhibition at the *Darmstädter Gespräch* of 1951, and their collaboration on the West German pavilion at the 1958, however, the two architects took divergent paths. Schwippert maintained fidelity in his built work to the immediate post-war idiom he had helped to foster in his 1951 podium comments, and to the bespoke construction from which it derived. Ruf, who in 1954 took control of the project for the American Consulate in Munich from Skidmore Owings and Merrill (SOM), moved quickly towards an idiom expressive of increasing West German building industry largess and one clearly aligned with the High Modern style pioneered by American architects including SOM. The comparison of these two architects' construction practices and architectural expression is underpinned by an analysis of three decisive documents, which describes the changing manner in which West Germany defined its self-image through architecture between 1949 and 1959.

Zwischen 1949 und 1959 hat sich die westdeutsche Architektur schnell und vollständig geändert – sich entfernend vom leichten, filigranen Stil der unmittelbaren Nachkriegszeit und sich annähernd zum robusten, material-intensiven Ausdruck, der sich mit dem internationalen ‚High Modernism‘ der späten 50er Jahre deckt. Trotz ihrer Geschwindigkeit und Intensität ist diese Veränderung nicht einem rhetorischen Programm zuzuschreiben. Sie ist eher das Ergebnis des Dialogs zwischen einem spezifischen architektonischen Ausdruck und der von amerikanischen Vorbildern stark beeinflussten Baukonstruktion, die sowohl über die Besatzungsmacht wie auch durch die stilrichtungsgebende Presse in Westdeutschland sich schnell Fuß fasste. Die Arbeiten von Hans Schwippert und Sep Ruf, die als Freunde und Kollegen während dieser Jahre stets in Kontakt waren, bieten wichtige Erkenntnisse für das Zusammenspiel von Rhetorik,

Konstruktion, Rezeption und architektonischem Ausdruck in diesem Wirkungsraum. Trotz ihrer frühen Affinitäten, sowohl in der Diskussion und in der Ausstellung bei der 1951 Darmstädter Gespräche wie auch in ihrer Zusammenarbeit am Pavillon der Bundesrepublik Deutschland für die 1958 Brüsseler Weltausstellung, gingen ihre Wege auseinander. Schwippert blieb in seiner Architektur dem Ausdruck treu, den er schon in Darmstädter Gesprächen definiert hatte und der einer maßgeschneiderten Konstruktion entsprang. Ruf, der 1954 die Bauausführung des amerikanischen Konsulats in München vom New Yorker Architekturbüro Skidmore Owings & Merrill (SOM) übernommen hatte, bewegte sich stattdessen schnell in Richtung einer Architektur, die die Stärken einer heranwachsenden westdeutschen Bauindustrie zur Schau stellte und die dadurch in die Reihe der von SOM und anderen amerikanischen Architekten propagierten ‚High Modernist‘-Architektur einzuordnen wäre. Der Vergleich dieser diskrepanten Haltungen wird durch fünf ausgewählten Bauten von Schwippert und Ruf erläutert und durch die Analyse von drei entscheidenden Dokumenten unterstützt, die die Transformation Westdeutschlands in Hinsicht auf der Bildung eines architektonischen Selbstverständnisses zwischen 1949 und 1959 deutlich macht.

## *Preface*

### **Initial Affinities**

The architectural trajectories of Sep Ruf and Hans Schwippert make for an unlikely comparison. Their ease with each other shows in the photographs in Schwippert's archive of the smoke filled room in which, in front of a site plan of the Brussels World's Fair, it is easy to imagine that the finer points of Ruf and Eiermann's authorship of the pavilion representing the young Bundesrepublik were developed.<sup>1</sup> Their intellectual commonalities are evident in the fact that they were the only architect participants of the 1951 *Darmstädter Gespräche* to return for the fourth *Gespräche* in 1953.<sup>2</sup> Whatever their personal affinities, it is their intellectual kinship that seems most unexpected. Schwippert, a pensive and theoretically inclined architectural thinker whose post-war production in architecture was balanced against his activities as an advocate for German design, seems temperamentally utterly different from Ruf, the decisive and prolific practitioner. Both architects were, however, deeply invested in the act of construction and its detailing. Their immediate post-war work was directly confronted by the material challenges, which mirrored the existential challenges of realizing sophisticated Modern construction amidst post-war shortages. The way in which they articulated the implications of those challenges is the initial affinity upon which this study builds: the second *Darmstädter Gespräche* marked one of the few occasions on which Ruf, prompted by Schwippert, discussed publicly his more abstract thinking about architecture as cultural enterprise.

For all their affinities, both professional and, apparently, interpersonal, the development of their built work in the relatively short period between the 1951 *Darmstädter Gespräche* and its accompanying exhibition and the two projects with which this study ends was increasingly divergent. The thinly-dimensioned window mullions, attenuated glazing proportions and simply stucco'd surfaces that both favored in the early fifties developed in Ruf's case to a far more robustly dimensioned palette of elements realized in a far greater variety of surface finishes. In contrast, Schwippert's St. Hedwig's Cathedral, a public building realized on the eastern side of the Berlin wall in 1963, retains much that had characterized his immediate post war work.

This shift in idiom is not unique to Ruf's work in this period; it bespeaks roughly a periodization of Modern architecture identifiable as 'fifties' as opposed to 'sixties'.<sup>3</sup> Ruf's particular case is compelling because it included direct interaction with the construction methods of the American

architecture firm Skidmore Owings and Merrill (SOM) in West Germany – a kind of ‘smoking gun’ for his turn to an International Modern style that could only otherwise be interpolated from manufacturers’ information, periodical publications and the built work itself.

Schwippert’s built work offers a counterpoint or baseline for comparison. Amidst the changes in building industry, construction products and even taste that occurred around him, he maintained the idiom with which he had launched his post-war career in the construction of the new Bundeshaus (1949). Bespoke, labor intensive, filigree – by the time the Hedwigskathedrale was being built, this manner of building had no place in the post-Wirtschaftswunder building economy of the Federal Republic. Schwippert’s interest in construction as a negotiation between the replicable and the bespoke, and as a dialogue between the identifiable part and the larger whole seemed well positioned in the context of material frugality and skilled, committed labor. His East German commission, planned from afar, is, like a LeWitt telephone painting *avant le lettre*, a work whose spatial remove also had a temporal aspect, returning Schwippert’s practice to the conditions like those he had known in the late 1940s.

Ruf’s deployment of construction registers the kind of tight control he had over his projects and their construction. Details drawn to millimeter precision, receipts for on-site labor checked and double-checked – these are the hallmarks of Ruf’s office. In light of this way of operating, the greater precision and control offered by collaborating with the building product industry was logical, offering a synchronicity between Ruf’s values and the tendencies of the post-war German construction business. Ruf’s changing architectural idiom, from the early bespoke construction solutions to a palette of building products developed especially for his projects, relate directly to the way in which it was realized. His prolific career would not have been the same without developments in the building construction environment, which allowed him to remain exacting while building numerous, sizable projects.

Both Ruf and Schwippert represent a moment in the architectural profession in which the architect retained significant authorship over all aspects of a building project, from conception to realization. This comprehensive role meant enormous responsibility and demanded a huge scope of knowledge. It also meant that no design was conceived without consideration of its construction. The purpose of reading carefully the texts, built works and drawings, which describe three specific moments in West German post-war architecture relative to these two

architects' careers is neither to heroize, nor to demonize. Instead, it is an approach to understanding why buildings look as they do by examining the process of their production, from the intellectual spirit in which they were imagined to the decisions about how to configure the juncture between wall and window.

This study is organized in sections, each comprising a chapter, which analyzes a single, emblematic text and two, which discuss particular building projects. By juxtaposing these two methods of identifying the architectural concerns of each chosen moment between 1949 and 1959, the goal is to propose both an intellectual climate and a practical context as motivation for the decisions these architects made. Each chapter can stand alone as a study of its immediate subject but taken together, they trace a narrative arc in which these two architects can be appreciated both for their specific contributions and for the paradigmatic way in which they represent two distinct approaches to defining the Modern architecture appropriate to the *Bundesrepublik Deutschland* in its initial decades.

## Introduction

### **'Ist damit räumliches Bauen zu Ende?': Hans Schwippert, Sep Ruf and the Culture of Building in German Modern Architecture 1949-59**

"Is spatial building in the sense of the kind of dwelling we need and desire thus at an end? In other words, is that spatial being which most precisely bespeaks our dwelling on the earth today tied to the materials of today, or is this *Wohnenwollen* so strong that it can form all simple materials, even all older forms of building – that it can penetrate them? Can our spatial form-giving occur, and truly occur, if we do not have the particular means of today?" Hans Schwippert, *Darmstädter Gespräche* 1951<sup>4</sup>

"Unfortunately it remained without influence. No answers were given to the questions it asked." Ulrich Conrads on the effect of the *Darmstädter Gespräche* of 1951 on German post-war architecture, in conversation with the author<sup>5</sup>

The question, which lends this study<sup>6</sup> its title is drawn from a text delivered by Hans Schwippert at the 1951 *Darmstädter Gespräche*, entitled 'The Human Being and Space'. The ideas Schwippert put forth, as quoted above, indicate a line of questioning whose relevance to the trajectory of post-war West German architecture deserves close attention, not least of all as a contribution to tempering the more common narrative which sees International High Modernism in West Germany as stylistic evidence of growing American cultural dominance, or 'Americanization'. While the American influence on the image of the post-war International Style, especially in a country sited at the center of the Cold War, is undeniable, the contribution of material culture to developments in Germany remains understudied, despite its capacity to explain changes in idiom and to assert the integrity of the architecture at stake. Schwippert's words indicate the desire to distinguish post-war German Modern architecture from pre-war culture; all that the war-weakened material culture of that era could muster was invested in actualizing this desire.

The major architectural protagonists in West Germany considered deeply their relationship to interwar-war and war-time German Modern architecture.<sup>7</sup> They were also highly aware of the way their expatriate colleagues in the United States had transplanted, if not 'naturalized', ideas and stylistic trajectories of German origin. Simultaneously, the task of rebuilding what had been, both before and during the war, one of the most highly industrialized economies in the world impacted, and is evidenced in, the material, technologies and economics of architectural construction. Schwippert's ambivalence about the relationship between material and meaning in



architecture is indicative of the need to reframe the question of style and stylistic influence in this period as a deeper, practice-based development.

His words reveal the extent to which problems of materiality both as fact of life and as tenet were central to the developing architectural idiom of post-war Germany. It is with regard to the problem of materiality that the 1951 *Gespräche*'s importance may be evident, despite its apparent ineffectualness at establishing a unique, recognizable Modernist idiom over the long term. For all his professed disappointment, Ulrich Conrads made no mistake about the importance of the *Gespräche*'s ambitions. In 1951, he was a young art historian recently returned from military service on the Russian front who attended the *Darmstädter Gespräche* as staff member of the *Werkbund*-sponsored journal *Baukunst und Werkform*. Some 45 years later, after a distinguished career in architectural journalism and publishing, the *Gespräche* remained for him a ready reference in any discussion of the cultural relationship between the "human being and space."<sup>8</sup>

This study will interpolate from the 1951 *Gespräche*'s ambitions, and the extent to which they were actualized and redirected in built work, to define the baseline from which to measure developments in the oeuvre of Hans Schwippert and Sep Ruf between 1949 and 1959. Two subsequent texts from 1953 and 1955 will provide intellectual and rhetorical benchmarks against which to consider their respective developments. Schwippert's direct interlocutor in the discussion of "spatial building" was Ruf, who by plan or by coincidence was scheduled to speak immediately after Schwippert's introduction. Ruf and Schwippert make an unconventional but revealing pair: the former, a charismatic practitioner and the latter, an articulate and savvy advocate for architecture and design whose own production took many forms besides that of building. From the moment of tangency in Darmstadt, their careers crossed on several occasions, and over time, the two architects' evolutions corresponded to those problems of material culture endemic to German architecture between 1949 and 1959. Perhaps their most significant collaboration was for the 1958 Brussels World's Fair German pavilion. They shared a deep investment in the act of construction and the responsibility of the architect down to the detail. This investment is reflected in the quality and extent of construction documentation their offices authored that has survived to the present.

The specific Modern architectural expression in which each architect chose to work, however, diverged markedly after 1951. The reasons for this divergence are not to be found in superficial stylistic imitation or ‘Americanization’, but rather, in two very different experiences with the enterprise of making architecture in Germany in the 1950s. Ruf’s prolific output and professional network put him in direct contact with changes motivated by post-war construction industry retooling. Schwippert’s more academic and selective practice was intimately bound to his work as president of the German Werkbund and his identification with product and environmental design. The lack of “influence” which Conrads lamented begs redefinition in order to do justice to the stylistic integrity of the architecture produced, and to the extent to which building construction, as practiced thoughtfully and skillfully by Schwippert and Ruf, influenced the architectural expression of their mature works.

Schwippert’s words expose the myriad difficulties confronting the practice of Modern architecture in the late 1940s and early 50s, when the “particular means of today” were simply hard to come by. These words are, however, no less an attempt to distill to a *sine qua non* the preconditions of any architecture, if it is to be meaningful. In his brief presentation, Schwippert shifts the value of architecture away from expression achieved by means of material tectonics towards a spatial ethics. The questions he raises reflected both the larger conceptual topic at hand and the problems of architectural expression with which practicing architects dealt every day. Architecture’s location in the production streams and representational aspects of material culture offers the potential to broach these questions by looking at the practices which translated architects’ larger philosophical considerations into the built environment of everyday life.

Schwippert’s questions also map a shift from an earlier Modernist position, one that heralded an heroic, causal relationship between the will of an era, its material and its expression to a more loosely associated constellation of meaning, space and material in which hierarchies are more dynamic. This latter, more interrogatory position was at least distinct from, if not in opposition to, the kind of Modern architecture and rhetoric emerging from the United States as victor nation in the late 1940s and 1950s, avid to export its democratically-connoted architectural minions abroad. It was not lost on the German architects who remained at home that some of the most vocal protagonists were their former compatriots, most notably Walter Gropius. Gropius’ position at Harvard University and as an expert advisor to the US Department of State on German reconstruction offered him myriad opportunities, including a 1948 visit to Germany on behalf of

General Lucius Clay, to expound his own version of Modern architecture's trajectory. The very great importance for both German-American and German protagonists of the struggle for the birthrights to Modern architecture was publicly exposed in 1953, during the so-called Bauhaus Debate, initially between Gropius and Rudolf Schwarz but later implicating a whole cadre of others.

By the early 1950s, mainstream history writing – not least of all that of Gropius' Harvard colleague Sigfried Giedion<sup>9</sup> – had already positioned the Gropius Bauhaus at the epicenter of Modern architecture's inception; by virtue of Gropius' emigration and the installation of many important Bauhaus professors in American universities, the United States' ascendancy in Modern architecture's development from its Bauhaus beginnings seemed assured. American-sponsored German language newspapers in West Germany published articles, many by expatriate German journalists and art historians that reinforced this historiography.<sup>10</sup> Adapted from the rhetoric of early Modernism, the putative bond between an era and its art, and an era and its technical means, became the grounds for the heroic tone, which later characterized Gropius' writing on "democratic" architecture.<sup>11</sup> The aspirational manifest destiny of America's technical prowess, political sway and artistic expression in architecture is the ever-present background to the considerations at stake in this study.

Nonetheless, the intention here is to resist a discourse that pits 'German' against 'Americanized' Modern architecture and thus marginalizes lesser-known German architects as it cedes 'victory' to an homogenized 'High Modernism'. Some studies of European architecture in the initial post-war era have focused on the opposed trends of Americanization in the form of International Modernism and a shift towards local romantic vernacularism.<sup>12</sup> Germany's Third Reich architectural legacy had, at least on the surface, eliminated the resistant potential of an idealized vernacular. The fact that the proponents of Americanized Modern Architecture in West Germany were themselves expatriate Germans complicated the relationship. But it is incorrect to cast the period between the establishment of Bonn as West Germany's capital in May of 1948 and the moment when Germans had regained their pre-war standard of living in early 1958<sup>13</sup> as an intentional surrender of the architectural ideals posited at Darmstadt. Influence couched in material culture is much more complex.

Enormous art historical and historiographic intelligence has addressed the philosophical and theoretical bases upon which the assertions associated with the dominant post-war American discourse of 'Modern Architecture' draw. It has effectively mapped the greater and lesser degrees of differentiation and subtlety in the various discourses into which these premises were absorbed. There is also much evidence of the ways that the construction materials and methods of early Modern buildings frequently diverged from the canonical expression attributed to them: the Einstein tower as an embodiment of space-time seems at odds with its brick and stucco construction; the essentially low-tech hay bale walls of the Pavilion de L'Esprit Nouveau were never part of Le Corbusier's narrative. Rather than undermining the integrity of these works, however, such discrepancies appeal to a contemporary desire for a more complex reading of that period's architecture than does the monolithic Modernism, which dominated textbooks for so long. To what extent can philosophical and material interrogations be cross-referenced? The questions raised by the three texts considered in the opening chapters of each of this study's three sections offer the opportunity to explore the relationship between the intellectual and material aspects of the Modern architecture project as it developed in the Federal Republic in the decade between 1949 and 59.

Seen as evidence within a larger system of knowledge transfer that includes both architect-to-architect communications and the full cycle of building construction, the visible stylistic changes in German architecture from the late 1940s to the late 50s can effectively be tracked materially. This mode of reading construction details relies on techniques borrowed from other scholarly disciplines, most prominently archeology, history of design and construction history. The intent is to decode the reciprocity between the architectural expression scripted by the architect and the practice of building. The enscripted ideas are not only authorial; they reflect the state-of-the-art in products available and manufacturing techniques favored. While assuming that 'architect' has to be used as a collective noun, the study of detailing practice in the service of understanding the struggle for the lineage of Modern architecture – as it played out between the German-American and German architects embroiled in rhetorical exchanges, and within internal discourse among German Modern architects attempting to reorient their belief systems after the War – relies on the concept of distributed authorship.

Even in its most accelerated moments, of which the period at stake here provides some wonderful examples, architecture is not a fast or agile genre. The mobilization of capital, material

and labor needed for its realization is enormous; its technologies of communication and realization are specialized and difficult to coordinate. To frame architecture as the expression of an era becomes increasingly difficult as the rates at which change occurs in industry and society overtake the rate at which architecture moves from ideation to completion. The immediate post-war period in West Germany is one of the few moments in which the interplay between these discrepant rates of change is revealed in architectural expression. Industrially-based building supply companies leveraged post-war rebuilding efforts as an opportunity to regain the very high levels of precision manufacturing they had enjoyed before (and in many cases, during) the war. The concessions they were willing to make in the late 1940s or early 50s to realize architectural details as bespoke, architect-dictated constructions with little relation to economies of scale evidence a climate in which architectural expression was more fully in the hands of the designing, construction-literate architect. Over time, however, as will be argued in subsequent chapters, business models aspired to economies of scale. This in turn dictated more systemic, reproducible approaches towards detailing, especially in façade construction and interior finishes. This change in manufacturing and product development accompanied shifts in West German postwar architectural expression. It is unimportant whether stylistic or manufacturing priorities first motivated those shifts. The fact of their reciprocity in this period is unequivocal and requires more elaboration than has been accorded it in architecture historical literature to date. It is the subject of much of what follows, and central to the way in which architecture as building and as discourse will be cross-referenced.

By the time Germany had begun its mobilization for war in the 1930s, construction technologies had more than accommodated the desire for Modernist expression in architecture. Two handbooks on windows and doors by Adolf Schneck, from 1932 and 1933 respectively,<sup>14</sup> for example, attest to the sophistication of the hardware available, and the large number of fabricators. They document the fact that proprietary hardware for every conceivable motion, size and configuration of door, gate or window was available. The images in the handbooks describe the extent to which still-famous and now lesser-known architects availed themselves.

After the war, when German industry was faced with rebuilding from 'year zero', the know-how in machining that had produced the technical efflorescence of the 1920s and 30s in the building trades actively sought market opportunities.<sup>15</sup> Collaboration with architects, who wished to realize Modern-looking buildings despite the dearth of available products and components, was

an ideal outlet for this ingenuity. The survival and success rate of companies involved in significant early post-war projects is remarkable.<sup>16</sup> This evidence of business savvy speaks again to the potentials of Modern architecture in the late 1940s and 1950s not only as a stylistic choice, but also, as a business model. Construction drawings, catalogues and advertisements provide evidence of this.

The symbiosis between Modern architecture and contemporary advances in business management and industrial fabrication was not unique to West Germany. The trajectory of curtain wall fabrication from bespoke to systematic as it occurred in Germany after 1949 resembles the same trend in the US, if under completely different economic and socio-cultural conditions. American architects and builders benefited from an expanded wartime industrial base and a victorious war campaign. Their more accelerated rate of optimization in the building industry could therefore provide an example to follow. American architects working in Germany, accustomed to designing for a culture already firmly embedded in economies of scale, would have placed demands on their German associate architects and suppliers which, as American models were understood and taken up, translated into a different, more American-like way of operating. In this way, American architectural developments could impact the kind of products and production methods ultimately available to architects. Given the competitive, transforming environment of the West German post-war construction industry, practitioners working on American-designed projects in Germany, sponsored under the US High Command's Consular and America House program, had insight into an alternate business culture, that of US postwar production. In this study, Skidmore Owings and Merrill is treated both as a proxy for American developments in construction and architecture during the late 1940s and 50s, and as a specific player in Ruf's career. The extent to which his idiom shifted after his commission for the US consulate in Munich, a project he assumed after SOM had been fired, is more than obvious. Otto Apel, the architect who served as liaison between SOM and German building practice, is vital to this story, too, because he collaborated more or less simultaneously with SOM and Ruf.

Direct evidence of knowledge transfer is not easy to find, since much documentation in the form of shop drawings or tooling protocols was not considered worthy of preservation and has not survived. But inferences drawn from architectural detailing and construction documents, including correspondence, and from product catalogues and advertisements are valuable in estimating how this knowledge transfer may well have operated. Although not often

foregrounded, the kinds of products and production methods available to architects, is an undeniable contributing factor in architectural expression.



Left: Sep Ruf, Academy of Art in Nuremberg, 2011. Photo by author

Right: Hans Schwippert, *Bundeshaus* view from terrace to plenary. *Architekturmuseum TUM*

The buildings discussed here were completed between 1949-1959. They are all public buildings, so that the representative character of their Modernist language was, and is, significant. This is particularly true of the first case study, the 1949 planning and building of the *Bundeshaus* in Bonn by Hans Schwippert. Built only slightly thereafter, the *Akademie der Künste* in Nuremberg by Sep Ruf (1950-54) offers detailed insight into the material culture of early 1950s Modern architectural construction in Germany. The two buildings represent both architects' idioms at the time of their interactions at the *Darmstädter Gespräche*; they also both epitomize the lightness and openness, the "space of light and encounter,"<sup>17</sup> which Schwippert had ascribed to his building in the text included in the accompanying 1951 Darmstadt exhibition. These buildings benchmark construction practice relative to modern architectural expression in the early moments of the German Republic.



Sep Ruf, American Consulate, Munich. *Stadtarchiv Munich*

The completion of the *Akademie der Künste* overlaps with the next phase of architectural production at stake in this study. During the mid-1950s, Ruf and Schwippert maintained their contact, both attending ‘The Individual and the Organization’, the *Darmstädter Gespräche* of 1953, the only architects among the many who had participated in the 1951 event to attend that year. Their professional paths diverged, with Ruf’s prolific career gaining momentum while Schwippert dedicated more energy to his presidency of the Werkbund than to a high-volume building practice. By the time the two men collaborated again formally on the site plan and building of the German pavilion at the Brussels World’s Fair of 1958, Ruf’s idiom had shifted towards the expression for which he later became known. The chapters that set the stage for and describe Ruf’s American General Consulate in Munich (1956-59) will argue for the ways in which Ruf experienced the shift away from a trades-based to a products-based building industry during the time he worked for the American Office of Foreign Buildings. This shift and the changes it accompanied in the way that building components were conceived, dimensioned and fabricated is central to understanding the material culture underpinning to the so-called ‘Miesian’ turn of the very well-received German pavilion designed by Ruf in collaboration with Egon Eiermann.





Left: Sep Ruf, College of Public Administration, Speyer. [www.br.de](http://www.br.de)  
Right: Hans Schwippert, St. Hedwig Cathedral, Berlin. *DKA NL Schwippert*

The last chapters will discuss comparatively two mature buildings by Ruf and Schwippert, to bring full circle the comparisons with which the study began: Ruf's *Hochschule für Verwaltungswissenschaften* in Speyer (1957-60) and Schwippert's St. Hedwig's Cathedral in East Berlin (1956-63). Considered from a material culture perspective, these last two buildings offer fascinating case studies of the ways in which the two architects understood construction, along a spectrum from the bespoke to the systematic, amidst the two German cultures' very different material conditions.

## **Sep Ruf**

An excellent and tireless practitioner, Ruf built numerous, architecturally significant buildings of all types during his post-war career. He is singular in Bavaria, a region of more traditional tastes, for having achieved such a prolific body of work without compromising his stylistic fidelity to Modern architecture. Ruf's daughters, one of whom worked in his office, have maintained his office archives in nearly untouched condition. The archives include original working drawings in versions from initial sketches to approved shop drawings. Project correspondence, time sheets, reclamations and specifications are also accessible, and selected product brochures have also survived. The generosity of Elisabeth and Notburga Ruf in sharing their archive was invaluable to the methodological and analytical premises of this study. Of particular interest is the nature of his contact with American architects building in Germany during the 1950s. Skidmore Owings and Merrill, the US firm responsible for the four other consulates built in Germany under the Consular and Amerika Haus program, is the relevant point of contact, especially the office that SOM oversaw in Bad Goedesberg. To contextualize the tendencies identified in Ruf's Speyer building,

SOM's reception in Germany, which occurred through professional publications as well as personal interaction with architects and builders, will also be reviewed.

The quality of Ruf's work, its architectural expression and the availability of vital project documents are in themselves compelling reasons to look to Ruf in considering the way in which German Modern architecture developed during the 1950s. As a way of deciphering stylistic shifts in the German Modernism of that period relative to the kind of Modern architecture exported (or re-imported) from the US, Ruf's work is an unparalleled control: his contact to American architecture was actually quite circumscribed. Ruf did not subscribe to any American architectural publications<sup>18</sup>, nor was he in regular correspondence with German émigré architects in the US before 1963, when he sought out and met Mies during a three-week trip to the US.

Ruf's contact with American culture occurred in a completely different context. The Tegern valley, where the Ruf family lived, capitulated to the advancing American troops without bloodshed. The Rufs' experience of the American take-over is the subject of family anecdotes. General Patton, Ruf's daughters recall, requisitioned the Ruf home as an officers' club; he arrived as their mother was cleaning chicken droppings off the floor beneath a table, so that she could recognize who her visitor was only by his shoes and trousers. Before handing the building over, Ruf removed the floorboards to protect them from wear from the officers' heavy-soled boots. The family's contact with the occupying American army was cordial, and the family continues to celebrate American Thanksgiving many years thereafter.<sup>19</sup>

The wealth of documentation in the Ruf family archive is an exception, however, in tracking the interplay of architecture and construction in the exchange between American and German traditions in Bad Goedesberg. The remnants of Otto Apel's archive, mostly from his successor firm ABB, include nothing from his work with SOM for the HICOG or the realized projects designed as competition entries with Ruf.<sup>20</sup> Apparently, security dictated that all drawings made for American buildings in Germany were to remain in the possession of the HICOG, not the architects of record. HICOG's record keeping was centralized and meticulous, a fact which ultimately proved to be to the disadvantage of architectural historians. Until the US embassy in Bonn was closed, the records were kept in the Consulting Engineers Office. Harald Nethe, the architect who had oversight of the archive in its last permutation, described its fate:

“As long as the American Embassy was in Bonn (where I still live) it had what was called the Consulting Engineers Office. When I started working for that office (1984), Richard Neumann was the (German) boss. ...

What I will now tell you will bring tears to your eyes. When Bonn was closed down, the question was what was to become of the drawings in the archive? Since I was being transferred to Frankfurt, I took the Frankfurt plans with me. The plans of Bonn and anything else we had were to remain where they were. We left them in our office and closed the door. I’m sure the new owner threw them all away.”<sup>21</sup>

Loss of material evidence is not unusual for any historical enterprise, of course. Construction documents, specifications, catalogues and other records related to the realization of buildings are, however, particularly susceptible because of the way they are perceived. For their authors, their value ends when the information they communicate has culminated in the accurate realization of the built work. Once the statute of limitations on architect, builder or manufacturer liability expires, there is little reason to keep them. They are not, as design development or presentation overview drawings are, seen as intrinsically valuable or of art historical interest. Changes in art and architectural historical methodology can eventually affect this perception. Nonetheless, the time needed for the detritus of a finished project to become a bearer of cultural significance is long, perhaps longer than an architecture office’s patience with the by-products of its own production.

### **Hans Schwippert**

Schwippert’s archives are as prodigious as Ruf’s, including material from years of architectural and design practice, teaching, writing and orchestration. His copious collection of newspaper clippings and letters reveal the intrigue and politics which make up the intensive *Rezeptionsgeschichte* of the Bundeshaus; preserved candid group photos of Ruf, Eiermann and Schwippert seated at a round table in front of the Brussels’ World’s Fair site plan have the fashion flare and cigarette smoke of an early Bond film.<sup>22</sup> Schwippert’s ability to navigate volatile situations seems, to judge from his correspondence, to have come through insistence rather than diplomacy, at least in comparison to Ruf. A much less prolific builder, his influence came as the first Head of the German Werkbund (1950-63) and as leader in pedagogic and theoretical discourse within the culture of everyday life as the Wirtschaftswunder increasingly gained force.

Schwippert's own practice speaks to a particular version of architecture as part of a larger design culture, actively involving product design, lighting design, interior architecture, architecture and exhibitions. Although this kind of all-encompassing environmental practice was not uncommon in the post-war period, as the examples of Ruf and SOM described elsewhere in this study attest, Schwippert's approach, which accepted the variations implicit in distributed authorship as part of his design process, is different. The chapters on the *Bundeshaus* and the St. Hedwig's Cathedral will describe this approach in specific terms. In Schwippert's case, too, the ground-up design of furniture, hardware, lighting and architectural environment allows reflection both on the material limitations in which both projects were realized and on his practical relationship to the industrially produced designs he championed via the Werkbund.

Questions of 'influence' as already described relative to Ruf's architectural idiom are no less relevant to Schwippert who, as a close colleague of Rudolf Schwarz's, would have at least known, if not shared, Schwarz's position on the problems of re-importing Bauhaus ideology (or even worse, protagonists) after the War, an issue addressed at length in the second section of this study. Schwippert's goal as Werkbund president included the re-definition of a German idiom capable of recognizing the complex historical moment at which he assumed leadership. The positive reception of the Brussels pavilion as appropriate to the new German republic speaks to the image that Schwippert cultivated.

The circumstances under which the St. Hedwig Cathedral was realized offer a marked counterpoint both to Schwippert's earlier *Bundeshaus* and to Ruf's contemporaneous college in Speyer. The *Bundeshaus*, although realized with unheard-of speed in a time of material scarcity, was backed by the full force of the new Federal Republic and its recovering industry. The Speyer college was seen as an important project for the Republic as well, as it took on the training of a new cadre of bureaucrats. In both cases, architectural design represented a new post-war German culture balancing modesty against the assertion of self-governance. As much as the expression of these two buildings differs, they both represent cultural dominants. St. Hedwig, the Catholic cathedral in traditionally Protestant (if historically religiously tolerant) Berlin, now the capital of the German People's Republic, was not party to the same cultural or financial support. Realized at a distance by an architect otherwise deeply invested in the materialization of his work, the cathedral is a fascinating document of building construction-based ingenuity. Its extended construction time bespeaks the difficulties involved in its completion. Nonetheless, or

perhaps because of its limited means, the building is useful in gauging the distance traveled by Ruf and Schwippert from the moment of their architectural tangency in the exhibition that accompanied the *Darmstädter Gespräche*. To read St. Hedwig relative to the ideas about material, spirit and expression that Schwippert had phrased more than ten years before its completion is plausible: the cathedral's radically transformed spatial structure and modest material presence can also be read as a direct response to the answers central questions Ruf raised in the aftermath of the war.

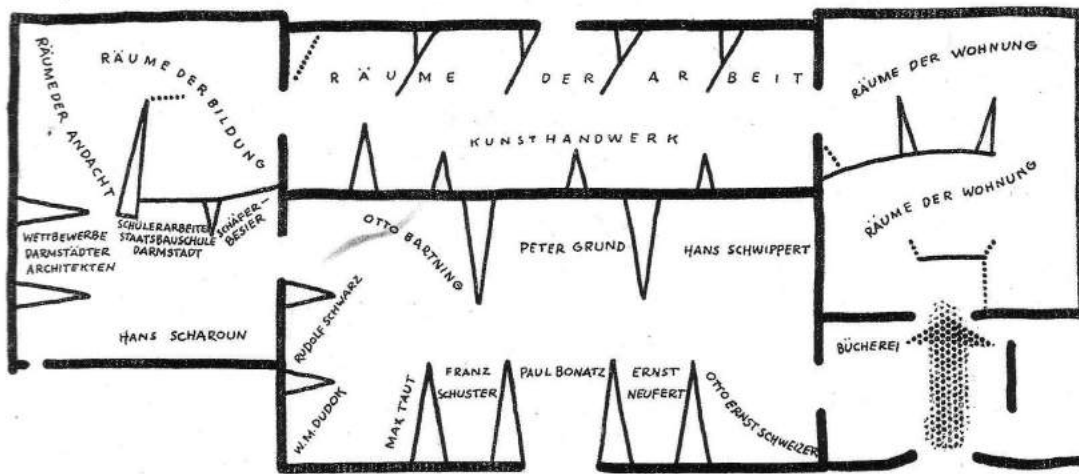
### **Concluding Thoughts**

Within the limitations of evidence available to a material culture approach, this study hopes to offer an inflected, careful reading of particular stylistic developments in German Modern architecture 1949-59 by considering their rhetorical, material and authorial contexts. In order to argue for the interaction among these factors, it will engage a relatively large scope of material and therefore will of necessity omit or exclude other information that belongs to a definitive account of this era. Nonetheless, the ambition is to introduce into the ongoing research on the period material not previously accounted for and to contribute to the growing body of significant study on this volatile, productive moment. A reconsideration of developments that might otherwise be read in opposition or acquiescence to an 'Americanizing' influence carried by the image of High Modern architecture can be enriched and complexified by considering the material culture pressures always present in the act of realizing architecture.

## Chapter 1

### Zeitgeist, Technology, Space: The *Darmstädter Gespräche* of 1951

For three long and very hot August days in 1951, a packed hall and extensive live radio audience sat patiently, listening, despite the poor acoustics,<sup>23</sup> to a “conversation” staged in the Hessian court city of Darmstadt on the topic of the “human being and space,” *Mensch und Raum*. The conversation – not symposium or conference by name – was in part a celebration of the fiftieth anniversary of the *Mathildenhöhe* artists’ colony. It was also the second in a series of “conversations” intended to reestablish Darmstadt as a center of culture following the complete destruction of its economic and social base in the war.<sup>24</sup> Most intriguing was, as the title implied, the intention to redefine ‘space’ as the existential basis for cultural production.



Gallery plan for the exhibition at the 1951 *Darmstädter Gespräch*. Bender et al., *Architektur der Fünfziger Jahre: die Darmstädter Meisterbauten* 1998, p.5

The event was planned with purposive symmetry between past and future. On the one hand, as witness to the cultural continuity between 1901 and 51, an exhibition described the architectural pre-history of current discourse and practice. Shown in the last room of the exhibition halls, on the other hand, were the *Meisterbauten*, drawings and models of eleven public buildings to be

realized in Darmstadt by those architects chosen to represent the best of what could be achieved in 1951. Acting as the fulcrum between past and future was the three-day discussion. In many ways, the ambitions of the event far exceeded its actual effect, despite the fact that many of the most prolific and publicly visible German architects and professors of architecture of the period were present. Among those in attendance, for example, was Ulrich Conrads, later the highly influential editor-in-chief of the magazine *Bauwelt* and beginning in 1952 an editor under Alfons Leidl of the magazine *Baukunst und Werkform*, which gave the event its best coverage. His assessment, that the debate had little influence on the course of West German architectural history, is consistent with the historical reception of the event: empathy and admiration for its content, and dismissal of it as an influence on the architecture of post-war Germany.<sup>25</sup>

The reasons behind Conrad's dismissal, perhaps justified by the fact that the event's near-disappearance from most accounts of post-war architectural history,<sup>26</sup> certainly support speculation. The drama in 1951 was not as high as it had been at the 'conversation' of the preceding year, which had culminated in acrimony about the status of representational art in an exchange between Willi Baumeister and Hans Seydlmeyer over the "image of the human being in our time."<sup>27</sup> Despite the pivotal position of Germany between East and West,<sup>28</sup> a geopolitical locus whose propagandistic architectural and cultural potential was lost on no one, the US occupying agencies did little more than send an observer.<sup>29</sup> It also attracted almost no attention in the international architectural press of the time, although it was covered more widely, if not extensively, by the German architectural media.<sup>30</sup> Perhaps it was the conversation's conceptual focus that was to blame for its marginality: as one of the audience respondents said, "we are discussing philosophical concepts while outside, there are burning problems."<sup>31</sup> Nonetheless, as a means to assess the intellectual impact of wartime experience on the proponents of Modern German architecture and to gauge the concerns of this one prominent cross-section of the

architectural community, it is an invaluable resource. Of the many aspects of the *Gespräche* that could productively be considered, two will be studied here. The first is the way in which the conceptual legacy of early Modernist architecture was recast; and the second, the reframing of the constituent impulses from which an ethics of Modern architecture would arise. In 1951 and in this context, architecture was understood as a significant contributor to the method through which a new, ethical nation would be cultivated.

### **The Need to Reclaim ‘Modern Architecture’**

In contrast to the more homogeneous Modernism that was then emerging around a tidy ‘International Style’ as articulated by the German expatriate masters who had taken over prominent positions in the US, the speakers and respondents reflected their awareness of changed historical contingencies by employing complex and ambiguous constructs to describe their architectural interests. The debate on the Bauhaus heritage and its legitimacy with which several of the *Gespräche*’s major figures were concerned two years later brought this essential conflict to a head.<sup>32</sup> Such foundational Modernist concepts as the inherent unity of architectural means, historical imperative, technological determinism and spatial expression played quite differently in a defeated Germany than in the victor nation. This fact was implicit in the preamble to the 1951 *Gespräche*, posted as an introduction at the entrance to the exhibition. It denotes a shift to the attribution of a metaphysical grounding to architecture as a “fundamental” human activity, expressed in the construction of space:

“Building is a fundamental activity of the human being – The human being builds by structuring spatial constructs and thus forming space – Building corresponds to the essence of our time – Our time is the time of technology – The exigency of our time is homelessness.”<sup>33</sup>

On the surface, this statement seems only a slight departure from standard Modernist rhetoric, coupling to one another architectural expression, the historical moment and technology. The



hierarchy among these factors is worth considering more closely. The statement implies that it is not technology, which drives architecture as cultural expression but rather, space as the product of the human's fundamental activity. Space is in turn not an expression of an era's particular character through the determinate of progress, but instead, is existential, the product of a fundamental human activity. Finally, the confluence of this basic human activity and the needs of the time is a fact with which to confront the problem of homelessness. It was a figure which described literally the state of the country after the war, but also evoked a central *Leitmotiv* of German Romanticism which had re-entered literary and philosophical discourse in the 1920s: Novalis' "tranzendentalle Obdachlosigkeit" as appropriated by Georg Lukács.<sup>34</sup> Homelessness was both a physical and a philosophical condition.

By 1951, architecture could begin to envision a transition from the urgency of the *Luftkrieg* cityscape to the imminent *Wirtschaftswunder* of the 1950s. This sense of impending, if not ongoing, transformation was not limited to the physical environment: as denazification was replaced by an atmosphere of normalcy, many architects and planners felt increasingly the need to distinguish between their own 'resistance' and the 'compliance' of others. These public confrontations between the two primary camps of architects active in post-war reconstruction appeared in the pages of the magazine *Baukunst und Werkform*.<sup>35</sup> Those who actively tried to separate themselves from the prevailing architectural culture in the Third Reich openly challenged those who tactically said little about their activities in the 1930s and 40s. The war as well as emigration had greatly reduced the cadre of qualified architects and planners in Germany. Despite attempts to convince expatriate German architects to return from the United States, England or Palestine,<sup>36</sup> the country was dependent upon the architects who had remained, and those few younger men, and a very few women,<sup>37</sup> who had managed to study architecture and survive the war.<sup>38</sup> The tenuousness of a separation in 'Germany Year Zero'

between those architects who collaborated during the Third Reich and those who had not was exacerbated by the role of the occupying forces in reinstating, for reasons of expediency, those best acquainted with the urban planning issues of the day. Denazification was carried out in some cases, as with Egon Eiermann or Peter Grund, the head of Darmstadt's building department in 1951, to name only two who were directly involved in the *Gespräche*. In other cases, however, the transition from a leading position in Albert Speer's *Arbeitsstab für den Wiederaufbau kriegszerstörter Städte*, which began its work in 1942 under the directorship of Rudolf Wolters, to an important role in the post-war reconstruction might proceed with little interruption.<sup>39</sup> The culpability of all architects who had – by choice or of necessity – operated within the mainstream could be considered a matter of degree, a fact of which all were conscious.<sup>40</sup>

By the 1950s certainly, simple fidelity to Modernism was an inadequate political touchstone. The fact was that a Modernist language had also been part of the official Third Reich culture, as an icon of progress and as an appropriate representation of industry. Egon Eiermann's 1937 design for the exhibition entitled 'Gebt mir vier Jahren' (Give Me Four Years) was only one example of how a monumental machine aesthetic could be adapted to express the potential for progress and power under the Nazi dictatorship.<sup>41</sup> As Modernism became the official expression of post-war democracy, especially within the cultural context of the Cold War, its political lassitude grew, apparent not least of all in the success enjoyed by Speer's many former associates who built in an exclusively Modernist idiom. Friedrich Tams, a member of Speer's "internal staff" (*Engerer Arbeitsstab*),<sup>42</sup> summarized the situation in a 1952 letter, "The comfortable simplification: modern – democratic, traditional – national socialist has no credibility. Conceptual discussion crosses political boundaries. It is apolitical."<sup>43</sup> By virtue of its success across political lines, modernism had lost its claim to an inherently democratic potential, at least in German architectural circles.

This could only have been of real concern to those architects who had perceived adherence to a Modernist idiom during the Third Reich as a touchstone of integrity.

These circumstances created an immediate need to confront the war as a mere interruption in an otherwise ineluctable Modernist trajectory specific to Germany. Awareness that Modern architecture was not ideologically exclusive gave urgency to the desire to reclaim Modernism as a progressive political potential. The statement published in the first 1947 issue of *Baukunst und Werkform*,<sup>44</sup> whose founding editorial board included Rudolf Schwarz, Otto Bartning, Egon Eiermann, Hans Schwippert and Otto Ernst Schweizer, all official participants and organizers at Darmstadt, reflects the tension between continuity and rupture in their narrative of Modern architecture and design. It also resonates with the assertions made in the 1951 preamble, describing the act of making architecture as fundamental and elaborating on the “essence of our time.” It seems that the authors felt nothing less than a moral imperative spurring them to return to work:

“The collapse destroyed the visible world of our lives and work. With a sense of liberation, we thought then that we could return to action. Today, two years later, we recognize the degree to which the visible collapse is only an expression of spiritual erosion and we could lose ourselves in desperation. We are left to return to the foundation of things, it is from that point that our responsibility is to be understood....only the valid-simple is useful in many respects.”<sup>45</sup>

### **The Darmstadt Exhibition**

The architectural work presented at Darmstadt – in the exhibition, in the formal presentation, in the ensuing responses and in the *Meisterbauten* – is perhaps most accurately understood relative to the ambitions expressed in the preamble and presaged by the 1947 statement in *Baukunst und Werkform*. It offers physical evidence that the “foundation”<sup>46</sup> to which they referred was both spiritual and practical, and that the curators, who in many cases were also authors of

the work exhibited, saw their architecture as the basis for a democratic *Neubeginn*. The public exhibition's organization and content indicates that this mandate required some reconfiguration of Modern architecture's heritage as well as the way its relation to function and occupancy was conceived.<sup>47</sup>

The alternate architectural heritage constructed in the exhibition is best revealed by the ways in which it deviates from an otherwise conventionally structured history of Modernism, one which might begin with proto-modern works of engineering and include early anti-eclectic movements, then culminate in an international Modernism in the 1920s. The occasion and setting in Darmstadt provided an alibi for the predilection for German and Jugendstil architecture in the exhibition, an historical lineage that had been consistently propagated by Schwarz and reflected in the pages of *Baukunst und Werkform*.<sup>48</sup> Nonetheless, three tendencies apparent in the exhibition stand out for their difference to more mainstream histories: the clear preference given to architects building in solid rather than transparent or inherently open materials and construction methods; the heterogeneity of expression, as opposed asserting 'white' Modernism; and the fact that the typologies in which all the projects exhibited fell were spatial rather than functional.

The first two tendencies represent an implicit counter-argument to the typical story of Modern architecture as materially and technically driven. It also deviates from the story of Modern architecture as a uniquely appropriate reflection of the fact and spirit of its era. This is evident in the context of building construction, a criteria often employed to argue for the technological mandate for Modern architectural expression. Much early Modern work was built using traditional wall construction, a fact that was often polemically concealed under a coat of stucco; this was not the case in the buildings exhibited in Darmstadt, whose architects emphasized the materials used in bearing or solid wall construction. The weighty, solid architecture of Olbrich, Behrens,

Tessenow, Mutthésius, Peret, Gaudi, Van de Velde, early Frank Lloyd Wright, Bartning and Bonatz was given most of the wall space in the part of the exhibition devoted to “spaces of inhabitation.”<sup>49</sup> In contrast, Le Corbusier’s abstract painted wall surfaces were given limited representation. Only the Villa Savoie and the Pessac complex were exhibited, accompanied by a terse caption: “Le Corbusier designed with an ‘aesthetic sense dictated by the civilization of the machine age’.”<sup>50</sup> Gropius received slightly more attention, represented by the Dessau Masters’ houses, the Bauhaus and the Törten complex. In his case, his work was accompanied by direct quotations from texts written in the mid-1920s. In the one, he defines a successful and efficient realized building as functioning if “it completely serves the life activities required, and that these life activities are based on both spiritual and material demands.” The second quotation insists that “spatial feeling is changing...and seeks to maintain the unity of interior space and universal space.”<sup>51</sup> Both these assertions would be raised explicitly, although without specific reference to Walter Gropius, in the discussion at the *Gespräche* prompted by Hans Schwippert, an active member of the exhibition curatorial committee.<sup>52</sup>

As affirmed in the catalogue text, the visitor would have left the exhibition with a sense of the “different spatial conceptions of the modern master builders”<sup>53</sup> rather than with a singular, consistent image of contemporary space. The curatorial intent seemed to contradict the statement attributed to Philip Johnson and posted below an image of the Weissenhof Siedlung: “The Weissenhof Siedlung...finally demonstrated that the different architectural elements of the early post-war years had been unified in a single movement.”<sup>54</sup> The representation of Modernism as spatially and materially heterogeneous was, by 1951, not unique to Darmstadt – one need only consider the inclusion of a new chapter dedicated to Aalto in the second 1949 edition of Giedion’s *Space Time and Architecture*. In this case, however, it may well be understood as an attempt to reframe Modernism, in response to the impossibility of a mere “return to action,” by

pointing to its stylistic and construction-based heterogeneity. This shift is evident in the choice of quotations drawn from Gropius. The incompatibility between the architecture exhibited, diverse in its architectural expression, and Philip Johnson's Weissenhof claims in favor of a unified Modern architecture also indicate the desire to distinguish the rhetoric of International Modernism, associated the well-known German architects who had by then emigrated to the US, from that of those who had stayed in Germany.

The exhibition filled four adjoining rooms at the Darmstadt Mathildehöhe complex.<sup>55</sup> These four rooms were in turn subdivided by partition walls so that the work could be hung relative to topical subject. The topic headings seem at least superficially to correspond to the Modern planning principles guiding the functional separation of the city: "spaces of inhabitation," "spaces of work" (incorporating applied arts), "spaces of learning" and "spaces of contemplation." The last rooms were dedicated to the *Meisterbauten* projects commissioned from prominent architects for the city of Darmstadt.

Despite the apparently straightforward subdivision of the exhibition by functional categories, these headings were significantly modified by the addition of the concept 'space', allowing the curator to create unlikely groupings of projects. Under the heading of "inhabitation," for example, the distinction between public and private, essential to a Functionalist reading, was ignored.

Villas and housing complexes were shown together, to emphasize their shared spatial predilections. Similarly, "spaces of work" included functional typologies as diverse as exhibition architecture, factories, hospitals and artists' ateliers. Here, too, any distinction between public and private was sidelined. In other cases, spatial affinities seemed to have had more traction than functional. For example, Mies' IIT was included among "spaces of work," but Olbrich's Hochzeiturm was considered a "space of education." Defining sports stadia and movie theaters among schools, libraries, museums and theaters alike as "spaces of education" ignored any

distinction between culture and leisure, between popular and high culture. This approach might in part echo an Avant-Garde polemic of the 1920s, which broadened the compass of culture to include physical activity, mass events and popular consumer culture, but the focus on spatial expression allowed the curators to set aside the polemic while retaining its cultural arguments. At the same time, the inclusion of mass spectacles in the “spaces of education” downplayed the experience of the politically-charged masses of the 1920s and 30s.

These spatial categories also defused questions of public representation. As already described, cultural buildings were distributed between the categories of educational and work spaces. Any discussion of political representation was completely eschewed in the exhibition: government buildings were subsumed in the category “spaces of work.” These include Hans Schwippert’s *Bundeshaus*, labeled with an excerpt from the speech Schwippert held at the building’s opening, in which he described his building as “an architecture of encounter and conversation.”<sup>56</sup> In this context, the importance given to the category entitled “spaces of contemplation” is threefold. On the one hand, the significance of organized religion in the immediate post-war period was evident in the fact that churches were rebuilt (or temporary churches built) even before housing stock, as a means to recenter communities. Although this was in some cases related to the subsidies and funding available, as was the case in Bartning’s Notkirchen,<sup>57</sup> the practice of church rebuilding was an immediate and effective way to create a public forum while secular public life was being reinvented. Within this context, church building offered architects the opportunity to conceive and realize spaces, which could assume a representational role, in way that the state or work-related entities struggled to do at that time. The corollary to both of these developments is the significance of the genre of church building in post-war German architecture. As Ulrich Conrads recalled,<sup>58</sup> “the existential had precedence, no one wanted to live in cellars... churches were relatively free of purpose, therefore spatial thinking was only possible in church building,” a fact borne out in both Catholic and Evangelical contexts. The thesis that

solid construction, a material necessity in the immediate post-war economy, could give rise to progressive spatial constructs is borne out in this genre as well, particularly in Rudolf Schwarz's churches, perhaps the most legitimate heirs to the *Gespräche's* ideals.

### **Reclaiming 'Space'**

'Space' was the dominant, unifying theme within the exhibition and the conference. The title *Mensch und Raum* is attributed to Otto Bartning<sup>59</sup> who was the head of the *Bund Deutscher Architekten* and lived in Darmstadt-Mathildenhöhe. Known before the war for his visionary churches and housing projects, he was the leading protagonist in the post-war rebuilding of Protestant churches. Because of his professional and intellectual standing and his Darmstadt location, he was thus a logical choice to serve as chairman for the second *Gespräche*. In Bartning's extensive pre-war and post-war writing on church architecture, he focused on the spiritual capacity of modern technologies, a conviction he shared with his Catholic colleagues Rudolf Schwarz and Hans Schwippert. Writing in 1946 about the conditions in post-war German cities, he used language that presages that of the *Baukunst und Werkform* statement and the Darmstadt preamble with its focus on building as a fundamental, if not foundational, human act:

"[...] we have become experts on the desert, both of the interior and the exterior world. [...] But wherever two or three gather in the desert and recognize each other through a particular look in the eye, they will remain connected. And when they become thirty or forty or four hundred, so they shall build a community of silence, of hesitant speech and of spontaneous prayer and song. Such a community in the desert will lay out a ring of stones and will build a tent, not to safeguard the settlement, but rather to make the community of the spirit tangible to the community, to allow it to impress itself upon the senses."<sup>60</sup>

The meaning given by the Darmstadt curators and authors to the term 'space' as an activity around which community is formed would be repeated throughout the conference's proceedings by nearly all participants. The act of defining 'space' was understood as transcendental, and a necessary step in recreating a democratic society after the 'zero hour'. More than a simple shorthand for 'architecture', the term was also fundamental to the event's agenda, a revised lineage of



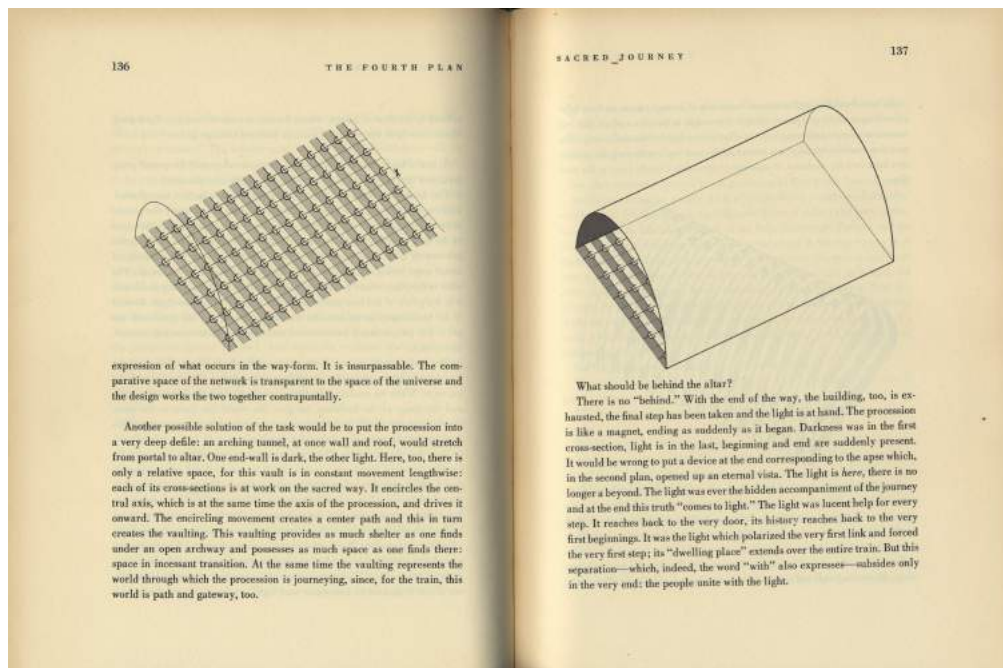
Modernism, just as the word “image” in the title of the 1950 conference had been in indicating a new ambivalence about representation and abstraction.

The concept of space as socially and philosophically foundational is characteristic of 19<sup>th</sup> century German architectural theory, for example in Semper’s account of architecture’s beginnings as demarcating, rather than sheltering, or among art historians who based their work on the scientific theories of Wilhelm Wundt.<sup>61</sup> Its prevalence in the rhetoric of early German Modernism thus draws on a deep theoretical traditional. The Third Reich made its own explicit political use of the term *Raum* in describing the manifest destiny of Germany’s expansion throughout Europe and its annexation of its Eastern neighbors. The term *Lebensraum*, first coined in 1901,<sup>62</sup> was re-appropriated as justification for that expansion, as documented in Hitler’s August 1936 Confidential Memo on Autarky.<sup>63</sup>

By its association with the ideas around *Lebensraum*, ‘space’ (*Raum*) had been used to denote a tangible territory, as in the 1937 propagandistic exhibition designed by Emil Fahrenkamp, “Volk ohne Raum.”<sup>64</sup> In that same year, Fahrenkamp was at work on such other cultural propaganda as the Hermann Göring School for Painting in Kronenberg, in the Eifel area, destined to become a highly contested region at the tail end of the war. Fahrenkamp is an excellent example of the political compromise of the Modernist idiom during the Third Reich: although he was Goebbels architect of choice, he was, by his own account, too modern for Hitler’s taste. As he testified in 1947 at his De-Nazification trial, “I was later given exhibition buildings to design so I wouldn’t be passed over completely.”<sup>65</sup> The 1937 exhibition, staged inside an enormous hangar-like free-span structure, juxtaposed enormous photographic panels of German rural, industrial and urban landscapes shot at slightly above eye-level with encroaching machinery, displays and models. The deep space depicted in the enormous photographs above the visitors’ heads was

juxtaposed with the densely occupied space at the level of their bodies. The technology of German productivity, represented in the three-dimensional objects with which visitors vied for space, contrasted with the productive landscapes. The result was to reify space as a tangible, occupiable property, and one in apparently short supply: the masses of workers and factories depicted on the end wall and superimposed with an enormous head shot of Hitler, seemed ready to throng into the exhibition space. The space at stake here, far from being constitutive of a reflective community as it had been in Bartning's depiction, was a physical commodity in short supply.<sup>66</sup>

### Space and the Lineage of Modern Architecture



Rudolf Schwarz, *The Church Incarnate* 1958, p. 136-7

The emphasis on 'space' at Darmstadt may therefore also be seen as an attempt to rehabilitate the concept, in counterpoint to its territorial denotations. In the much more modest context of the architectural discipline itself, the curators' insistence on 'space' could also be understood as an attempt to wrest the concept away from its abstract and apolitical usage in describing a general

*Zeitgeist*. This latter undertaking occurred in much the same way that the exhibition attempted to stake out territory apart from the lineage represented by the Germans who had left, most prominently Gropius and his Bauhaus lineage. Although radically different in their theoretical trajectories, the spatial theories propounded by the two primary Darmstadt speakers Rudolf Schwarz and Martin Heidegger argued the socio-spiritual significance of space. Their 'space' was juxtaposed to a reading of space as *Zeitgeist*, as evidenced by the quotation that accompanied Gropius' Törten Siedlung in the exhibition: "The sense of space changes: whereas in older times of finite cultural developments, the weighty bond to the earth was embodied in solid, monolithic-seeming volumes and individualized interior spaces, the works of today's leading architects...reflects the movement, the traffic of our time..."<sup>67</sup> Whereas the Darmstadt preamble focused on the timelessness of space-making as the "fundamental activity of the human being," Gropius continued to celebrate the era-dependency of spatial sensibility. The latter reading of space pervades such contemporaneous works as Sigfried Giedion's *Space, Time and Architecture*, published in 1941<sup>68</sup> by Harvard University, where Gropius' new architecture courses at the Graduate School of Design continued the legacy of Bauhaus visual representation and spatial analysis.

Thus, unlike the space of mainstream International Modernist architecture, the space to be recuperated at Darmstadt was not only architectural or experiential, but also existential. Unlike the space of the Third Reich, it was metaphysical and not territorial, an instrument through which the meaning of life communicated. This approach was broadly articulated by the Catholic architect Rudolf Schwarz, on the one hand, and the philosopher Martin Heidegger on the other. Although Schwarz was quick to distance himself from Heidegger,<sup>69</sup> the two descriptions of the genesis and significance of space are far from the techno-teleological rhetoric of space exemplified in Gropius' "transformed feeling of space, which reflects the movement, the traffic of

our era.”<sup>70</sup> Rather, space emerges as an expression of the relationship between the infinite (God, whether explicitly identified by the two speakers or not) and human experience; in neither case is space an abstract intellectual construct. Schwarz’s space is periodized and Christological; Heidegger’s, ahistorical, mythogenetic and Germanic (and perhaps uncomfortably in need of its own Denazification). The former can be reckoned part of the project of reinstating an ethical culture, distanced from its collaboration with the power politics of the 1930s and 40s; its effects on subsequent architectural production were negligible. The latter integrates many figures which seem oblivious to any historico-political circumstance; its influence on architectural culture, largely by virtue of its later reception, was great.

### **Rudolf Schwarz: Space and the Unplannable**

Schwarz’s text incorporates ideas developed more thoroughly in other texts, especially in his complex article ‘Das Unplanbare’ (The Unplannable), published in *Baukunst und Werkform* in 1947.<sup>71</sup> It also integrates elements of the argument he would make in 1953, in the ‘Bauhaus Debate,’ which marked the decisive rejection of the official history of Modern architecture and its Bauhaus roots by Schwarz and his circle.<sup>72</sup> Schwarz began by asking his audience why the *Jugendstil* as a movement did not enjoy a second generation of protagonists. He attributes this inadequacy to its subordination within a “coordinate system of rationality,” to the “grasping reach,” the *be-greifen* of 19<sup>th</sup> century instrumentality used to “place the world in a yoke.”<sup>73</sup> To this distanced and scientific approach, in which he also includes architectural photography and art history, he juxtaposes an alternative: “The grasping hand only realizes its purpose when one enters into things...when the eye joins it, the eye which perceives with astonishment and wonder how the world exists only in forms, of which each form speaks the truth and does so in an irreplaceable way accessible only to the eye.”<sup>74</sup> Schwarz makes neither technology nor modernity culpable, however. He writes that “technology, an originally high and nobly intended

world form, arose in the appropriate continuation of God's work, in the soul of the lonely seeker of God in its love for the sublime, with the single intention of making lighter the stuff of the world."<sup>75</sup> What he rejected instead is the all-encompassing intellectual "abstract system, the web of bars, to which the human spirit subjects itself." Presumably, his alternative was the "unplannable" as an historically relevant but supra-historical spatial concept:

"Every era has a particular task to complete: the construction of an economy, the founding of a state, the building of a cathedral or something else. It is called to that task, it is simply its work. Everything else which exists in addition to it or demands to exist, is not truly of that time...If one provides space in the soul or in the landscape for any other matter, then it is a free space in the most general sense...Tied to the earth and constricted in body and space, the human found for himself the spiritual way out and broke through the old measure knowingly and effectively, and gained breadth, a higher position as well as with distance from his own center....What can be planned is the beginning, the first decision to take this path and to leave the realm of the plannable in order to do well by the future and to become its fuel, outside in the realm of the unplanned."<sup>76</sup>

Space in Schwarz's account is both infinite and anthropocentric: it is the medium in which the human soul moves, between the realm of the known and the unknowable or unplannable, from which the future springs. It is not the historical duty of humanly formed space to reflect its own time but rather, to acknowledge its absorption in the future, just as it has subsumed the past.

The dictates of an era are relative, and progress aggregative rather than linear in a world dependent in equal parts on chaos and order:

"There may be a place where everything that has happened is preserved just as it occurred, an enormous memory of the cosmos; the earth is not this place. What lies on her surface is the rubble of previous eras which themselves barely managed to complete anything cleanly...between the two possibilities of the earth, to be crystal or rubble heap, are the average things, the half-completed, the resigned, the things that were properly made for a particular purpose or placed in orderly fashion according to a specific consideration as if they belonged together....He who wants to help the earth must know this. He may not overburden himself or the earth with the attempt to eliminate confusion, because the earth and the world require confusion....He must allow space for confusion, enormous free space."<sup>77</sup>

Given this imagery of human work as both tied to its own era and supratemporal, as ordering but in need of acknowledging the spaces beyond its ordering capacity, Schwarz developed a theory of the genesis of space which takes into account individual consciousness, community and the

provisional nature of the boundary made by virtue of its constant referentiality to what is beyond. His book *Vom Bau der Kirche*, published in Germany in 1947<sup>78</sup> and in English in Chicago, under Mies' auspices in 1958,<sup>79</sup> presaged the ideas set forth at Darmstadt. The book described in detail the mutual evolution of space, community, liturgical expression and perceptual relationship of the participant to the here and the beyond. At Darmstadt, he expanded this argument to include the act of building as part of the same process of creating space – perhaps an acknowledgement of the enormous task at hand outside the walls of the lecture hall – and to speak again to the problem of modernity and history:

“You all know that there are two great primary forms with which western architecture has struggled for millennia: the central form and the longitudinal form. The central form is the innermost concentration of a people's community to a unified work, and the longitudinal building is the built transposition of the path taken by a people. Both forms, which are very simple...cannot be achieved by an individual. The round form is something that is entirely inaccessible to the individual, since he is not circular in shape. The human being is directional, he has a certain space in front of him and behind him is no longer anything. The round form may be unachievable for an individual, but it arises immediately once many humans are there who join hands, who sit around a table or form a ring. When they all enter together into something shared, then the round form appears instantaneously. It is the same with the longitudinal form....The longitudinal form arises when a community of people, like this one here, forms rows next to one another, behind one another, then suddenly the longitudinal building appears....Through their sacrifice, the people become part of an entirely different world form, of an entirely new form of existence which is given back to them again as individuals since they retain still their own personalities....The production of a plan, an elevation, a section, a measurement, that is the enormous achievement of the architect. It is an achievement only realizable through the sacrifice of many people to a common cause...The point is not to listen to the 'demands of the hour,' that has nothing to do with architecture. The word “modern architecture” is nonsense in itself. There is no modern architecture because architecture never calculates in terms of days or years but in terms of stretches of time. It is essential and unique to architecture that it is not calculated in terms of the individual nor by the hour and its so-called demands. It is rooted in the great community of those who live now and in the other great community of the epoch.”<sup>80</sup>

Some of this rhetoric might seem bone-chilling in a contemporary context, a period in which historians debate the commonalities between socialist and fascist forms of popular community. Nonetheless, Schwarz's insight lay in his insistence that the genesis of space be tied to community and not to boundary, that the spirit of technology and progress be historically relative and, perhaps most significantly given his deep friendship with Mies, that infinite space – the

“unplannable” – be the place in which humanity acknowledges the two spaces it inhabits at once, the defined and the infinite. These are the spatial and social constructs he sets forth as a new and non-Bauhaus basis for the *Neues Bauen*.

### **Heidegger: Space and Being**

Heidegger’s text made equally sweeping claims about ‘history’ but eschewed Schwarz’s overtly religious and Christological frame of reference. He, too, faulted abstraction (which Heidegger described with Latin-root terms, whereas he uses German-root words to designate positive metaphysical space) and located existential meaning beyond physical human space. The most significant differences to Schwarz’s account were Heidegger’s purposeful religio-historical ambiguity around his etymological story of space; his omission of the problem of technology; and his focus on an individual rather than communal subject in relation to his version of God, the “fourfold.”

Heidegger’s most radical undertaking in this lecture was his inversion of the activities “Building Dwelling Thinking” for which the lecture is titled. He undermined an intuitive chronology, which would perhaps begin with the act of dwelling, followed by that of thinking and culminating in building as applied thought. Instead, Heidegger used etymological arguments to argue that “to build is in itself already to dwell.”<sup>81</sup> Citing the word’s German roots, he explained “the Old High German word for building, *buan*, means to dwell...The old word *bauen*, which means that man is insofar as he dwells, this word *bauen*, however, also means at the same time to cherish and protect, to preserve and care for, specifically to till the soil, to cultivate the vine.”<sup>82</sup> He traced the act of preserving to its origins in the keeping of the ‘fourfold’, “earth and sky, divinities and mortals,” as that which gives meaning to the act of building: “Dwelling, inasmuch as it keeps the fourfold in things, is, as this keeping, a building.”<sup>83</sup> To this point, Heidegger referred exclusively to Germanic language roots, noting Latinate derivations only by way of clarification for the

complexity of the Germanic term, as when describing the nurturing implications of “Bauen:” “building as cultivating, Latin colere, cultura, and building as the raising up of edifices, aedificare – are comprised within genuine building, that is, dwelling.”<sup>84</sup> In Heidegger’s parlance, the German term was able to contain the two activities for which Latin required two separate and culturally differentiated terms.

As he began to speak more explicitly about space, in the context of his now-famous analogy of the bridge as “a thing [that] gathers the fourfold but in such a way that it allows a site for the fourfold,”<sup>85</sup> he had recourse to both Latin and Greek roots. “Raum” as a “place that is freed for settlement and lodging,”<sup>86</sup> in other words, clearly related to dwelling, was juxtaposed to “spatium and extensio,” spaces of measurement and universality, but not the spaces of every day life which we inhabit. Heidegger’s definition of space is worth considering here. He stated, “A space is something that has been made room for, something that has been freed, namely, within a boundary, Greek *peras*....Space is in essence that for which room has been made, that which is let into its bounds....Accordingly, spaces receive their essential being from locales and not from ‘space.’”<sup>87</sup> One thinks immediately of Semper’s wicker fence, of architecture as the originary boundary, with the important difference that Semper’s fence was significant for its introspective gesture of separation and inclusion. One also is reminded of Schwarz’s discussion of the plannable and unplannable, again with the important difference that God inhabits the unplannable while the human being moves between plannable and unplannable. In Schwarz’s account, humanity inhabits both localized and infinite space; the two do not oppose each other. The boundary, in turn, is the symbol of the coming together of those who inhabit both. In Heidegger’s argument, an oppositional relationship between German and Latin-root space is established. His imagery evokes those German Ottonian churches which are entered on their



longitudinal rather than lateral ends and span between the altar to Christ in the east and that dedicated to the local saint on the opposite end.

Heidegger's critique of the tradition of abstraction and rationality – one in which thought dominates the space of "dwelling" – is summarized by the opposition of Latin and Germanic etymology. Although implying the universal and existential relevance of the trajectory he established among building, dwelling and thinking, at no point did Heidegger address either the historical context, which effected changes in the denotation of the terms he described, or the cultural imperialism (Germanicism) which suffused his argument. "Spatium and extensio," clearly the underpinnings of Cartesian thought, were representatives of applied abstract thought; the accompanying development of applied thought and science are explicitly critiqued later, in his discussion of tectonics which he uses as a transition to the description of the Black Forest house:

"The Greeks conceive of *techne*, producing, in terms of letting appear. *Techne* thus conceived has been concealed in the tectonics of architecture since ancient times. Of late, it still remains concealed, and more resolutely, in the technology of power machinery. But the essence of the erecting of buildings cannot be understood adequately in terms either of architecture or of engineering construction, nor in terms of a mere combination of the two. The erecting of buildings would not be suitably defined *even if* we were to think of it in the sense of the original Greek *techne* as *solely* a letting-appears, which brings something made, as something present, among the things that are already present. The essence of building is letting dwell."<sup>88</sup>

Heidegger's direct contribution to the 1951 project of a re-envisioned Modernism has been described in the context of the unstable architectural discourse of the period. If, as has been argued,<sup>89</sup> the cultural disarray of the post-war period left a void in the way in which a public discussion of the built environment could progress beyond a crudely understood functional and financial calculation, then the contribution of a discourse which foregrounded the act of dwelling as foundational to social formation was potentially huge. Indeed, despite his turgid language delivered in an evangelical pitch on an impossibly hot day, his speech's immediate impact

resounded in the language of those who spoke after him. Nonetheless, the practicability and relevance of his ideas to German architecture in the accelerating economy of the 1950s proved minimal, although his Darmstadt text remains a favorite of 21<sup>st</sup> century architecture students. The 19<sup>th</sup> century discourse which struggled to define ethical principles within a technologically-driven building industry using the concepts of spatial definition (Semper) and the necessary interrelation of parts as tectonics (Bötticher) is absent from his account. There is no trace of social history: the inhabitants of the Black Forest house remain designated as mythical ‘peasants,’ and the exact nature of their dwelling as an ongoing historical activity is undefined. If Schwarz’s concept of space as congregational in nature, created by the joining of hands, is transparently theological, then it seems only appropriate to ask what Heidegger understood to be the activity allowed by architecture in 1951: what did it mean to “let dwell?” Aside from his references to a mythical German past, he gives no answers.<sup>90</sup>

### **The End of Spatial Building?**

Upon listening to the audio recordings of these and the other intellectually demanding lectures while keeping in mind Ulrich Conrad’s description of the lecture hall as overfilled and swelteringly hot, it is hard to imagine how the audience would have had the capacity to reflect upon and discuss what had been proposed by the speakers. The role of stimulating a discussion that could engage the audience of largely practicing architects while referencing the preceding discourse on space fell to Hans Schwippert, whom Otto Bartning invited to open audience discussion following the formal lectures. Schwippert undertook to locate a discourse of space more concretely and with greater immediacy by questioning the relationship among the spirit of an era, its spatial expression and material. In theoretical terms, his line of reasoning addressed directly the fundamental Modernist tenet of unity among an era, its technology, its materials of choice and its spatial expression. In practical terms, it addressed the material and intellectual ‘year zero’

with which architects, himself included, had dealt between 1945 and 1951 – what could spatial expression be when the spirit of an era was defeatist, when technology was dubious and materials scarce?

Schwippert managed to raise the stakes even beyond Schwarz's and Heidegger's spiritual and existential claims by framing them in the terms specific to architecture as practice. Space in Schwippert's parlance was the *sine qua non* of architecture, if architecture is to be meaningful. He spoke from the standpoint of an architect engaged in the production of meaningful, built architecture – not, as in the longer lectures, from within the discourse of architectural space as party to abstract, transcendental systems of cultural production. His brief presentation reframes the terms of the more familiar discussion about architecture's genesis by shifting away from formal expression, achieved by means of material tectonics, to address space as the primary means of expression. Schwippert's definition of meaningful space is related to the fundamental, existential value ascribed to architecture by Schwarz and Heidegger, if in philosophically divergent ways. But it also opened up new questions. What is spatial building anyway? What does it mean to separate space from material when discussing architecture? Which is the *sine qua non*, the material or the space? Or is it the question of embodying meaning *per se*? How can positive meaning be found in a collective so recently compromised by Fascism and broken by war?

Schwippert began by considering how best to describe the reciprocity between an era's spiritual urges and the spaces it inhabits. He coined the term "Wohnwollen", a clear play on Alois Riegl's *Kunstwollen*, perhaps filtered here through Theo van Doesberg's 'Wille zum Stil'<sup>91</sup> to describe an era's spiritual desire for a specific kind of inhabitation as independent of the physical reality. By his account, the two may be confluent or diverge, but it is the role of the architect to give the Wohnwollen expression regardless of his physical material capacities:

“What does the directive of building look like for us today? How does this dwelling appear to us, if we are to make it into building? It seems to me that there is something quite peculiar here. In a time characterized by unrest, fear and threat...we sense around the world a directive of building which is anything but a bastion of refuge....If dwelling precedes building, then we have to ask: is the affinity between the brightness and lightness of our spatial desire on the one hand, and the technical means of contemporary building on the other – is this affinity between these two things the only possibility given to us to build concretely in accordance to the internal directive?...If we had neither steel nor glass...would then spatial building in the sense of the kind of dwelling we desire and require be forever eliminated? In other words, is that spatial being which most precisely bespeaks our dwelling on the earth today tied to the materials of today, or is this “Wohnwollen” so strong that it can form all simple materials, even all other methods, even all older forms of building – that it can penetrate them?”<sup>92</sup>

The decoupling of material progress from spatial expression, analogous to Schwarz’s refutation of architecture as a direct expression of the specific time in which it is made, broke distinctly with the heritage of Modern architecture as temporal, techno-cultural imperative. To open the question of material appropriateness may in part respond to the pragmatic economic difficulty of finding glass and steel for most building projects in the late 1940s. But especially when phrased by the architect of the new *Bundeshaus*, a space he described as “a building of openness, an architecture of encounter and conversation,”<sup>93</sup> it also indicated the desire for an architecture able to reinforce the new postwar German Republic and its spiritual essence *in spite of* material scarcity. To some extent, it also suggests a motive for the curatorial tendency already noted to establish a lineage of solidly built works of Modern architecture in the accompanying exhibition. Knowing well that Modernist spatial expression was in itself no guarantee of its authors’ democratic politics, Schwippert also asked whether it is “thinkable that someone could misuse the means of today...to make spaces that bear no relation to us?”<sup>94</sup> The question can certainly be read as a reference to the fact that Modern architecture had become an official style, employed in 1951 by architects of all prior political persuasions. Schwippert seems implicitly to ask, could a former member of Speer’s *innerer Arbeitsstab* make spaces that bespeak the *Wohnwollen* of 1951? If *Wohnwollen* is materially dependent, then does the lack or misuse of material signal “an end to spatial building”<sup>95</sup> as a fundamental community-forming human

activity? This double challenge expressed a deep conviction about the role that architecture had within human culture and by extension, the role it was called to play in the post-war context.

Perhaps the problem of expressing *Wohnwollen* in architecture was at the heart of Schwippert's own bitter conflicts with Konrad Adenauer, the Christian Democratic post-war Chancellor in the year prior to the *Gespräche* over the architectural expression of the chancellor's residence in Bonn.<sup>96</sup> The complexity and difficulty of the problem resurfaced again in the discussion of the *Meisterbauten*, designed and in part realized under the aegis of the 1951 *Gespräche*. The two projects at the extreme ends of the Modernist spectrum – Hans Scharoun's atomized school and Paul Bonatz's ruthlessly symmetrical Concert Hall – remained unrealized but at the conference, were both the topic of heated debate.

### **Space or Atmosphere?**

Schwippert's words left the audience to ponder and respond to these three separate scenarios: that an affinity between spatial desire and technical means could be "the only possibility given to us to build concretely in accordance with the internal directive;" that spatial desire could be "so strong that it can form all simple materials, even all older forms of building;" or that someone could "misuse the means of today...to make spaces that bear no relation to us."<sup>97</sup> Bartning, the moderator, then prompted "the architect Sep Ruf" to respond. Ruf would not have been known as a theoretician or rhetorician, and the words he had prepared for this moment were at best an oblique answer to Schwippert's challenge.<sup>98</sup> The way he practiced the profession and the projects he had completed between the end of the war and 1951 would, however, seem to match perfectly to Schwippert's ambitions: as the architect of the recently completed *Akademie der Künste* in Nuremberg, a complex of buildings that required virtuosic, bespoke detailing to attain open, filigree expression, he would have been well-equipped to discuss specifically the friction

between Modernist architectural aspirations and the lack of appropriate building materials and products on the German market.

Ruf's initial response revealed the ways in which his interests and position aligned and diverged from Schwippert's. Both shared the conviction that the era required open, communicative building, despite the ominous historical moment, but placed their emphases differently when considering how the architect would achieve that particular expression. Rather than address the question of material and construction, Ruf asserted the need for the architect to be seen as an artist, not a *constructeur*. Rather than speaking directly about space in the sense that Schwippert, Schwarz or even Heidegger might, he introduced the idea of the "spirit's atmosphere."

Ruf immediately requested permission to "answer [Schwippert's questions] partially in order at least for now not to be compelled to speak about construction and its application."<sup>99</sup> Instead, he expresses confidence that "if the spatial form and that which today is necessary is clear in my mind – the open building, which binds itself to nature – then I can express it, too, with the means from which earlier forms were made, with the old building elements such as wood and stone."<sup>100</sup> This answer defused the challenge posed by Schwippert's hypothesis on the difficulty of applying traditional building materials to the problem of the open building, and belied the effort Ruf himself expended to detail the elegant windows and facades of the bank and the arts academy in steel, stucco, wood and glass. It countered the teleology of technology as a driver of progress in architectural expression with the teleology of architectural expression realized if necessary through technological regress. His implicit thesis seemed to be that as the desire for openness progresses, the architectural means used to realize it is made relevant by virtue of its

expression, not its technological currency. Rebuffing a technological approach to spatial

expression, Ruf instead argued that architecture must now:

“move forward into the spheres of the purely artistic.... We must achieve the same creative freedom with these building elements as other creative human beings who use words, color and sound to achieve the artistic expression of their spiritual world in order to move in the same plane of formal creation. In architecture, this involves cognition of the essential form-defining elements: the pure measure, the vertical, the horizontal, in other words roof and column or wall, the opening that spans space....The decisive aspect, I think, is that we know how to form the atmosphere, the spirit’s atmosphere, and then we will find the form, too. Because architecture has to create a specific spatial feeling.”<sup>101</sup>

His plea for architecture as art form might in part be a direct rebuttal of the idea of architecture as technically motivated.<sup>102</sup> Nonetheless, his aim was not the creation of an independent art object but instead, the production of “atmosphere.” Ruf was the only speaker at Darmstadt to use this term and his usage lends the concept a transcendental attribute: it is not space *per se*, nor technology, but rather the “spirit’s atmosphere” that drives the creation of an architecture appropriate to its time. Although seemingly far afield from the given topic of *Mensch und Raum*, Ruf’s desire to deflect attention from the technical manipulations at which he was so gifted and towards an ineffable, intangible quality embodied in the vague term “atmosphere” indicates more than a desire not to be pigeonholed as a technician.

To “justice to the demands of our time,” Ruf continued, spatial transcendence cannot derive from questions of materiality:

“...we have already understood the means of creating form – the construction alternatives such as steel, concrete and wood skeletons – so completely in their essence and could apply them in as experienced and economical a way as we do with older building techniques. We must achieve the same creative freedom with those building elements as other creative human beings who used words, color and sound to achieve the artistic expression of their spiritual world...In architecture, this involves cognition of the essential form-defining elements: the pure measure, the vertical, the horizontal...the opening that spans space...one must achieve form, the expression of a spiritual conviction.”<sup>103</sup>

Ruf's rendition of the relationship among space, spiritual expression and material combined a more conventional faith in the inevitability of Modern architectural expression ("the opening that spans the space"), its inherent spiritual meaning ("conviction") and a more amorphously romantic insistence on architecture as art and the architect as freely creative. Although it vaguely integrated the concepts around which Schwippert built his questions, it revealed Ruf's position to be less academic and programmatic than Schwippert's.

The parallels in expression and construction between the two contemporaneous buildings by Ruf and Schwippert featured in the exhibition thus did not transfer to their theoretical considerations: Schwippert, an academic and author throughout his career, framed questions that touch the foundation of the Modern architectural belief system which Ruf seems to have integrated thoroughly into his credo. Ultimately, however, Ruf, a prolific practitioner, would be much more affected by the questions around material, construction, space and expression than he might have anticipated in 1951. His firm belief in the importance of the architect as author, and his downplaying of theoretical fine points, were doubtlessly advantageous in building his reputation as a charismatic professional; they may also have contributed to the changes in his architectural language over the course of the 1950s.

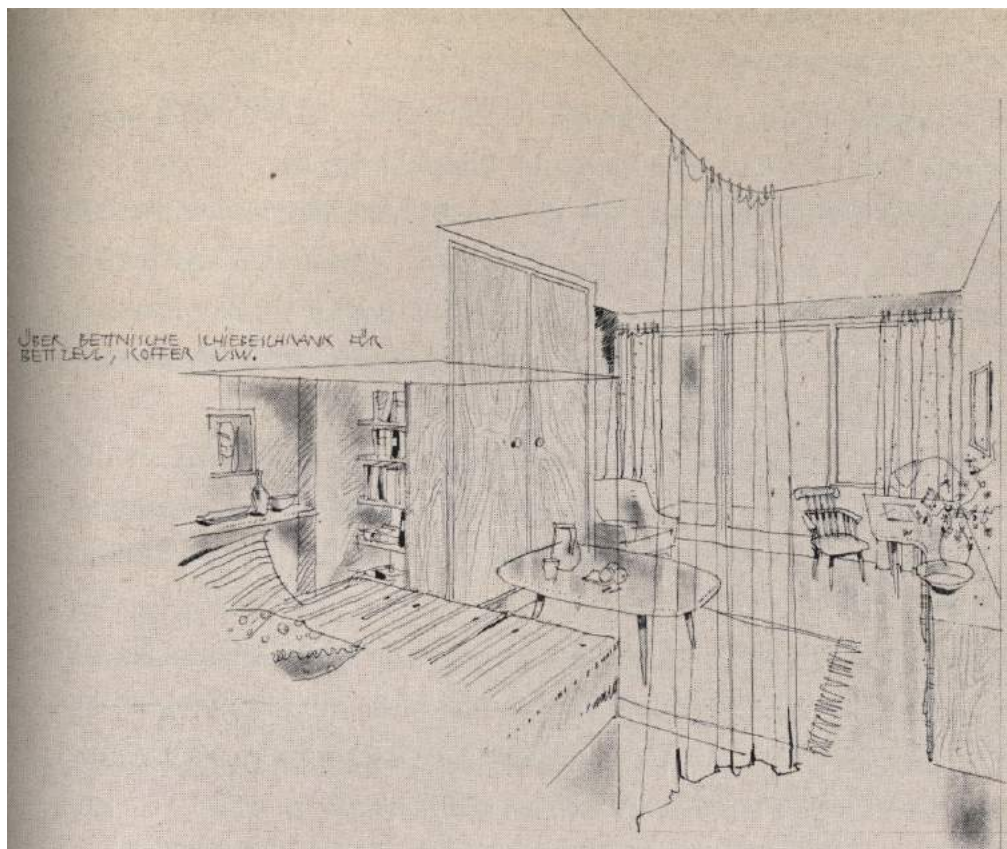
Bartning was loath to allow Ruf to avoid Schwippert's questions, and later in the day, gave Ruf another opportunity to address them. Without shifting his focus from the perspective of the practitioner, he was able to frame a response closer to his audience's expectations:

"...if the spatial form and that which today is necessary is clear in my mind – the open building which binds itself to nature – then I can express it, too, with the means from which earlier forms were made, with old building elements such as wood and stone. The decisive aspect, I think, is that we know how to form the atmosphere, the spiritual atmosphere, and then we will find the form, too. Because architecture has to create a specific spatial feeling. I will always, if I am able to see forms artistically, be in a position to create a place of occupation that corresponds to the idea held of the dwelling today."<sup>104</sup>



For this second attempt, Ruf earned two rounds of applause from the audience which had withheld signs of support from his initial response: first, when he averred that he could make the spatial forms of his time in older materials and again, when he assured the audience that, given the capacity to see artistically, one would be able to realize a place appropriate to occupation. Aligned with Ruf's tendency to individuate the questions are the terms he uses – not “space” or *Wohnwollen* but instead “spatial feeling” (*Raumgefühl*) and “spatial form” (*Raumform*).

### Space or Stuff? Ernst Neufert's *Meisterbau*



Ernst Neufert, Perspective, *Meisterbau* Darmstadt. O. Bartning, ed. *Mensch und Raum Darmstädter Gespräche 1951*

The completed buildings by Schwippert and Ruf, which will be discussed in the following chapters, ratify the “brightness and lightness of our spatial desire,” even as they describe their

authors' divergent methods of achieving it. Nonetheless, there remains a need to address Conrad's valid critique of the *Gespräche's* inability to define an agenda that linked the rhetoric of exhibition and conversation to realized architecture, as intended by the inclusion of the *Meisterbauten*. The *Meisterbauten* and their heterogeneous architectural expression was also debated during the proceedings, with specific reference to the proposals by Scharoun and Bonatz, protagonists of an older generation and its debates. The easy juxtaposition of Scharoun's splayed, irregular forms and Bonatz's symmetrical, typologically referential ones added little to the debate about the virtues of Modern architecture, especially in a new post-war context. The heterogeneity of postwar Modernism, far from undermining its relevance, would in fact grow to become a hallmark of its international relevance. In interrogating the question of relevance, it is more productive to consider the shift from a focus on pure space to the inclusion of the things that occupied space, as a social phenomenon and as a way to begin to explain why the *Gespräche's* outcomes failed to capture the imagination of the many influential architects in attendance, and to influence their production over the long term.

Although the statement that introduced the conference declared homelessness to be "the exigency of our time," only one of the *Meisterbauten* accommodated a residential program, an SRO for single men by Ernst Neufert. Neufert's building and its drawn representation eloquently described a larger shift of expressive potential from communal space to individuated lifestyle object. His success in securing the commission and realizing it also reflect the Realpolitik of architectural practice even in the Darmstadt of 1951, regardless of aspirations to a greater ethics of architecture.

Neufert's biography is in itself evidence for the political non-alignment of Modernist architecture as a style. He had studied at the Bauhaus in Weimar and had been Gropius' technical

collaborator, overseeing the building of the Bauhaus and Masters' Houses in Dessau. He was later a professor at the *Bauhochschule* in Weimar, under Otto Bartning. There, he had carried out the studies of normative dimensions and configurations, which formed the basis of his *Bauentwurfslehre*, first published in 1936 and in constant publication since. By 1936, however, Neufert's political allegiances belonged to the Nazi party. In addition to freelance commissions in industrial architecture, Neufert established the norms for the design of hostels for the Hitler Youth, and by 1938, he was working directly for Albert Speer, including the completion of a design for housing which integrated bomb shelter and bunker. The design even employed Neufert's ergonomic figure drawings to describe simultaneously normative family life and wartime security.<sup>105</sup> By 1947-8, he attended regularly Rudolf Wolter's Coesfeld reunions of former close Speer associates while enjoying a comparatively high standard of living provided by royalties on his *Bauentwurfslehre*.<sup>106</sup> His invitation to Darmstadt is at least partially explained the intervention of the CDU party's local head who advised the conference organizers that it would be prudent to invite a representative of Darmstadt's architecture department, of which Neufert was a prominent member. There is nonetheless at least small irony in the similarity of the program with which he was commissioned, an SRO for single working men, and the hostel study he had completed under Speer in 1936 for a rural location. In fact, Neufert described his *Meisterbau* as an "urban vacation home: near to the woods, with a row of cells next to one another."<sup>107</sup> Neufert was in any case inclined to discretion at the event. Unlike the other architects of the *Meisterbauten* who were in attendance, he did not participate in any public debate. His project presentation, given on the last day of the *Gespräche*, discussed the building only as a formal and problem-solving proposition. He engaged none of the speculation on the nature of its occupation or the larger principles governing its design, which characterized the other presentations, especially those of Scharoun, Bartning, Schwarz and Schwippert.

It is not Neufert's biography, which makes his building a significant case study, but the way he applied a revised Modernist vocabulary to the problem of inhabitation. In his own text, Neufert described the building as a volumetric response to the urban context: a rising topography, a line of remaining three-storey buildings, proximity to the villa structure of the *Mathildenhöhe*. Certain design strategies recall the Bauhaus itself: the use of ascending volumes, the central bridging element with its open axis, the expressive use of the individual room's balconies, the spatial significance in the public spaces of the column grid. The exterior treatment is, however, entirely different from the Bauhaus' industrial glazing and abstract white stucco. Neufert clad his building with dark-burnt klinker brick, intentionally integrating distended blocks into the bond just as Aalto had done in his Baker House of 1947 (or in many of Aalto's other textural experiments in brick popularized by Giedion). The effect is to emphasize the building's volumetric and sculptural qualities simultaneously; in its material presence, it belongs clearly to a post-war Modernist genre, not the stucco'd 'white' Modernism reflected by Ruf and Schwippert's exhibited projects.

The interior of the building revised the tradition of an early Modernist *Existenz Minimum* housing to suit a developing sense of lifestyle. The figures for which Neufert was famous were omitted from the orthographic and perspectival drawings, but the most revealing drawing, the perspective of the tiny one-room standard unit, is filled with signs of its occupation. A vase and painting decorate the headboard-night stand, the bookshelf is full, a pitcher and glass stand next to a full fruit bowl on the low, rounded-corner table and flowers decorate the sideboard, although few of these items seem compatible with the building's program of a men's SRO. The interior objects seem remarkable for a room meant to be inhabited by a working bachelor with minimal income, but are completely appropriate to a design-sensitized 1950s audience, such as the one in attendance at the Darmstadt exhibition. Like the curtain on entry and the walled balcony intended as a gesture to privacy, the plethora of domestic design objects shown also described

the tension between communal living (here, by necessity) and growing desire for individuality. Unlike the balconies or terraces which compliment the small apartments in Ernst May's *Frankfurt Siedlungen*, in which built-ins were sociologically engineered rather than design-driven, each balcony described the presence of an individual asserting his singularity on the building's exterior facade. As Neufert wrote, "The balconies produce a rhythm which describes the interior purpose;" elsewhere, he described thoroughly the public rooms and their adjoining terrace as enjoying "late afternoon and evening sun, advantageous resting places in the open air for people who are usually at work outside of the home from morning to afternoon."<sup>108</sup> Where, then, was the weary bachelor to sit? The architectural language employed here may be that of Modernism, coupled with the ambition for "an open view to the outside, without a vis-à-vis."<sup>109</sup> Nonetheless, the vision of community is an uncomfortable marriage of cohabitation by necessity and individual expression of as yet undefined value content. And Neufert, unlike Otto Bartning who presented his *Meisterbau* immediately after him, proposed no way to address the relationship between *Mensch and Raum*.

By 1951, one might be inclined to conclude, the cultural urgency of "Mensch und Raum" had begun to be eclipsed by the very genre which had best served early Modernism in Germany: housing. The sheer physical need for accommodation took precedence over dwelling as a political or ethical potential. Those architects who strove to reground space as a concept – and not coincidentally, these are the architects whose works and thoughts have attracted increasing architecture historical interest in the past ten years – were largely limited to other genres. It is not difficult to contend that the Americanized Bauhaus genealogy prevailed and the attempt to create distance to it was largely rejected, despite the scuffles around the 'Bauhaus Debate' of 1953. Although none of the main participants at Darmstadt can be considered marginal, their combined influence on the stylistic turn taken by West German architecture in the 1950s was less than that of American models and the influence of Americanized construction techniques.<sup>110</sup> Stuff, not

space, was becoming the medium in which inhabitation left its imprint. It was that stuff which in turn became the focus of Hans Schwippert's curatorial approach to representing the Federal Republic at the Brussels World's Fair.

## Chapter 2

### Hans Schwippert's *Bundeshaus*, 1949

#### Aller Anfang ist schwer

The apparent ease with which Hans Schwippert acceded to the commission for the *Bundeshaus* in Bonn in 1949 was evenly matched by the difficulty he encountered in completing the building and thereafter, defending his work against critics no less powerful than *Bundespräsident* Adenauer.<sup>111</sup> At stake in these conflicts were both the building's expression and its construction. Both will be explored here as a means to understanding the building in terms of its philosophical position and its material culture.

Schwippert had already been involved in discussions about the building as part of Bonn's bid to become the new capital over Frankfurt, and had completed designs even before the decision to move to Bonn had been finalized.<sup>112</sup> Even amidst successful negotiation of a breakneck design and construction schedule, support for the project flagged immediately following its completion and, eventually, turned to political strife. As early as the summer of 1950, when an additional DM 290,000 had to be allocated by the German congress for repairs to its brand new building only a year after its inauguration, public opinion had focused its censure not only on the quality of the building's construction, but on the person of the architect and his architecture.<sup>113</sup>

The attacks on Schwippert's design continued into the 1960s, in debates over the geometry of the plenary seating. One can begin to infer how painful all this remained for Schwippert from the letters he wrote in the weeks before Christmas, 1962, to Konrad Rühl, who had been the Ministerial Director of the Reconstruction Ministry, and to Hermann Wandersleb, head of the State Chancellery at the time of the building's construction. Even fifteen years after the *Bundeshaus'* completion, Schwippert saw himself in need of Wandersleb's affirmation that the

negotiation between spatial and political representation had been hard fought but victorious.

“Herr Dr. Adenauer,” Wandersleb wrote regarding the design of the plenary interior, “proved very open to your argumentation and judged your respective sketches to be excellent. However, he opined that for the beginning of the parliamentary work, one should not immediately seize upon such radical novelty.”<sup>114</sup>



Hans Schwippert, *Bundeshaus*. Photo: Hugo Schmölz. *DKA NL Schwippert*

Designed as an addition to an existing building in the *Neue Sachlichkeit* tradition, the Bonn Pedagogic Academy completed between 1930-1933 after a design by Martin Witte, the putative radicality of Schwippert’s design is hard to see, even from the standpoint of Adenauer’s decidedly conservative architectural taste. Its simple volumetrics and repetitive facades seem to plant it firmly in the genre of modest Modernist administrative buildings. This sobriety seems reaffirmed in the fact that, in the exhibition at the *Darmstädter Gespräche* of 1951, the building was displayed among other “spaces of work” rather than among civic buildings. In its expression, the project held a fine line between politically necessary modesty and political representation. Nonetheless, the building’s apparent simplicity belies both the enormous efforts that went into its



materialization, and the impression that its spatial expression left on a contemporary – and later – audience.

From the start, and in no small part thanks to Schwippert's inaugural address, it was interpreted as literally representative of the new German government's transparency, embodied by the glazed walls on either side of the plenary hall.<sup>115</sup> This interpretation would locate Schwippert's design in the High Modern tradition of its near contemporary, the United Nations headquarters in New York (1947-1952), in which curtain wall facade, communicating spaces and open vistas were used programmatically to represent political unity and openness. But a close study of the design development, construction correspondence and project realization offers a broader understanding of how Schwippert's building embodies "an architecture of encounter and conversation,"<sup>116</sup> not only by virtue of the plenary's generous glazing but also through the manipulation of the façade articulation and the treatment of interior spaces. A more careful assessment might see it not as a radical glass building but a carefully fenestrated and articulated structure whose sense of transparency and dominant spatial gesture, the orchestration of the plenary and its seating, owed as much to Schwippert's close relationship to Rudolf Schwarz's church architecture as it did to the window walls.

As a benchmark for the conditions of architectural construction on the ground at the beginning of the German Federal Republic, the material constraints on the *Bundeshaus*' realization and the ways that its architects dealt with them are the actual circumstances under which the "end of spatial building"<sup>117</sup> in the face of material inadequacy, theorized by Schwippert in his 1951 *Darmstädter Gespräche* speculations, might have occurred. This was a nationally significant project for which all available building resources – few though they may have been – were mobilized, and for which participating construction firms developed unique products and

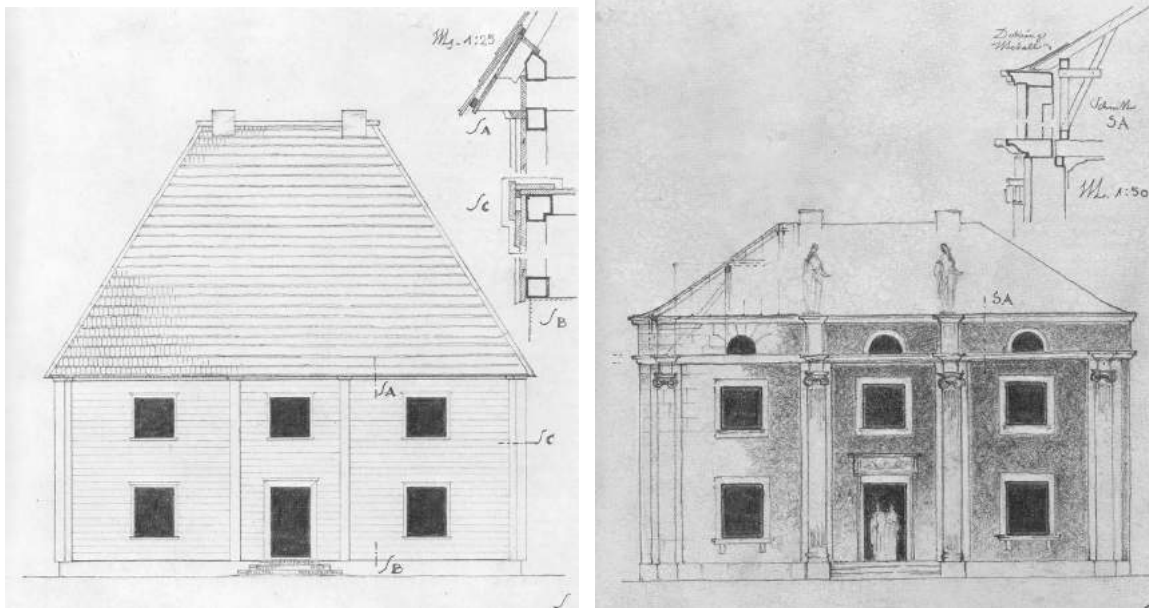
solutions. Structural steel, lighting elements, dropped ceilings, and window details were only a few of the products developed in collaboration with Schwippert's office and that of his engineer. In some cases, these proved to be singular solutions, in others, prototypes. But in each case, the products used to construct the *Bundeshaus* were bespoke combinations of available parts, guided by ingenuity.

### **Schwippert as Constructeur**

As architect, designer and pedagogue, Schwippert made careful consideration of construction and realization from the earliest point within the design process. This care in considering constructability aligns with the experience gathered while working in cabinet and interior woodwork shops during his studies.<sup>118</sup> It also may align with the context in which he studied architecture. Schwippert had begun his studies after serving for a year at the end of World War I on the western front. He started in engineering but after a year at two different technical universities, he enrolled at the Technical University of Stuttgart, where he studied with Paul Schmitthenner and completed his studies there in 1924.<sup>119</sup>

Schmitthenner's biography has come to be seen as inextricable from the architectural styles and cultural policies of the Third Reich, especially in housing. His houses and urban master plans, no less than his publications on building "in the new *Reich*," were models of an architecturally facile *Heimatsstil*.<sup>120</sup> His insistence on a typological approach to architecture, in which an ingenuity applied to tradition was more highly prized than invention, had its logical extension in his approach to construction. This is particularly apparent in a book intended as one in a series on architectural form and published in 1949 but redolent with the themes of his earlier works. Entitled *Baugestaltung. Erste Folge. Das deutsche Wohnhaus*, the book demonstrates how

heavily Schmitthenner was invested in construction as a means of revealing “the meaning of a material in its transformability.”<sup>121</sup>



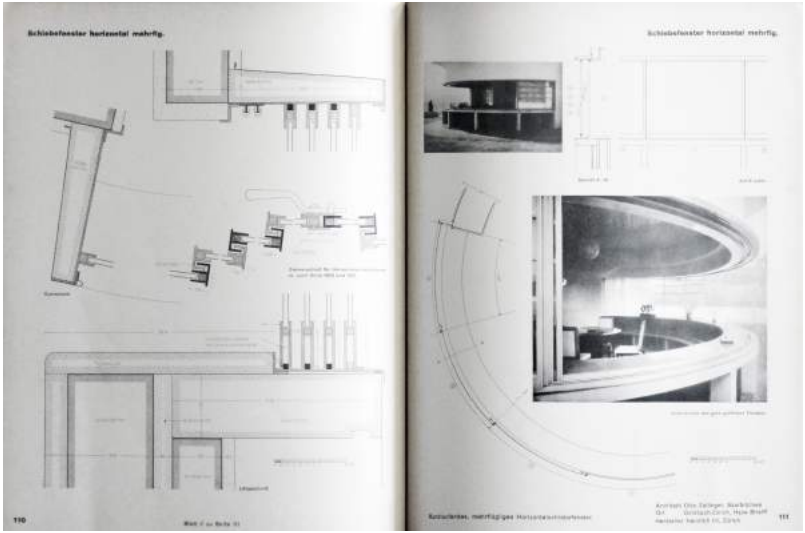
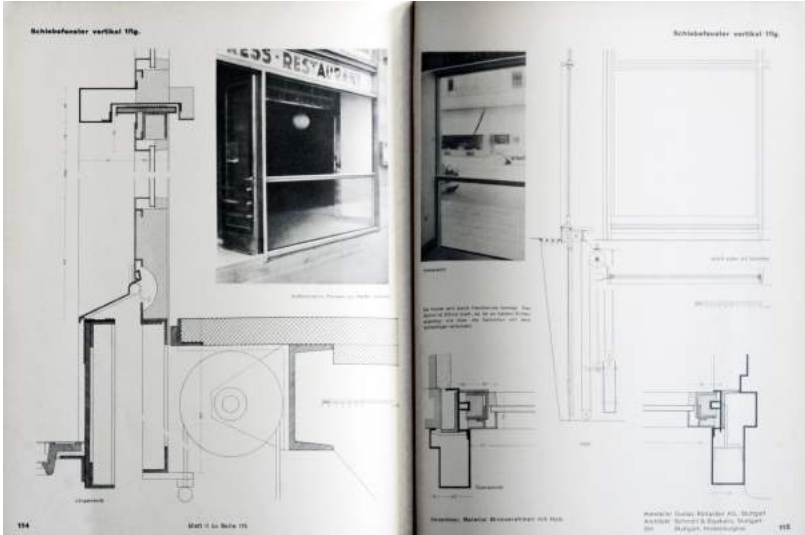
Pages from Paul Schmitthenner *Baugestaltung. Erste Folge. Das deutsche Wohnhaus. 1949*

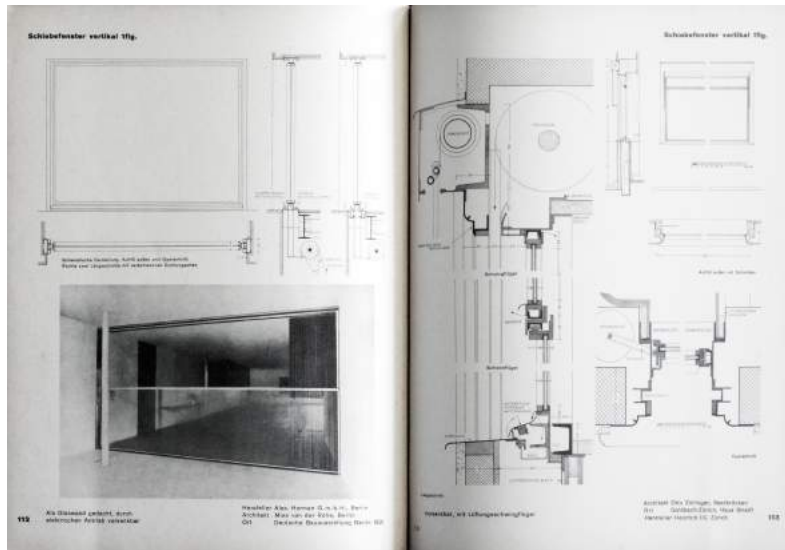
If in the form of counterargument, his text speaks articulately of his engagement in the contemporary discourses of construction, progress and expression. Building in its craft-based and technological forms are the basis upon which Schmitthenner built his pedagogy, to which Schwippert would have been exposed. Schmitthenner used the motif of ‘theme and variations’ to depict how traditional carpentry and masonry house building techniques can be adapted to a series of different appearances. He promised his readers “nothing new, but perhaps something forgotten,” which is “the meaning of material in its transformability and the significance of the measurement as placid and constant.”<sup>122</sup> The book’s illustration plates play out this contention, juxtaposing precisely drawn details with elevations of houses in the style of those anatomical books, which depict a frontal view of a human being whose skin has been flayed along the body’s axis of symmetry to show internal organs. Construction was the way in which an architectural idea became embodied according to Schmitthenner: “all building is the conjoining of

material to mass (Körper) and space.”<sup>123</sup> Construction also rightfully limited the architect’s claim to authorship and reminded him of the primacy of craft: “Technology in building is always craft, even today with machines, cranes and bulldozers... the building art is always an impersonal art form.”<sup>124</sup> The reciprocity between construction and architect meant that materials were simultaneously the *sine qua non* of architecture as its embodiment, and the matter subordinate to architecture’s formal predilection. Similarly, in construction, the architect found the moment in which his will was exerted but also in which he lost his authorial role to the distributed authorship of the building process. Although Schwippert was politically and stylistically distanced from Schmitthenner, his valuation of construction and the way in which he detailed retained an affinity for Schmitthenner’s building pedagogy. Schwippert’s experience within Schmitthenner’s pedagogy, perhaps coupled with his earlier interest in engineering, may well be the basis for his ability to integrate construction exigencies into the nature of the design process.

The dictates of the Modernist style, which Schwippert learned first-hand in 1925 in Eric Mendelssohn’s large and prolific Berlin office, made the expression of material and technological logic a programmatic design consideration. During his employment there, Schwippert was responsible in Mendelssohn’s office for the renovation of a villa, from design to construction drawings to construction supervision.<sup>125</sup> The difficult translation of Modern architectural ideas into widely-ranging available building technologies would have been in particularly sharp relief in the context of a renovation project, but the challenge was evident in even iconic projects. Although a central rhetorical and design agenda, material expression in interwar Modern architecture was, of course, not necessarily ‘true’ to its construction. By the late 1920s, the building industry had caught up with architects’ desires but this transition was still incipient during Schwippert’s internship with Mendelssohn. Mendelssohn’s iconic Einsteinturm in Potsdam (1924), for example, was actually a masonry building plastered to look like cast concrete. By contrast, the

famous retractable windows in Mies' Haus Tugendhat (1929-1930) had parallels in high-precision window hardware available as a standard product for commercial and retail shop fronts.





Three examples of window hardware used in commercial settings, including the pocketed single-hung windows for which Mies' Tugendhat House was famous. A. Schneck, *Fenster aus Holz - und Metallkonstruktion und Maueranschlag* 1942, pp. 110-115

Nonetheless, even then, when the inherent capacity of surface materials was in conflict with the expression desired, other materials which facilitated that expression were concealed behind it, as in the Krefeld villas by Mies van der Rohe (1927/1928),<sup>126</sup> with whom Schwippert also established a life-long friendship during his time in Berlin. That period, in which he enjoyed direct contact with such leading protagonists as Mendelssohn and Mies as they finessed the relationship between material fact and its expression, may well have demonstrated to Schwippert the value of integrating his construction knowledge into his approach to architecture.

Schwippert returned to his family in Duisburg after his time in Berlin and tried with modest success to work independently via family commissions. Beginning in 1927, he assumed a teaching position in Aachen at the Craft and Applied Arts College (Handwerker- und Kunstgewerbeschule) at which Rudolf Schwarz was director. While responsible for the architectural studies there, he developed a curriculum, which integrated representation, theory, construction and design. During this period, he also began to catalogue domestic furniture, and to speculate on designs that were both generic in form and subtly adaptable in individual

execution. His research on furniture, which began as an academic project and continued in the way he approached the work he did during the war, reveals much about his character as a constructeur. His interests define a specific and unique position which overlap the values of both industrial and craft production by seeking to negotiate between serial and bespoke design.

In 1930, the *Kunstgewerbeschule* in Aachen published the first iteration of Schwippert's research catalogue, entitled *Neuer Hausrat* (New Home Furnishings).<sup>127</sup> This earliest catalogue shows a series of tables, chairs and cabinets each of which combines rectilinear solid wood sections for structural support with plywood or textile webbing to create usable surfaces. In each case, the separation of elements into support or surface is made explicit in the objects' design, which emphasized the distinction between the two components. Connections were concealed by means of slots or intercuts. The furniture all shared formal characteristic and was intended to be combinable. In describing the concept behind the design, Schwippert wrote, "If I was concerned about a rational and useful form for each individual piece, I still did not neglect to think about the fact that these individual pieces should have a good familial relationship among themselves. They should be able to stand together in ever new combinations and get along well, in addition to facilitating as many types of furnishings as possible."<sup>128</sup>

The book's title page featured six photographs which emphasized the serial and component construction of each piece: at the top of the page, the photographs showed completed and partially completed chairs and side tables, lined up in precise, equally spaced rows to emphasize the repetition of identical pieces. The lower band of photographs showed component pieces, stacked and ready for assembly via the long vertical slots visible in the central photograph. In the lower right hand photograph, three identically dressed men look up at the camera from what appears to be their work assembling side tables. But these photographs belie the way each

component was dimensioned, not as part of a series but as an individual problem set of proportion, appearance and structure. For example, the catalogue included two related hard-backed plywood seat chairs, one with a vertical back for dining or desk (*Stuhl 2*), the other with an angled back for more relaxed posture (*Stuhl 4*). The two chairs differ in seat height, overall width and depth, as would be expected on the basis of their different purposes. The solid wood frame used in both, however, is similar enough in appearance to justify the expectation that this component would be standardized to facilitate serial production. Instead, Schwippert subtly varied the dimension of the wood frame elements, using 2.5 x 3.5 cm hardwood for the frame of *Stuhl 2*, but 3x3 cm components in *Stuhl 4*. An armchair in the same series is drawn with yet another dimension, 5x5 cm. These subtle differences, made on the basis of appearance rather than bearing capacity or serial production, indicate Schwippert's shifting value system within his design process, in which the repetitive, production efficiency-based values represented on the title page give way to a differentiated sensibility to which pure construction efficiency is subordinated. This is borne out in the preface Schwippert wrote to the catalogue's second edition, in which he stated, "The fact that this furniture is not produced serially in large quantity but rather piece by piece or in small series via a crafts-based process gave rise over time spontaneously to multiple changes of the same basic form, and it offers the possibility to choose at will."<sup>129</sup>

This same sensibility reemerged in a more systematic form in the furniture Schwippert designed during the early 1940s for his work on developing the architectural systems that would allow the occupation by German settlers of occupied Eastern Europe, commissioned by Heinrich Himmler's Ministry of the Interior in the context of the *Festigung deutschen Volkstum* ("Stabilization of German Nationhood"). This furniture continued a tendency already visible in the redesigned furniture shown in his 1938 edition of *Neuer Hausrat*, in which the lighter, more



modern materials plywood and visible webbing have been replaced by solid wood in heavier dimensions. Slotted connections have now been made visible, giving the furniture a more rustic, heavier feel in alignment with the stylistic dictates of the time. A child's crib depicted in photos is made from woven willow and stripped but unmilled logs, implying that although the construction technique and overall appearance could be reproduced, the specific configuration and dimensions would be unique each time the crib was executed because of its minimally processed materials. This approach to standardized furniture, both as rustic in appearance and as a set of instructions for variable reproduction rather than a basis for identical products in series, was the foundation for his furniture designs published in 1943<sup>130</sup> for the new German settlers to take along and, in the pioneer spirit, build for themselves in their new homes. The brochure drew, as Schwippert wrote in the jacket notes, upon both traditional techniques and upon "contemporary practices,"<sup>131</sup> combined to allow both skilled and unskilled builders to reproduce the designs despite variable access to materials and tools. It was intended as both a pattern book and as a primer, embracing variation in the designs depicted:

"And even if we believe that many will receive useful instructions, if not teaching, in the form of these patterns, then we also expect at the same time that some of them, inspired by these precedents, will recall appropriate forms and means as were practiced earlier or that one person or another will invent something better that did not occur to us."<sup>132</sup>

Here, and throughout his career as an architect, Schwippert moved comfortably in the terrain between forms determined *a priori* by the architect and those found in the process of construction. Although his construction documents bespeak a decisive, knowledgeable designer with full understanding of the construction implications which each design decision has, his interest in the assembly of each element, the expression of that assembly, and the latitude to be found between the repetitive and the unique remained evident in the architectural expression which characterizes his buildings.

## **Construction Context: Bonn**

The challenges faced by Schwippert and his on-site architects during the short, intense period of construction derive from the physical limitations of the German construction industry and building products, limitations that were turned to opportunity by the architect in his ambition to make the building a bespoke suit for the new government. The dearth of available products also offered the opportunity to envision graphics, furniture, decorative arts, hardware, cabinetry – all were designed and construction documents drawn by Schwippert's office. Little of the highly developed façade construction industry which had serviced Germany's extensive interwar and early war-time industrial construction sector had survived and rolled metal profiles specific to façade construction were difficult to obtain, even for as high-profile a project as the new seat of the parliament. Schwippert and his associates would be compelled to tuck between simple, traditional means of construction and, at the moments when nothing else would do, the tactical insertion of specialized construction.

The construction context in Bonn at the end of the 1940s was as dire as it was elsewhere in Germany, in terms of both available labor and construction materials. Bonn's university, one of the modern universities founded on the principles of Humboldt in 1818<sup>133</sup> and the city's most famous landmark, had been entirely destroyed in a bombing raid in October of 1944. The efforts to rebuild, which began as early as March, 1945, were originally conducted by faculty, and a few months later, became a requirement for matriculation. The so-called *Bautrupp*, led by a professor of art history and the head of campus building, comprised younger students and returning soldiers in August, 1945; with or without construction knowledge, these students acted as masons and carpenters, rebuilding walls, forming rough openings for windows and doors, and securing roofs.<sup>134</sup> In the winter of 1945-1946, these same students were sent out to fell trees for firewood. Numerous reports made in 1946 and 1947 identify the problems stemming from the

lack of skill, physical strength and maturity; nonetheless, student construction assistance was so central to the city's rebuilding that the *Bautrupp* was assigned to work on the town hall and the Poppelsdorf palace.

Construction material was equally difficult to come by, evidenced by the practice of recovering brick from the debris of older buildings. In Bonn as in other cities, the ruins were a resource for organized and individual labor in the years between the end of the war and the currency reform of June, 1948, exactly a year before Schwippert's building went into construction:

“While an army of ‘rubble-seekers’ were out – people who searched through the ruins for useful objects for their own building projects – there were already transport groups in the old city who brought hand-cleaned bricks to trucks and brick fragments to a set-up that made new blocks from milled brick and a cement mixture.”<sup>135</sup>

Other accounts recall the difficulty of finding cement to reinforce the Rhine bank or the back-breaking work of breaking basalt for the revetments and bringing it to the masons by hand in wheel barrows. There was little in Bonn's immediate construction context to reassure Schwippert that he would have access to the labor and material upon which a new parliament building could draw.

### **Construction Context: Realizing ‘Transparency’**

The restoration of historic buildings and the reinstatement of pre-war housing stock offer only an incomplete comparison to the building, which Schwippert set about realizing. The plenary's long-span structure and large-scale glazing, the sources of the ‘transparency’ that would come to dominate the building's reception, could not have been conceived without assuming access to structural and detail metalwork. Although the industry was at best emergent in 1948-1949, metalwork was connected directly to the new Republic's hopes and self-image. Bonn's location meant geographic proximity to Germany's mining and steel industry in the Ruhr and Saarland

areas. This proximity was also one of identity, with the construction industry seen as the economic engine of the rebuilding effort begun in earnest with the currency reform of June 1948. The power of this connection between cultural and industrial identity in the new *Bundesrepublik* was part of the program of everyday life, as evidenced by a stamp series, issued in 1949 with validity until 1957 and entitled ‘Industrie, Handel, Landwirtschaft und Kultur’ (Industry, Trade, Agriculture and Culture). The series depicted the Saarland and was printed in France, the allied power responsible for the area. The series’ imagery linked Beethoven, born in Bonn, to the regional mining, smelting and industrial labor shown on the stamps, which bore the words, “Our economy in rebuilding (*Unsere Wirtschaft in Wiederaufbau*).”<sup>136</sup> One stamp in the series, showing molten steel and a smelter flanked by two figures, one holding a sheet of drawings, directly references “the building trades.”



Saar IV stamp series depicting construction, music and heavy industry. 1947.

[https://de.wikipedia.org/wiki/Briefmarken-Jahrgang\\_1947\\_des\\_Saarlandes](https://de.wikipedia.org/wiki/Briefmarken-Jahrgang_1947_des_Saarlandes)

Access to steel for construction was not without complication in early 1949. The structural steel for the *Bundeshaus* was furnished by the *Rheinische Röhrenstahlwerke* in Müllheim, which had been part of the *Vereinigte Stahlwerke AG*. Unified in 1934, the *Vereinigte Stahlwerke* spread across the Ruhr valley and had been the source of the fuel (coal), ore and steel used in the war effort. In June, 1948, the occupying forces subdivided the remnants of the larger company; the *Rheinische Röhrenstahlwerke* was one of the few intact operations to emerge.<sup>137</sup> Only a few

years later, these small, independent steel companies would again be combined under the directorship of some of the same firms which had led the industry before the war – Mannesmann and Thyssen – as was the case with the *Rheinische Röhrenstahlwerke*. As the industry developed, companies also defined their scales of operation and specializations, but in 1948/1949, this was not yet the case. Anticipating that the building industry would, as it had in the US, best serve steel manufacturing in transition to a new economic stability, forays into structural steel were common across different scales and specializations among steel manufacturers and metalworking firms.<sup>138</sup>

The structural system used in the *Bundeshaus*, as described in a summer 1950 trade publication,<sup>139</sup> comprised 30-meter trusses made simply by welding standard steel pipes in the appropriate form. It was a system used elsewhere in such contemporary long-span public buildings as the Apollo theater in Düsseldorf and the restored convention center in Cologne, as well as for industrial buildings. Its virtue from the point of view of the steel works was the universality of the component pipes from which it was made: these round pipe sections could be manufactured and stocked, then used for any number of purposes – for example, as both conduits and struts in the contemporaneous bridge built for the *Ruhr gas AG*. The tendency to use standard steel sections in different ways, rather than creating specialized sections for particular usage in one area of construction or another, was common until 1951/52, when companies began to identify particular market niches and shift to specialized products.<sup>140</sup>

While producing and stocking standard steel sections to be used interchangeably for different construction purposes was a sensible, and perhaps necessary, strategy for metalworking companies only emerging from wartime privation, it created difficulty for architects. Steel, and natural or anodized aluminum window elements or systems were far less easy to source, and in

most cases did not become commercially available until the early 1950s. Given Schwippert's investment in construction as the basis for design, and his commitment to completing the *Bundeshaus* from design to occupancy in nine months, there must have been careful consideration of just how to realize any large-scale glazing in his design, without being able to rely on prefabricated or factory-made building products.

### **Construction Context in Comparison: The United Nations Organization Headquarters**

Despite the obvious differences in scope, the way in which the facts of construction on the ground created great difficulty in realizing the *Bundeshaus* so quickly bears comparison with the United Nations headquarters, designed in 1947 and also completed at break-neck speed. The comparison, made by contemporary observers,<sup>141</sup> is also instructive in understanding the way that standard construction on site influenced how the building was designed and realized. Although the American construction industry was highly developed and diversified before World War II, its resources had been directed to technical rather than stylistic modernization. The limited resources expended on building during the war effort had not helped to advance the development of products for the construction of Modern architecture. In terms of the products offered, Germany's interwar building industry was more amenable to Modern architecture. As US manufacturers retooled for the post-war economy, however, Modern architects found ample opportunity to direct the industry towards their stylistic preferences.<sup>142</sup>

In the case of the UN, the complex's dramatic design history, negotiated by the young Oscar Niemeyer on behalf of Le Corbusier to allay the objections made by the original design team, pales in comparison to the force of New York real estate smarts behind its construction.

Although the complex was originally to be located outside of the city, its midtown site was strategically acquired through a barter brokered by Nelson Rockefeller with William Zeckendorf

for the land along the East River.<sup>143</sup> Rockefeller's architect of choice, Wallace K. Harrison, was retained to translate the design into working drawings and construction documents; his partner Max Abramovitz was named Deputy Director of Planning for the UN Headquarters. With the involvement of Turner Construction, the largest construction management company in the United States, to build the complex, the consortium of New York City architectural power brokers assembled for the project was complete.

At the time of the commission, Harrison, a partner in his own office since 1935 before beginning his partnership with Abramovitz in 1941, had managed to remain continuously busy since his days in the consortium of architects responsible for Rockefeller Center (1930-39). His built work included office buildings, public buildings and residential projects from public housing to luxury apartments— clearly his was an office familiar with the specificity of construction in New York City. In 1948 New York City, he was likely best able of all to turn standard construction to the purpose of realizing a civic architecture with little or no stylistic precedent.

Harrison's bread and butter was residential construction. New York's building trades had, in the housing boom years of the 1920s, refined a variety of fireproof steel construction methods in which variously sized steel beams were connected to make a structural skeleton which was then encased in cast concrete. The floors were made of flat arches, often in prefabricated terra cotta, spanning between beams. The flat arches also acted as lost formwork for slag-filled screed-topped floor slabs; metal anchors were attached to the arches from which metal lathe was hung and then plastered for the finish ceiling. This type of method was not only extremely fast to construct. It also allowed the structural engineer to tailor the structural height of each steel beam to its specific span, minimizing the cost of structural steel. Over time, as the various versions of this system competed and developed, the flat arches and suspended screed were replaced by cast concrete slab.

Harrison's office applied a variant of this construction technique at the United Nations with particular effectiveness in the Plenary Building, the complex's most public and expressive building. The building's long spans and non-rectilinear geometry were framed in steel, in direct analogy to both fireproof residential construction and to the ship construction which had comprised the bulk of the US steel construction in the 1940s. The transposition of a method familiar within New York's active residential construction context to the Plenary allowed Harrison to take advantage of the available know-how and materials on hand, and to insure that the strong, unionized trades on site were comfortable with the techniques.<sup>144</sup>

The Secretariat Building, on the other hand, followed the construction model of the office towers then rising in mid-town Manhattan. Lever House, built only one year earlier, offers a well-known example: steel frame, metal decking with cast concrete flooring, a systematized suspended ceiling with integrated ventilation and lighting and an equally systematized glass and aluminum facade. Here, too, the choices of materials, products and construction techniques were in lock step with the prevailing practices of New York City construction at the time. Without failing to admire the speed with which the United Nations Headquarters was realized, it is clear that this speed was accomplished in a climate of strong, skilled available labor and excellent access to construction means.

Much of the construction activity in Germany between 1945 and 1949 had been directed towards alleviating the enormous urban housing shortages caused by wartime destruction of housing stock and the influx of refugees. Masonry salvaged from debris for reuse in restoring existing residential buildings was initially the extent of available construction material. In many cities, more than half of the housing stock had been destroyed, and the majority of the remaining



buildings were unfit for inhabitation. The restoration of these units, relying on labor rather than on the greater access to material and technology required by ground-up building, was the first priority. Not until 1950 was there a uniform national act to provide funding for new residential building.<sup>145</sup> Under these conditions, there was little in the immediate construction context from which Schwippert could hope to borrow in order to ensure that the *Bundeshaus* would be realized as required.

### **Representing Bureaucracy**

The United Nations Headquarters also figured, if only briefly, in the 1951 *Damstädter Gespräche*, during which it was cited by Alfred Weber, a professor of philosophy with, by his own admission, “nothing to say as a specialist in architecture,” to exemplify the failings of Modern architecture to capture what he termed “collective experience:”

“... if architecture wishes to be more than building, if architecture wishes to become monumental and representative... then it must form a space from the spiritual collective... what has happened to the palace, to the place of occupation of the United Nations in New York? If one imagines the collective content, which the United Nations should represent, what has happened? Do you believe that a cigar box on its side should have resulted, which by the way has ruined the New York skyline, as far as I can tell?”<sup>146</sup>

The response from the architects present was telling, although it came from both a critic of and an advocate for the UN buildings. Otto Bartning, head of the *Bund Deutscher Architekten* and a co-organizer of the conference, was quick to shift the blame from architecture *per se* to the client, claiming that it was the UN “which did not understand how to formulate its needs in terms of ...its entire thought.” Bartning also criticized the building’s architecture, characterizing it as emblematic of the organization’s pitfalls, and as “a clear signal of the bureaucracy of the entire UN Organization.”<sup>147</sup> Hermann Mäckler, an architect from Frankfurt who would enjoy a prolific career in the post-war period, praised the building and its position among the other Manhattan skyscrapers. He reminded his colleagues, “It is merely an administration building, and I ask you,

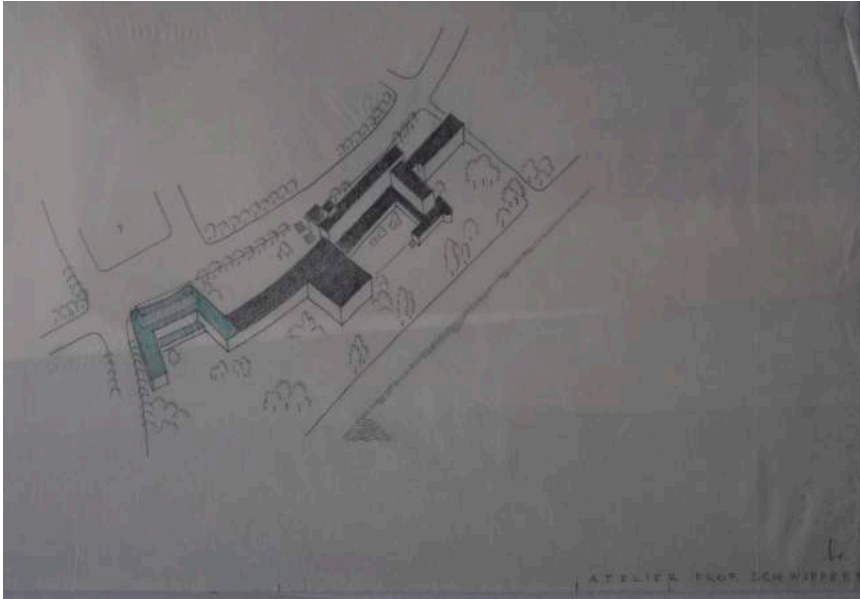
independent of the position you may take on architecture, what is this at its core other than the true production of space for the bureaucracy? Of course. It is in fact a bureaucracy that needs its space.”<sup>148</sup> Mäckler’s words express a very different concept of the “collective content” invoked by Weber, one that presages the impending era of the ‘man in the grey flannel suit.’

The “Haltung der Zurückhaltung,”<sup>149</sup> or discreet demeanor, for which Schwippert strove in his design for the *Bundeshaus*, required not only sensitivity to the excesses of monumentality and pomp exemplified by the governmental and civic architecture of the Third Reich. It also required the development of a specific architectural language that could navigate between the trivialization of the new German Republic expressed in terms of its bureaucracy – Weber’s “cigar box on its side” – and the desire to represent the Republic as more than the administration of which it was comprised – Mäckler’s “mere” administrative building.



Hans Schwippert, Colored axonometric. 1948. *Architekturmuseum TUM*

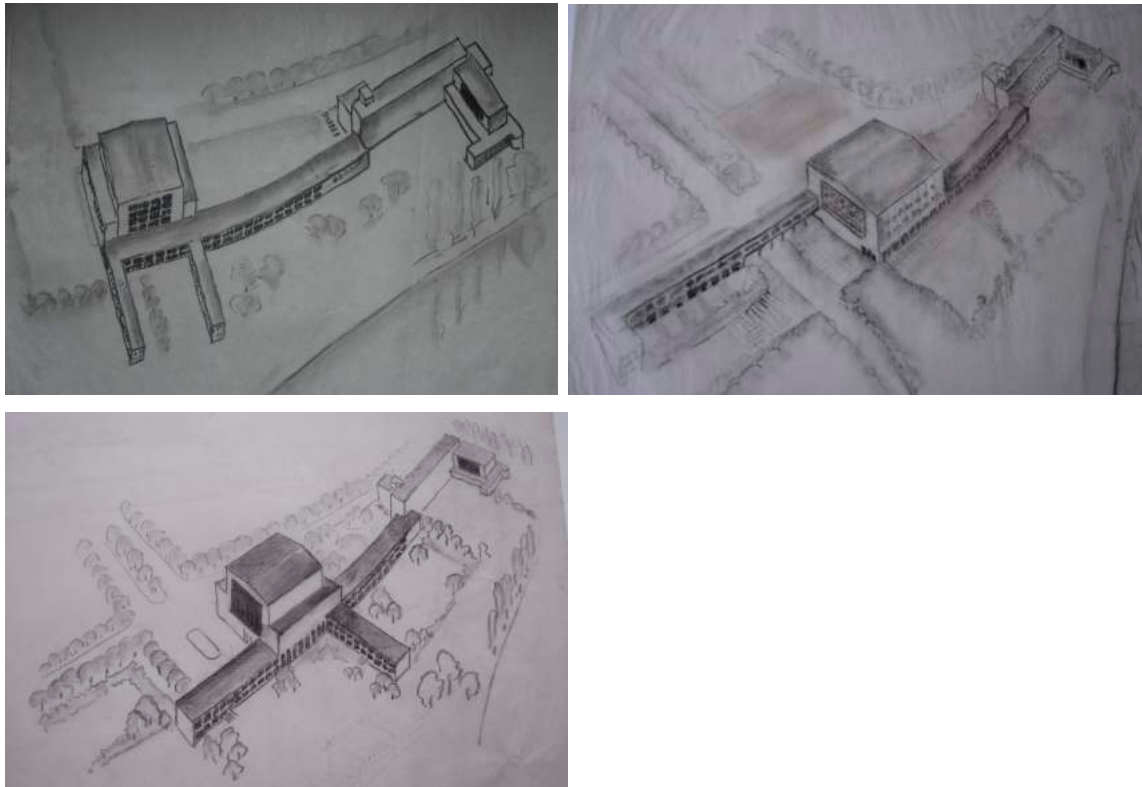
## Bird’s Eye Views



Hans Schwippert, Axonometric view. 1949. *Architekturmuseum TUM*

Schwippert received the commission to renovate the Pedagogic Academy for use as the new parliament directly rather than through a competition; his design for the project began as part of Bonn's successful bid to wrest the seat of the federal government from Frankfurt am Main.<sup>150</sup> His first proposals date to November, 1948, and depict a series of additions and changes to the Academy, a building in which the Bundestag was already meeting provisionally. Over the next several months, Schwippert produced numerous sketches of the complex, many of them developed via axonometrics or bird's eye perspectives, depicting the massing and fenestration of the plenary and new adjoining tracts. Ground was broken for the plenary in April, 1949, and the first meeting was held there on September 7<sup>th</sup> of the same year.<sup>151</sup> The pressure to design, detail, source, schedule and oversee construction on the building is hard to imagine. In this context, the luxury of drawing and redrawing aerial views, sketched and drafted, ink and pencil, is almost impossible to reconcile with the scale of this challenge. What do these drawings reveal about what Schwippert was looking to accomplish? How did he approach the problem of representing the building's parliamentary role in relation to its administrative function? And what

means did these design studies lend him for constructing a 'transparent' building despite material limitations?



Hans Schwippert, Axonometric views. January 1949. *Architekturmuseum TUM*

The drawings still preserved show a much more expansive initial design for the complex than was realized.<sup>152</sup> Early sketches in pencil<sup>153</sup>, dated to late January, 1949, show the existing Pedagogic Academy connected via the administrative office bar, to the plenary hall, located on the foundations of a preexisting air raid shelter. In this series of three sketches, the plenary sits like a fulcrum between two wings of office buildings. In all three, the building has a low-pitched gabled roof, with its primary glazing on the gable side. The sketches show two versions of a similar scheme, which can be associated with orthographic drawings dated from January 27-31, 1949. In one scheme, the gable side faces the river and is on axis with the entry, whereas in the other two sketches, the roof ridge runs parallel to the Rhine. The former scheme shows a basilica-like massing, with two lower wings as side aisles on either side of the main hall; in the

alternate scheme, the massing does not reveal the side aisles, although the plan of the plenary is the same in both schemes. In both, too, the directional massing of the overall volume does not express the centralized square floor plan.

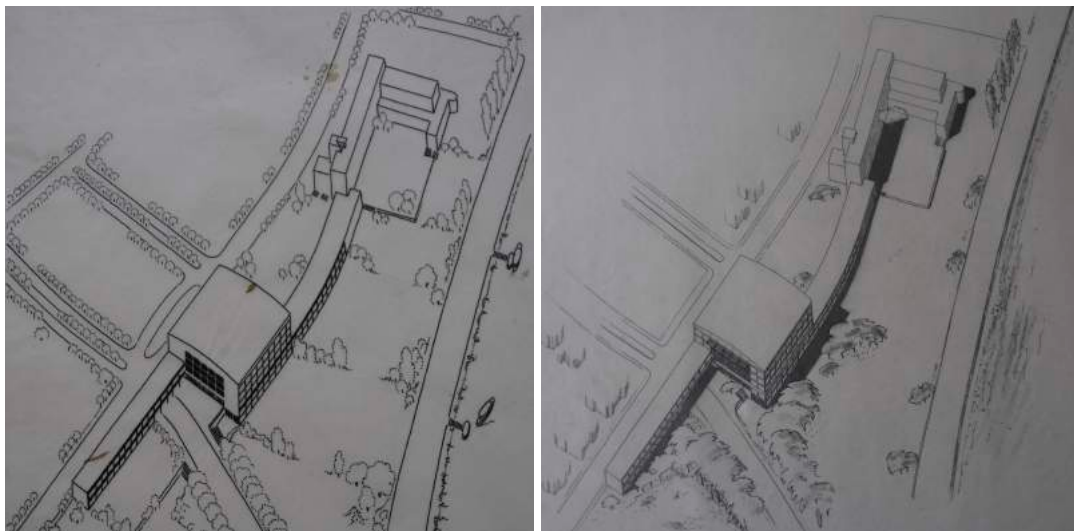
While he worked through different volumetric solutions, clearly keeping in mind the need to add office area in successive phases, Schwippert also rendered the facades of his complex with detail far greater than would be expected from initial massing studies drawn in soft pencil. Each drawing indicates the testing and development of fenestration strategies, many intended to relate the large plenary building to the office wings; unlike the design of the UN Headquarters, Schwippert's design intent seems to have been to represent if not the integration, then at least the balance of the bureaucratic and congressional functions.

### **Initial Massing and Articulation**

In these early sketches, Schwippert identifies two separate approaches to façade articulation, both of which he continued to develop in subsequent three-dimensional drawings. The first is to find a window format and dimension that could be applied to both plenary and office building. Schwippert seems to have decided quite quickly that the primary glazing on the plenary should be on the gabled side, and should occupy a large, consolidated portion of that wall. But in the sketch in which the glazing is facing the river, he shows this area as sixteen tightly spaced, individual windows with the same format as those in the office tract that the façade adjoins. This same sketch proposes that the two aisle-like wings that flank the plenary are continued by two thinner office bars running perpendicular to the Rhine; both elements share like-format, small windows. In a sketch showing a related version of the plenary with basilica-like massing, Schwippert simply embeds one of these 'aisles' into the office building, distinguishing this part of the office volume from the rest by its height and by its fenestration, which picks up the rhythm and width of the office windows but conjoins them into a single, vertical window element. In

another sketch, Schwippert has moved away from a gabled, basilical plenary to a flat pyramidal roof on a cubic volume, the expression he would ultimately retain. Vertical windows at the base of the plenary continue the horizontal line struck by a lower, adjacent office wing; the plenary's large glazing is shown as five vertical windows of similar format, which are then picked up by another, taller office wing.

The second approach, which Schwippert would continue to study throughout his various versions of the complex's massing, foresaw a surface grid on the long façade of the plenary and between the windows which comprise the primary glazed area on the gable side. Light construction lines imply that Schwippert first drew this grid across the wall surfaces to guide his placement of windows – the windows on the plenary's long side maintain the rhythm and format of the office building wing it adjoins – but in later drawings, these grids would become more pronounced. The low relief of the skeleton implied an open, infill facade, despite the fact that the walls on which they were laid were more mural than transparent.

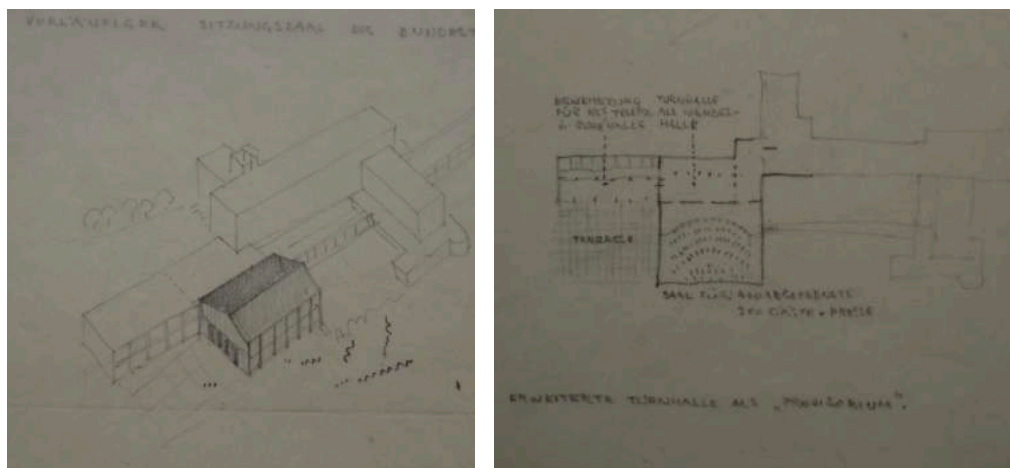


Hans Schwippert, Axonometrics in ink. 1949. *Architekturmuseum TUM*

Once Schwippert had settled on a parti, which placed the square plenary between two office wings running parallel to the Rhine, his office generated three more detailed, drafted

axonometric drawings of the scheme, two viewed from the river and one from the street side, to accompany plans dated January 31, 1949. These drawings depict more precisely the strategy that would have allowed access to the plenary from two sides, one facing the street and the other perpendicular to it, by driving beneath a portion of the office wing raised on columns. A transitional horizontal band is used on the facade to integrate the height of the adjoining office wings into the plenary. The expression of the building complex is, moreover, significantly different from the earlier sketches. A slightly bowed roof parallel to the Rhine lends orientation to the square plenary. In the pencil perspectives, a surface grid that surrounds three smaller windows is continuous across the two office wings and the plenary. On the gable sides, the grid is left blank on the building's corners, but brackets the five bays of glazing at the center of the façade. A set of brise-soleil tops the central windows. The grid, which also appears although less extensively in the ink perspective, does more than simply unify the disparate buildings. It gives the appearance of larger-scale glazing, and the semblance of skeleton construction, to all the buildings without requiring the detailing, manufacture and installation of a construction typology – curtain wall – that might well would doubtlessly have interfered with the construction schedule.

### The Compact Complex



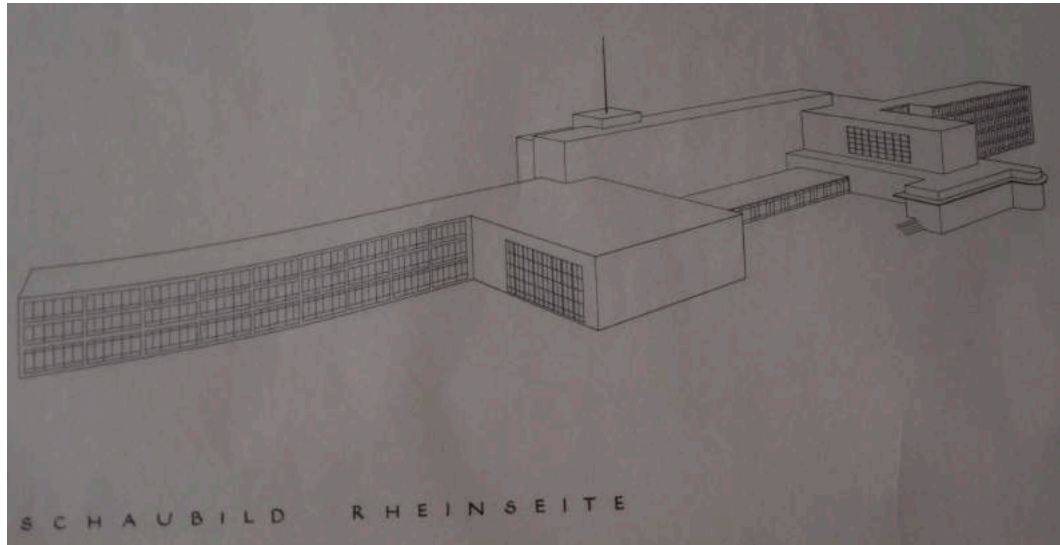
Hans Schwippert, Sketch, Axonometric and Plan. Undated. *Architekturmuseum TUM*

In late February, 1949, the project budget was reduced and the complex reconceived as an addition to the original building, using as much of the existing building infrastructure as possible.<sup>154</sup> A delicate pencil sketch dating to February describes Schwippert's revised design intention, balancing the expression of a gabled plenary building against a grid that subsumes it within the adjacent buildings and their subordinate functions. The thumbnail axonometric indicates gridded pavers on the terrace, and tiny figures standing between the plenary and the river's edge. A plan sketch below shows centralized seating within a square plenary, although the axonometric above seems to indicate a rectangular plenary with a roof ridge parallel to the river. The tension between centralized hall and directional hall evocative of a basilica is evident throughout the design process.

One last pre-construction drafted perspective showing Schwippert's signature and dated March, 1949 shows the most relentless use of surface grid and fenestration to unify the new complex's parts. This is one of the few surviving perspectives taken from eye level rather than from above, a viewpoint that makes it even more difficult to identify component buildings. Except for the slightly peaked roof receding towards the drawing's left edge, there is no indication that the plenary in the foreground is in any way exceptional. The river façade of the new buildings appears small in comparison to the existing academy, which had been dwarfed by the complex as rendered in Schwippert's earlier designs. It is subdivided into an unequal grid of two shorter storeys below and a larger unit above. To the right of the image, a flatter building – designated as a restaurant in two diagrammatic drawings from the spring of 1949 – abuts but does not pick up the horizontals of the existing building. The lower floor of the restaurant building shows small, square windows within the lower grid unit, with a set of four large doors near the building's center; above, filling the total height of the larger grid unit, are bays of what appear to be four



windows, rendered so dark that the lines between window elements is hardly visible. The plenary building is rendered with the same four dark windows in each of the four central grid bays. It is almost impossible to differentiate the spaces behind the grid, or even to know what is intended as glazed, or what is intended to be only surface articulation.



Hans Schwippert, Axonometric in ink, 1949. *Architekturmuseum TUM*

The realized complex, as shown in an axonometric of November, 1949, dealt differently with the problems studied by Schwippert in all his earlier design drawings, finding more subtle means of creating affinities by virtue of window formats, shared horizontals and wall surface articulation.

The plenary's river façade is blank, closer in expression to the *Sachlichkeit* of the original building than to Schwippert's design studies. Its relationship to the adjacent restaurant is asserted by alignments in the window mullion heights, and in the mullion details. The corner between the two building elements is treated as if the glazed surface had simply turned the corner. In the office wings, however, Schwippert's studies of the implied skeleton-and-infill provided by a grid were fruitful. Although from the inside, the relatively small offices had high sills and relatively standard-sized windows, the building's exterior is read in relief: a white foreground grid, grey basalt cladding as infill, bronze and aluminum framed windows give the impression of

a larger-scale façade treatment commensurate with the scale of the plenary. By carefully calibrating glazing and façade articulation, Schwippert was able to convey the sense of much greater glazing and ‘transparency’ than the building in fact had.



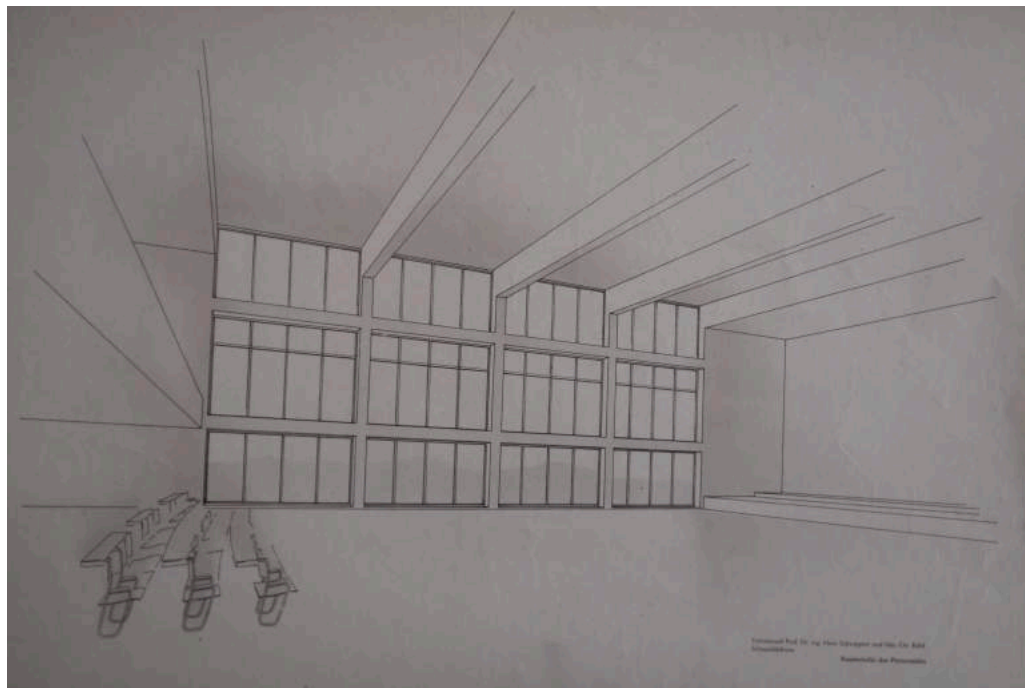
Bundesarchiv, B 145 Bild-F080774-0014  
Foto: Wiegmann, Ludwig | 9. Februar 1989

*Bundeshaus Bonn, Façade of the Schwippert-designed north wing during demolition in 1989.  
[https://upload.wikimedia.org/wikipedia/commons/2/2d/Bundesarchiv\\_B\\_145\\_Bild-F080774-0014,\\_Bonn,\\_Bauarbeiten\\_im\\_Regierungsviertel.jpg](https://upload.wikimedia.org/wikipedia/commons/2/2d/Bundesarchiv_B_145_Bild-F080774-0014,_Bonn,_Bauarbeiten_im_Regierungsviertel.jpg)*

### **Transcending Transparency**

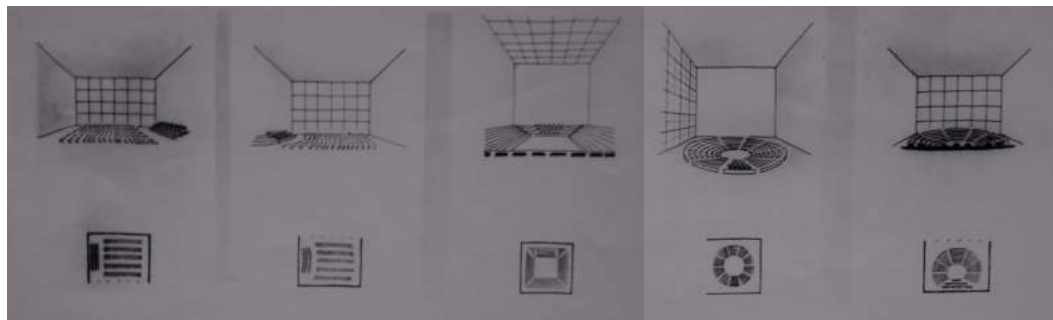
When Schwippert speculated on the possibility of satisfying the contemporary “yearning for light housing, for brightness, for openness”<sup>155</sup> even without the material means most amenable to it, he envisioned more than the tricks of surface articulation tested in his axonometric sketches. Even before he had conceived the new complex as a whole, he had begun to study the space and orientation of the plenary in a series of sketches completed in November, 1948. He worked through a progression of lighting conditions and seating geometries from one referencing the temporary plenary in the gymnasium of the Pedagogic Academy to concentric circular

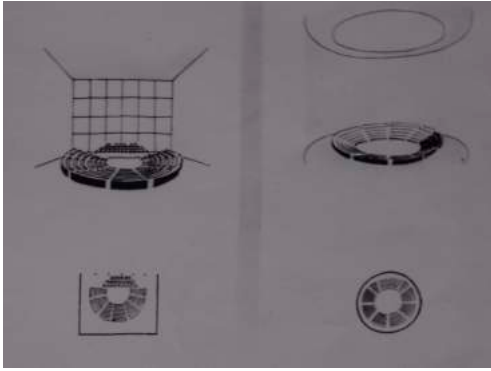
arrangements, both symmetrical and asymmetrical to their lighting sources. The series' geometric exploration recalls Schwarz's *Vom Bau der Kirche* of 1947 in its attempt to unify the meaning and virtues of both directional and centralized organizations. Schwippert's early axonometric sketches of massing and fenestration may also be seen in the context of a 'transcendental' transparency, conceived in analogy to the churches he and Schwarz designed together.<sup>156</sup> In these projects, transparency was in the service of daylight, which embodied literally and metaphorically the light of the world and the light of God. This conviction about the physical relationship of the building's occupants to one another, and to carefully orchestrated natural light, had both immediate and transcendental meaning for Schwippert's plenary studies. Both the seating configuration and the daylighting offered means beyond those of materials – glass and steel – with which to achieve transparency despite the physical limitations around the building's construction.



Hans Schwippert, Interior perspective. *Architekturmuseum TUM*.

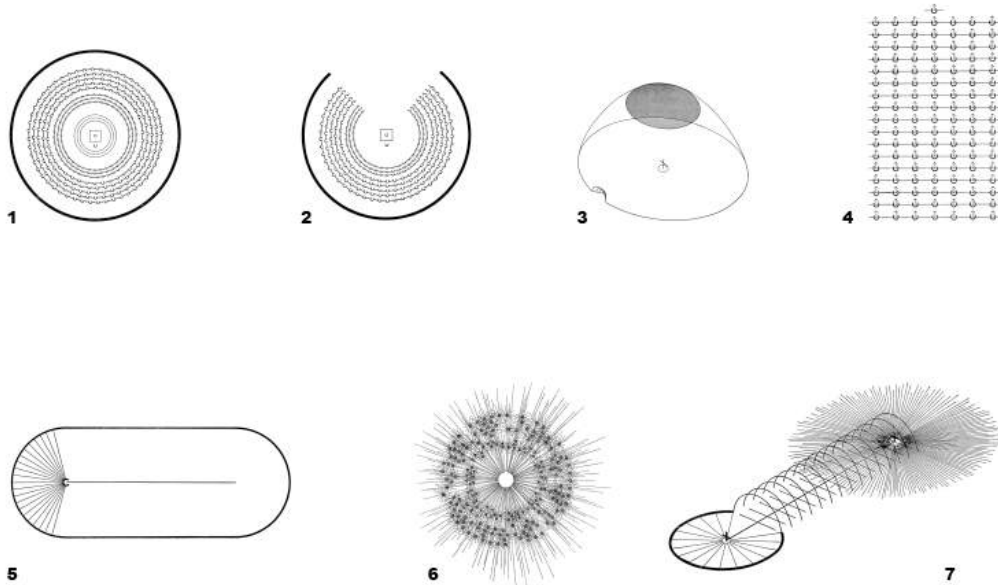
The earliest interior perspective drawn by Schwippert's office to support Bonn's initial bid depicts a simple long-span hall in analogy to the gymnasium provisionally used by the parliament in 1948/1949. In this scheme, the original gymnasium was to be reused as an entry hall, with the new plenary at a slightly higher level adjacent to it. The plenary was a rectangle, Golden Section-like in plan proportions; it featured a traditional dais on its western end, perpendicular to a large glazed wall overlooking the Rhine. Although the reference to the original gymnasium was evident in the glazing – three by four bays of four windows located in a generously-dimensioned structural grid that corresponded to the depth of the ceiling beams – the orientation of this new glazing was more appropriate to the view out rather than, as in the original gymnasium, the view in. In the inked perspective, a light grey wash indicated the landscape outside these windows, counterpoised to a subtle indication of light entering the room on the floor in front of the window. Seats were ganged in rows, as in a lecture hall or classroom. The hall would have been entered in two ways: either on the south to afford a view towards the window wall, or on the east, from a side corridor, on axis with the dais. The two entries and the side-lighting defused the otherwise hierarchical plan, but the perpendicular geometries of dais and seating were completely distinct from each other.





Hans Schwippert, Sketches for plenary layout. Undated. *Architekturmuseum TUM*

An abstract rendering of exactly this layout is the first of the seven diagrams Schwippert used to describe the progression in thinking to the solution he would ultimately propose. Each variation, like those proposed by Schwarz, seems to consider an appropriate balance between hierarchical or directional space and centered space. In *The Church Incarnate*, Schwarz designated the long, directional plan “the sacred journey” in which “sheltering space turns into the path leading toward the goal which lies ‘ahead.’”<sup>157</sup> He writes of the centralized plan, “sacred inwardness... Through the unending chain of hands the ring links human being into human being. Through their hands the individuals exchange themselves for the higher form and in doing so, they grow stronger. When people know they are at one they form the ring in accordance with an inner law... Ring is inviolability.”<sup>158</sup> Schwarz also ascribes a relationship to light for each these different liturgical spatial types specific. His final church type conjoins the processional, internalized and extraverted typologies. Internal geometry was not the only way in which Schwippert’s *Bundeshaus* expressed its debt to Schwarz. In Schwippert’s bird’s eye views, discussed in detail above, the roof’s low peaks and curves, the walls’ surface articulation and the way in which glazing was placed referenced Schwarz and Schwippert’s *Frohleichnam* in Aachen, and Schwarz’s articulated concrete frame and infill façade churches, such as St. Mechtern (1946-1954) or the East façade of the Gürzenich in Cologne (1949-1955) among others.

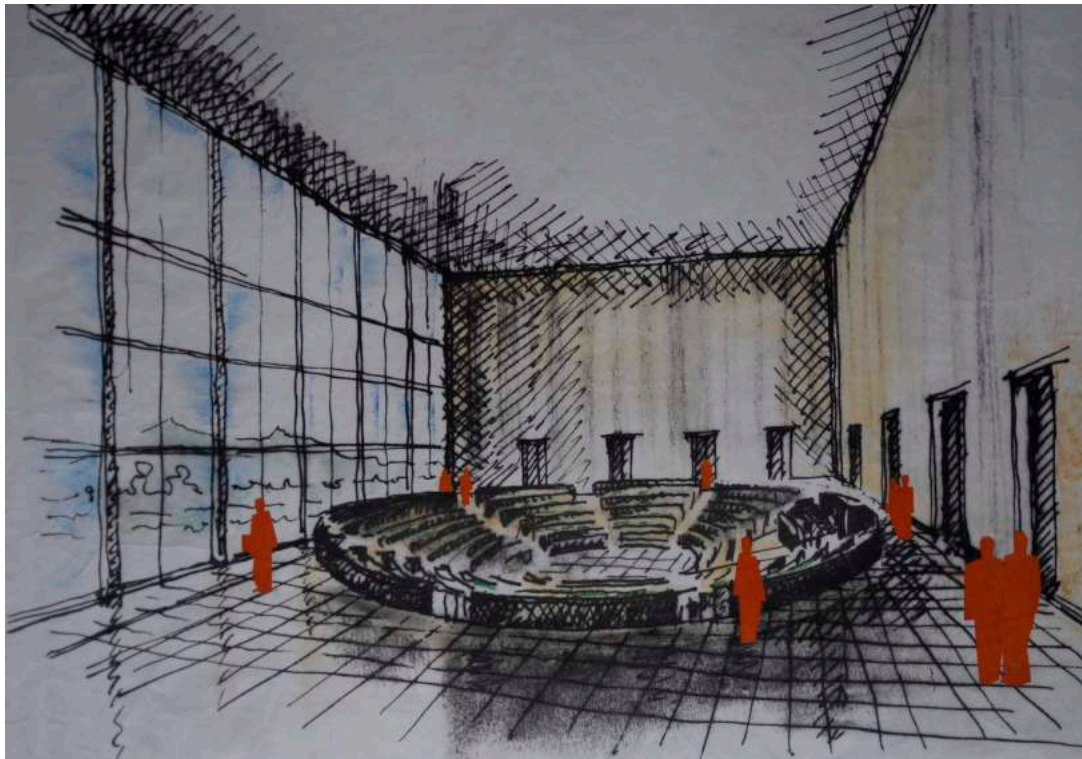


Schwarz's Seven Church Types from *Vom Bau der Kirche* 1947. p. 22, 46, 65, 78, 106, 124, 131

Schwippert's studies vary the relationship of dais, seats and glazed wall to one another. The first scheme more or less replicates the situation he had found in the existing gymnasium, a reference that would have been useful as a known baseline to everyone involved in the design process. In the second scheme, he left the glazing perpendicular to the hall's orientation, but introduced concentric curves in the dais and seating as a common geometry to mitigate against the geometric distinction between dais and seating in the first sketch. The third sketch went further, integrating the dais into the seating, which is organized as a series of concentric squares within the square room, and punctuating it with aisles at 45 degrees on the corners. Underscoring this centralized organization, daylight enters evenly from above.

In the fourth sketch, the dais has almost disappeared into the round seating, which is sectioned into wedges. It is recognizable only by comparison with the long benches depicted in the other

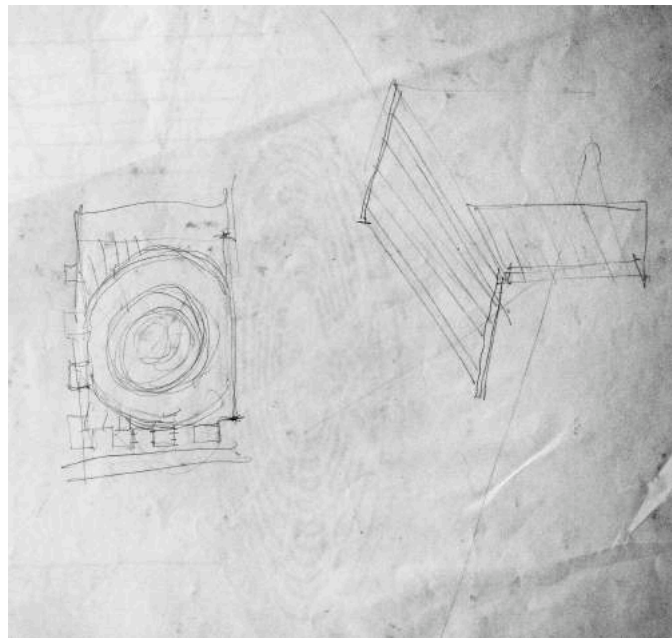
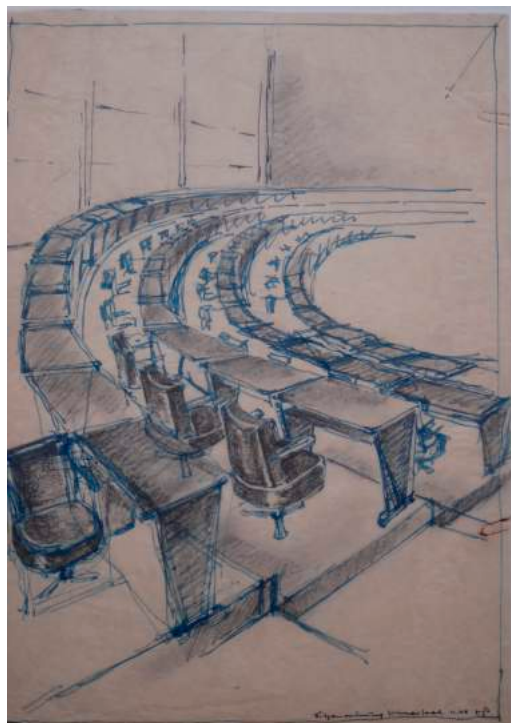
wedges of seating. The large glazing is perpendicular to the dais, but this relationship was reconsidered in the next two sketches. Both schemes revert to a linear dais, distinguished from the surrounding banked, circular seating, but each sketch studied a different relationship to the glazing: the first seems to depict the view from the dais towards the backlit seating, the second reversed this relationship to show glazing behind the dais. His last sketch shows concentric seating in a round room with a round centralized skylight. The dais and seating are subtly differentiated by the proportion of wedges allocated to them, and both are steeply banked to read as objects occupying the space in which they would have sat.



Hans Schwippert, Perspective study of *Bundeshaus* plenary seating. 1948. *Architekturmuseum TUM*

Schwippert derived from these abstract sketches several different typologies, which appear in his various design variations. He remained focused on the problem of locating circular seating in an asymmetrically glazed orthogonal space, as shown in a large charcoal and pastel perspective from 1948, in which the banked seating cantilevers above the floor. In proportion to the red

human figures collaged into the sketch, the floating seating seems reduced in scale as if children's furniture. Another, more realistically rendered ink sketch from November, 1948 shows Schwippert's skill as delineator and as designer: stepped platforms accommodate banks of upholstered swivel chairs and fixed desks, rendered using a soft pencil to describe the way the light coming from the large glazed wall would accentuate the curvature in the seating. Another tiny sketch, no more than marginalia, shows him working in plan on the idea of two perpendicular entries, as he had planned for the plenary in his first rendition.

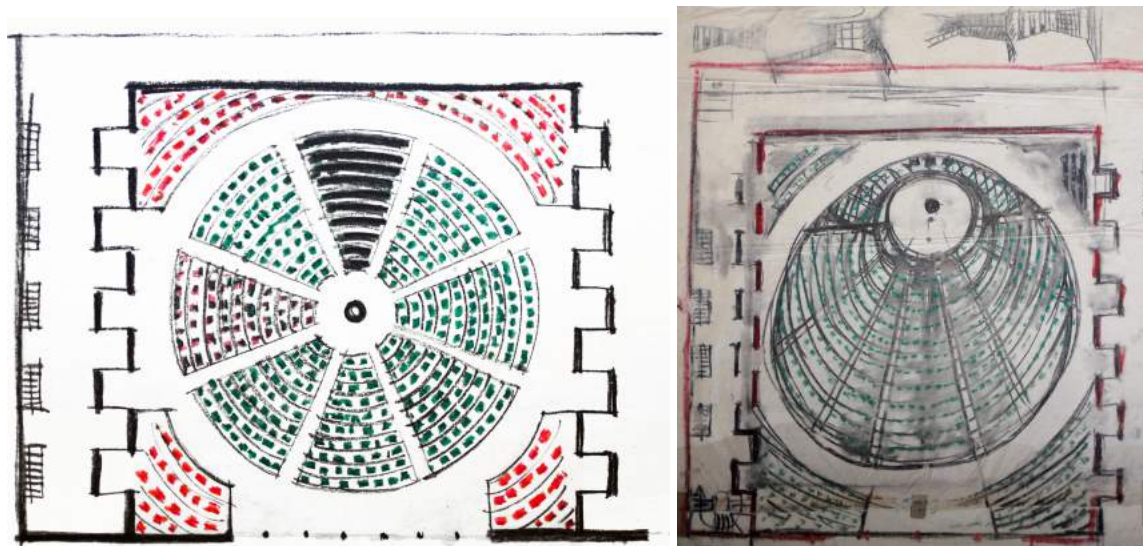


Hans Schwippert, Seating study 1948, marginalia, *Bundeshaus Plenary*. *Architekturmuseum TUM*

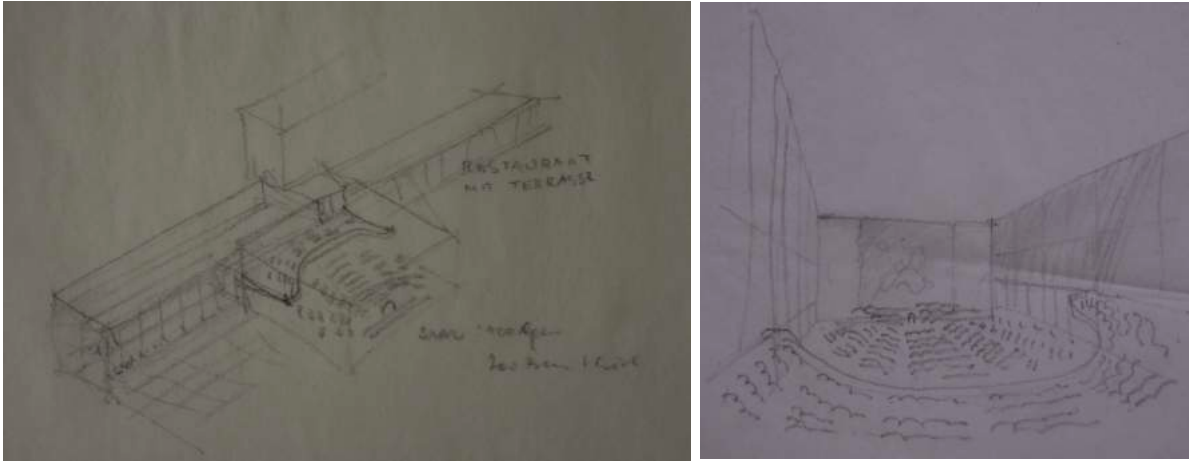
Two large charcoal drawings directly precede the plenary strategy that would ultimately find its way into the two earliest drafted plan sets and axonometrics, one with a peaked roof on the plenary and the other with a bowed roof. The first sketch retained the geometry of the abstract schemes, showing a square room edged in meander-like entry vestibules and occupied by concentric seating subdivided in wedges. The second sketch resolved the tension between centralized and directional organizations by placing the interior circle off-center in the larger



circle of seating. The intersection of the two radial geometries created seating in which the occupants would see one another as in an amphitheater but would also know where to focus their attention. The hierarchy implied between the seating and dais was a central topic for Schwippert, and an effect he sought to avoid.<sup>159</sup> The marginalia on this sheet is also important for understanding Schwippert's thoughts on lighting. It shows three different ideas for glazing and wall articulation within the plenary: a large glazed area within a solid wall flanked by vertically articulated sidewalls; a glazed area in the lower half of a wall flanked by sidewalls with high clerestory glazing; and two hybrid versions, showing different ideas for the larger glazed area and the articulation of the sidewalls either vertically or via a clerestory. Large glazed areas would create glare, whereas clerestory lighting could illuminate the space more evenly and indirectly. Finding a balance between illumination and the symbolic dissolution of the wall was best studied on the interior spaces.



Hans Schwippert, Two plan studies for the plenary. Undated. *Architekturmuseum TUM*



Hans Schwippert, Sketches of plenary interior. Undated. *Architekturmuseum TUM*

Schwippert's innovations in the seating plan were to run aground on resistance from Adenauer, among others. In February, 1949, as he undertook a new set of designs for the complex, commensurate with a reduced budget, he returned to the initial sketches showing a linear dais surrounded by curved, banked seating. This strategy appears in plan, axonometric and interior perspective sketches. The corresponding interior perspective is also the earliest of the remaining drawings in which Schwippert depicted double glazing, on both sides of the plenary perpendicular to the dais. A version of this bilaterally symmetrical glazing was ultimately realized. Nonetheless, until quite late in the process, Schwippert pursued a scheme with a roof ridge perpendicular to the interior line of symmetry, lending directionality at least to the exterior of the plenary volume and tempering the hierarchy implicit to the interior symmetry.

### **'Das hellste Bundeshaus der Welt'**

A pasted-up layout of the unpublished monograph that Schwippert prepared in May of 1951 in collaboration with a graphic designer<sup>160</sup> suggests how Schwippert intended each aspect of the building's materiality to contribute to its political expression. Had it been completed, the book would have addressed many remaining questions about the building's material culture and

technical means relative to its spatial atmosphere and everyday life. It would have depicted the building as Schwippert imagined and understood it. As such, it was conceived to do justice to both better and lesser-known contributors to its realization, from craftsmen on the construction site to unidentified government administrators to top-level politicians. This is all evidenced in its structure, its images and its texts. For a scholar interested in the building's realization, especially the elements more essential to constructing its physically transparent components, the galleys are also a source of frustration: in the paste-up, the chapter dedicated to the windows is the only one that remained without content. Nonetheless, the layouts can be interpolated to explain why Schwippert claimed for the building "the dignity of a building of today, which with the economical and stringent means of a technical era attempts to earn the love of people. A small push towards openness and friendliness, a frontal attack against that which we call bitter seriousness."<sup>161</sup>

The book's introduction and text was to have been an expanded version of an article entitled 'Das hellste Parlament der Welt' (The Lightest Parliament in the World) by Will Grohmann, published in March 1951 in *Die Neue Zeitung* Berlin.<sup>162</sup> Grohmann characterized Schwippert's ensemble as "the most modern government building in the world, although it might also be the most modest":

"The first impression is that work is done here, and that the human being is the measure of all things... We rejoice in this solution since even countries with architectural culture embarrass themselves when they build for the government, one need only think of the awful palaces of the past.... Seen from an artistic standpoint, the *Bundeshaus* does not stand alone but in Germany, this connection between function and beauty is rare, although it is found internationally in the Scandinavian states, and in America especially since the emigration of numerous excellent architects such as Mies, Gropius, Neutra, Saarinen, Mendelsohn. The most recent architecture exhibition to come from the US to Europe in 1951 showed exemplary governmental buildings, even the UN Headquarters is a functional building. Beauty resides everywhere in the balance of materials, proportion and spatial sense, in the organization of needs, the desires of people and the landscape.

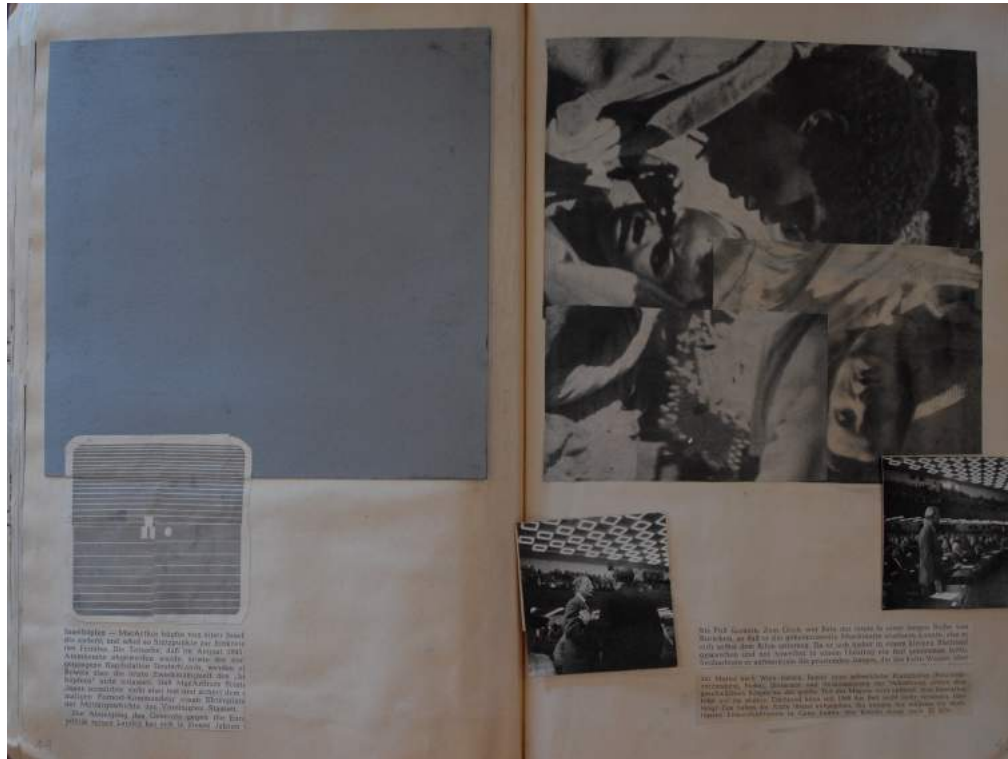
In the case of Schwippert's building, comparison is made to a university. This is good: what do we wish to represent here is not our reason, and a bit, too, our instinct for the situation.... Hans Schwippert has built using all the technical means at his disposal but without seeing technical achievement as an aim. The consequence was inexpensiveness, functionality and

extreme formal cleanliness. Although planning and construction occurred simultaneously because of the tight schedule, things were handled so rationally and work was executed so effectively with the construction companies that there were no failures.”<sup>163</sup>

Grohmann’s description praised the handling of construction and asserted that the building’s modesty was integral to its architectural value, not an unfortunate consequence of construction exigencies or professional incompetence, as had been implied elsewhere, to Schwippert’s lasting anger.<sup>164</sup> He placed the complex in the ranks of recent Modernist public buildings internationally, particularly those by the newly emigrated Germans in the US, as a measure of its appropriate representational capacity. He also attributed its success to its beauty, its “balance of materials, proportion and spatial sense, in the organization of needs, the desires of people and the landscape.” These three aspects – competent construction, representational capacity and aesthetic balance – were concisely articulated in the opening paragraphs of Grohman’s text, correspond to the contents Schwippert had intended for the photographic section of the book, as a register of those aspects of the building he most valued and hoped to convey.

The book was to comprise nine sections, interspersing images of its architecture, design objects, and occupants to depict the complex’s every day life. Chapters more architectural in title were juxtaposed to those focused on people, the things they used, and their daily activities. For example, sections entitled ‘Doors and Windows’ and ‘Honest Columns’ was to follow a chapter entitled ‘The brightest parliament in the world’ which was to open the book. A chapter entitled ‘Heads’ which shows images of the politicians and bureaucrats who work in the building, is followed by a chapter entitled ‘- and Seats’, a look at the plenary in session and at its furniture. The book’s final chapter, ‘What do you want to eat?’ would have included images of the restaurant as well as its menu and the items Schwippert had specified to lend the space its : table cloths, curtains sporting an abstract floral pattern, chairs designed by Marcel Breuer and Johannes Krahn.

Most of the photographs depicting the *Bundeshaus* in the layout were formal architectural images, many by Albert Ranger-Patzch. As full page spreads, these were to open the book, followed by architectural plan and elevation drawings. Thereafter, however, the kinds of images foreseen were harder to come by. Tiny photographs clipped from 35mm or medium format film contact sheets show delegates in the plenary on p. 45; Adenauer in top hat departing from the main entrance on p. 28; or three men and a women walking on the terrace in front of the plenary on p. 12. Elsewhere, the layout simply includes newspaper clippings as stand-ins for a grid of portraits, or for candid images of people caught in their daily routines. The letter from the graphic designer suggests taking “snapshots” (“knipsen”) to capture the openness and lack of formality that the architecture promotes. As Grohman described it, the building was “light” because it was “simple, human and friendly.”<sup>165</sup> More than a walk-through or a souvenir for visitors, the book was intended to convey the sociospatial potential of targeted transparency and modest, well-handled construction: an unbureaucratic bureaucracy inside the “lightest parliament in the world.”



Paste-up galley for unpublished book on the *Bundeshaus*. DKA NL Schwippert

## Windows and Doors

In February, 1949, Schwippert took time from his breakneck commission to make a special trip to a film synchronization studio in Calmuth for the purpose of “acoustical studies.”<sup>166</sup> This particular studio, Internationale Film-Union, founded in spring of 1947, had been built into a late nineteenth century country estate in the French sector of occupied Germany. Retrofitting an existing building as soundproof studios was then, and remains, particularly difficult because of sound waves carried not via air, but via walls, floors, structure and other materials, which can vibrate. By building new linings into the existing shell with the fewest possible points of contact, these vibrations are minimized and sound isolation achieved.<sup>167</sup> Although the plenary at this date was no longer foreseen as a retrofit, the construction work done at the International Film-Union offered a reference point for achieving acoustic separation without recourse to the kinds of

specialized building products, which would not have been readily available to Schwippert, and instead, by doubling the building's surfaces.

To limit acoustic transmission in the plenary, Schwippert, too, doubled every surface in the plenary hall, leaving an air gap between the exterior and interior surfaces. This was accomplished simply along the length of the masonry walls by constructing an extra layer only one masonry unit thick parallel to the bearing steel structure and its exterior masonry cladding. At the window walls, the double construction was an opportunity to adapt the structural requirements of the large glazed surface via a clever solution, which minimized the thickness of the mullions between window bays while providing a separated double shell.

As is evident in his façade studies, Schwippert never intended the plenary glazing as a curtain wall or self-supporting glazed structure. Instead, it is without exception rendered as groups of windows, usually four in a row, set into a horizontal opening. The structural grid between windows comprised the actual bearing wall, in which each primary vertical and horizontal mullion represents the structural steel cage, which supports the roof. The intermediary mullions are equally deep, although not to support the roof but instead to give the glazed areas the stability required to resist horizontal loading caused by winds. Such strong horizontal loads could best be resisted by locating material perpendicular to the main vector of force. The gap, which served acoustic separation could also be made to correspond to the dimension needed to resist wind load in the intermediary mullions, and to the full depth of the structural frame in the primary mullions. Thus, Schwippert used the depth of the double glazed wall of the plenary to conceal the vertical window wall structure, thin when seen frontally but more than deep enough to resist deflection caused by wind loads on the large glazed area. The interior glazing was positioned at an angle running between tangency to the exterior glazing on one end of each window to the full depth of the structural fin at its other end. The windows' fixed frames were detailed inside and

out to overlap the structural fin, concealing the structure and creating the optical illusion of a continuous glazing on both sides.



*Bundeshaus glass wall. Photo, Albert Renger-Patzsch. Architekturmuseum TUM*

The windows themselves were elegantly but simply built up. Similar details were used for interior and exterior glazed doors and windows, creating – one hopes – an economy of scales for the window manufacturer. The frames comprised two components, one that held the hinge mechanism and one that held the glass. The former was executed in natural aluminum and the latter, gold anodized. A reveal was left between the two frames, with the interior frame slightly proud of the hinged frame. This created the appearance of even greater thinness and delicacy on the front of the windows. The operable frame was significantly deeper, employing structural principles similar to those used in the plenary fins. Hinges were standard in execution, simple band or butt hinges, with none of the finesse seen in pre-war German architectural hardware. Glazing was inset, to create yet another plane of relief in the relationship of fixed frame, operable



plane, glass stop and glass. Using the bas-relief of grid, infill and windows, Schwippert lent all the punctured surfaces a filigree appearance, whether actually glazed as in the restaurant and plenary walls, or only implied, as in the office tract. The façade expression contrasted with the way in which windows were inserted into the white stucco walls of the existing Pedagogic Academy, and with the unbroken planar surface of the plenary wall that overlooked the Rhine.



*Bundesrat in session, showing dropped ceiling. Photo, Associated Press. Architekturmuseum TUM.*

To insure audibility of the spoken word, Schwippert, working with an engineer and the appropriate manufacturers, developed a suspended ceiling system. The system integrated lighting and acoustical performance into a checkerboard of flat and recessed panels. The need to design a component-based ceiling that optimized technical performance was a challenge well suited to Schwippert's interest in finding design solutions that engaged both replicable and unique aspects of production.

Aligning with the 2.25 meter on-center measurement between the primary structure of the window wall, the ceiling read as a series of squares set corner to corner, rather than as a grid. Except for the recessed panels, the squares of the checkerboard ceiling were outlined by surface-mounted fluorescent light bulbs. To accommodate the standard length of bulbs, the fluorescent tubes were offset from the centerline of each square, towards the center, and the corners of the bulbs did not abut. This negotiation between standard industrial and site-specific measurements created a geometry that underpinned the space's overall rhythm although its unassuming appearance could easily have been ascribed to a product designed for any number of applications. Manufactured by Siemens, the ceiling is emblematic of the special relationship between the architect and a re-emergent building industry, eager to develop economies of scale through singular, collaborative projects.<sup>168</sup>

### **Expression without Material?**

In the way that Schwippert approached its design, and in its actual realization, the *Bundeshaus* was a challenge to any simple equivalency between the means of an era and its expression as the only basis for Modern architecture. Perhaps, as Schwippert himself claimed,<sup>169</sup> he required the discussion at the *Darmstädter Gespräche* to extrapolate from his own experience and to recognize the possibility of transcending material determinacy as a valid intellectual and ethical position. As a designer of furniture and other everyday items, Schwippert showed an abiding interest in the balance between what was replicable – a technique, a geometric relationship – and what was more variable, whether the tree branches he had foreseen as building material in his designs for new settlers or the final interior fit-out of the spaces which would include his 'family' of standardized furniture.

The architectural idiom advocated by Schwippert at Darmstadt and represented by the *Bundeshaus* could, in various permutations, be found throughout West Germany in new buildings constructed between the war's end and the early 1950s. Over time, however, this idiom began to shift, a tendency associated as much with ideas about architectural expression as with the facts of construction. In Schwippert's case, however, the architecture and detailing of the *Bundeshaus* represented not only an idiom tied to that particular moment in his career, but instead, one with which he seemed most comfortable with as the work of his colleagues began to change within a year or two of the Darmstadt exhibition.

Despite the glut of building in West Germany, Schwippert chose to invest his energies in revitalizing the *Werkbund* and in teaching. The fewer than twenty buildings he completed after 1952 evidence many of the themes already evident in the plenary and office wings of the *Bundeshaus*: the effect of a surface grid on a façade, the manipulation of glazing and interior spaces to create perceived transparency, thinly-dimensioned window mullions, the balance between a singular decorative motif and its reproduction. His last building in particular, the College of Pedagogy in Neuss (1964-1970), offers some particularly beautiful examples of the latter: subtly varied ceramic floor tiles, bricks with circular patterns in low relief and burned to different hues of cream, orange, brown and black. To provide this balance of bespoke and reproducible required a particular building economy, one in which labor was less costly and materials more raw. Thus, Schwippert's ideal construction economy was quite different than the one towards which the building industry was moving in the 1950s, one which favored building products over semi-products that the architect could then assemble and reassemble to effect slightly different architectural expression each time.

Just as this environment was disappearing in West Germany with the growing *Wirtschaftswunder*, Schwippert gained the commission to renovate the most important Catholic cathedral in East Germany, the St. Hedwig's Cathedral in Berlin. During the project's seven year span, Schwippert produced and transmitted numerous sketches although he was unable to make frequent site visits. As he had in the 1920s,<sup>170</sup> he solicited designs for the ecclesiastical instruments from colleagues, including his brother. By the time the cathedral was inaugurated in November of 1963, Cold War politics had created an enormous spatial cleft between Schwippert and his work. The temporal dislocation between the West German Modernist architectural idiom of the mid-1950s and the idiom Schwippert used was also in evidence: it was the idiom of Modern architecture pursuing transparency in spite of spiritual threat and material scarcity.

### Chapter 3

#### **Sep Ruf's Akademie der Künste, 1950-54**

##### **Out of the Brown Inner City**

In the summer of 1950, as Hans Schwippert was fighting the brunt of critique contending that his *Bundeshaus* had been poorly built and planned, and almost a full year before he received the final payment of his architect's commission, Sep Ruf was awarded the first prize in a competition for the *Nürnberg Akademie der Künste* campus. The Academy of Art in Nuremberg had a remarkable history, beginning with its founding just after the Thirty Year War. In 1662, it became the first art academy in German-speaking Europe, and had been in continuous existence, albeit in different forms, since then.<sup>171</sup> Under the Third Reich, the school had benefited from Nuremberg's standing as the 'city of the *Reichspartei*', enjoying new status as an academic institution and a faculty directly engaged in the design and fit-out of the buildings planned for the city. An aerial bomb attack damaged the school's building in the city and it was moved to a castle on Nuremberg's outskirts. With the entry of the American army, the school was closed and its former building in the city repurposed.

In the spring of 1946, the military occupying forces approved the reinstatement of the Academy, at which Ruf became Professor of Architecture in 1947. On the one hand, the school represented Nuremberg's historic cultural importance and the legacy of its support of the fine arts; on the other, the school's privileged treatment during the Third Reich, including the intervention of Hitler in elevating its status in the hierarchy of educational institutions, lent it an aura in need of its own de-nazification. The appointment as director of Fritz Griebel, an artist whose work had been deemed *entartet* under the Nazis, offered the opportunity to renew the faculty and distance it from its National Socialist past.<sup>172</sup> The relocation of the school to a new site on the city's periphery, away from its negatively connoted 'brown' inner city, was intended in

the same spirit. Ruf's architecture carried the weight of this undertaking. Its spaces and its atmosphere, no less than that of the *Bundeshaus*, was asked to represent the future of a new democratic West German Republic, rooted in the best of Germany's cultural tradition but in clear opposition to its recent history.

After the corner stone was laid in 1950, construction stalled because of rising material prices and material scarcity during the Korean War. Construction began in earnest in Summer 1952 and the building was finally occupied in July 1954, after Ruf had left his academic position at the school to take up a professorship at the Academy of Fine Arts in Munich.<sup>173</sup> The construction documents for the building date from 1952-1955, when the final phases and punch lists were completed.

The complex, a series of atelier pavilions and courtyards strung along the axis aligned to the building containing all shared functions, offers "space of light and encounter," to borrow from Schwippert's description of his *Bundeshaus*. Its elegant, reduced tectonic language of thinly framed glazing, round steel columns, delicate roof eaves and white stucco'd surfaces is a simple but effective syntax for facilitating a dialogue between interior and exterior, built and implied volume, literal and phenomenal transparency. Ruf's construction documents reveal the effort and skill needed to realize these syntactic components from the most generic of means raised to the highest conceivable level of specificity: rolled steels L-sections, standard carpentry, ripped floor boards, material junctures redrawn by precise reveals with dimension lines annotated in millimeter units.

### **Form Follows Function?**

The *Akademie der Künste* in Nuremberg is exemplary of Ruf's immediate post-war idiom, which it shares with Ruf's Bavarian State Bank in the same city, both featured in the exhibition at the 1951 *Darmstädter Gespräche*. The Academy is put together from attenuated white exterior steel structural columns, minimally dimensioned roof overhangs shading continuous glazing, slender steel mullions pieced from steel L-angles, flush-detailed stucco'd walls. The transparency of the shaded glazing beneath the overhangs underpins the project's elision of indoors and outdoors. Held together along intersecting axes of circulation, a north-south corridor bisecting the main entrance and an east-west colonnade along which the atelier courtyards are aligned, the school complex's enfilade terminates in the broader landscape of the surrounding park.

This architecture is dependent upon detailing which achieved the greatest possible slenderness of all its leading edges without being overly precious or obtrusive. Rather than draw attention to the way the building is materialized, it deflects attention from it: all architectural elements are given a sleek profile, and the material palette is minimized so that the emphasis is on the resulting spaces rather than the component elements or constituent parts – plastered walls, white columns or steel-framed glazing – that defines them. In its details, the building's finished form offers little specific information about its genesis or even about the way it carries loads. The columns are dimensioned to appear almost too thin to carry the weight of the roof at which they end without offering any indication of the juncture between vertical and horizontal spanning members. The façade is kept stringently in plane, its overhangs shading the glass to insure its transparency. Plaster and white paint conceal differences in subcutaneous construction, which alternates in fact between masonry, wood and steel. Sleekness comes at the expense of expressing constitutive parts and assemblies, a practice which requires thorough planning and precise execution to account for the heterogeneous properties, dimensions and trades involved.

The plain appearance is deceiving. No less skill is required in its execution than in more luxurious, materially expressive contemporary buildings such as those by Mies or Aalto.



Sep Ruf, Nuremberg Academy of Art auditorium. 2011. Photo by author

At the same time, it would be inaccurate to characterize the *Akademie* as abstract or dematerialized in its expression. Essential tectonic roles are clearly identifiable in the case of each element, whether it is support, shelter or enclosure. This approach to tectonic expression, neither didactically explicit nor minimalist and suppressed, is exemplified by the detail between the walkway roof and its supporting steel column.





*Akademie der Künste* Porte-cochere and scupper details. 2011. Photos by author

Even as his idiom and interests as an architect changed and developed, this was a detail Ruf would repeat throughout his oeuvre. The challenge of the detail was the juncture of a round steel column and the rectilinear edge of the entry. The plane of the roof was intended to read as an extension of the ceiling of the building beyond, in juxtaposition to the exterior steel columns, which pin it to the ground. At the same time, the span between the building and the supporting columns is attenuated beyond what the thinly dimensioned porte-cochere roof would seem able to withstand. Ruf's solution at the vertical-to-horizontal meeting point subtly explains how the structure works, but keeps that explanation vague enough to allow the spatial effect of the long, thin, tenuously held roof to be dominant. Welded to the top of the two supporting columns is a flat profile, painted white to match the columns. The dimension of the flat steel is exactly that of the porte-cochere, minus what would be construed as the thickness of its top and bottom cladding. This dimensional correspondence indicates to an attentive observer that the roof's internal structure is also steel.

Elsewhere in the complex, however, Ruf was careful to denote steel only as bearing, as with the round columns, in contrast to the white-edged roof planes of roof, porte-cochere and exterior canopies, which connote shelter. By allowing this small piece of white-painted steel to mediate

between bearing and sheltering elements, he resolves a formal problem in a way that also helps communicate his tectonic syntax. The welded flat steel is a simple element, but accomplishes multiple, complex architectural purposes: a transition between two unlike geometries, a reveal and offset which allows the horizontal plane to appear to float, and a subtle indication of the “magic” behind the lightness of construction.

### **How It's Done**

A remarkably intact array of documents survives for the Nuremberg academy. These include drawings and sketches ranging in scale from detail to site studies; product brochures and specifications; and correspondence. In all, they attest to the enormous effort invested in achieving the desired tectonic effect, and to the array of materials and methods of production at the architect's disposal. They also describe the way Ruf negotiated standard construction as executed by skilled labor, and the moments at which his architectural ambitions required intervention into what might otherwise have been governed by a simple written specification rather than a drawing with millimeter tolerances. Ruf had supported himself immediately after the war not only through architectural work but also by selling building supplies.<sup>174</sup> This intimate knowledge of construction, from materials to trade practices, expresses itself in the way that his detail drawings pre-empt what otherwise might have been on site construction decisions, made by the worker or foreman.

The thoroughness and extent of the construction details for the *Akademie* might be attributed to the hiatus between cornerstone ceremony in 1950 and actual construction start two years later, a long and luxurious amount of time to consider how to put together a building; however, most of the construction drawings date to 1952 or later. The construction detailing of the Bavarian State Bank in Nuremberg, begun only three months after the competition was decided and completed

nine months later, is equally exacting, a fact which in no way negatively impacted its timely execution. Ruf's exactitude was strategically considered and well-communicated, if the speed and precision of construction is any measure.

Ruf's approach to detailing differed in important ways from other contemporaries. Unlike Schwippert's *Bundeshaus* project, in which natural stone, steel, concrete, masonry and a variety of finishes are all in evidence, the Academy was realized in a material palette that was starkly reduced, with exterior elements masked beneath a coat of white paint. Schwippert's drawings, even those for furniture, are accommodating of interpretation and interpolation made in the process of construction. Overall dimensions and forms are specified, certain important connections between elements are depicted, but otherwise, Schwippert, who had worked in cabinetry shops while a student, seems to have been happy to rely on the skill and pride of his craftsmen. For the most part, Schwippert's trust was well-placed, and corresponded to his interest in a Modernist architecture located between industrial and craft traditions. At other moments, as in the concrete work at the foot of the main stair in the *Bundeshaus* lobby, publicity photographs required the use of well-placed potted plants to conceal mistakes.

The construction detailing of Hans Döllgast, whose work in Munich Ruf supported in his capacity as advisor and competition juror and with whom Ruf occasionally collaborated, offers another relevant comparison. Döllgast took a more conventional approach to detailing, annotating drawings in ways that allowed work on site to be organized in a variety of ways while achieving the architect's desired outcome. Although his architectural idiom differed considerably from both Schwippert and Ruf's, they shared a comparable sense of how to turn the elasticity of traditional construction to their own specific architectural expression. Döllgast was equally strategic about the points at which to exert pressure upon traditional crafts and their methods. Although also

evident in documents for his ground-up buildings, it is most rewarding to study his detailing style in the context of his most famous project, the renovation of the ruined *Alte Pinakothek* in Munich by Leo von Klenze. An elaborate jigsaw puzzle, in which an entirely new structural skeleton and integrated building system was threaded through the old brick hull so as to remain invisible both to users and to art historical reception,<sup>175</sup> the building's construction documents were dimensioned in ways that seem unusual and even slightly outdated. Heights are listed on drawings both in absolute metric dimensions and, as had been practice through the turn of the 20<sup>th</sup> century, in numbers of brick courses. Even cabinetry detailing, which has the tightest tolerances of all construction trades, was noted in centimeters rather than millimeters. By indicating centerlines, axes, alignments and desired finished openings, Döllgast communicated his reliance on the foreman and his workers, and their ability to find the measure of their work in the relationships of whole and parts.

### **Theory, and Practice**

What motivated Ruf to pursue the particular tectonic expression he chose for the Akademie der Künste? How did he reconcile uncompromisingly pragmatic mastery of the construction process with the delicacy of achieving such subtle and reduced architectural expression? There is only circumstantial evidence, derived from his sparse contact with more theoretically-inclined circles, from which to interpolate what Ruf meant, and to what he was referring with his terse comments.

Although Ruf was not among those contemporaries who counted theory and writing among his primary activities, he took part in the two round table discussions organized by Alfons Leitl, architect and editor/founder of the periodical *Baukunst und Werkform*, in Aulendorf in 1946 and 1948.<sup>176</sup> These discussions, also attended by such prominent figures as Otto Bartning, Hugo Häring, Egon Eiermann, Rudolf Schwarz and Hans Schwippert, provided the basis for the re-

activation of the German *Werkbund*, the founding of *Baukunst und Werkform*, the defining statement published in the first pages of that magazine in 1947 and the preamble to the 1951 *Darmstädter Gespräche*, itself an event curated by the Aulendorf circle. Ten years later, in Leitl's open brief to Ruf which served as introduction to an issue dedicated exclusively to Ruf's buildings, Leitl recalled the role of those early meetings for their importance in augmenting the "unheroic" work of reconstruction with an effort to "turn and transform things."<sup>177</sup> Ruf was accordingly invited to speak at Darmstadt, also in recognition of his success as an advocate for Modernist architecture, and likely because of his relatively prolific post-1945 career which by 1949 already included participation in more than 40 projects.<sup>178</sup>

Through his position as professor at the *Akademie der Künste*, Ruf also had occasion to engage theoretical discussions around art, which were especially active in an era preoccupied with redefining the ethical role of culture in German society. His colleagues there included significant representation of the *Münchner Bilderhauerschule*, a group that traced its roots to Adolf von Hildebrand's writings on form, and was known for its attempts to define a position for sculpture between representation and abstraction, particularly of the human figure. Hans Wimmer, who became professor for sculpture at the Academy in 1949, and Ruf had both been active simultaneously the restoration of the Christ the King (Christkönig) church in Munich, at which Ruf directed reconstruction from 1947-1950 and Wimmer installed bronze reliefs depicting the stations of the cross in 1950-1951.<sup>179</sup> In addition to his connection to the Munich sculpture school, he was also in direct contact with Martin Heidegger, who collected Wimmer's work, including a mask-like portrait of the philosopher completed in 1958. Heidegger's 1950 article 'The Origin of the Work of Art'<sup>180</sup> resonates in Wimmer's texts on the relationship between figuration and abstraction, which he published some ten years later. The role of the object, the perceiving subject, the artist as author and the relationship between art and the natural world

were framed in this context in ways that may begin to explain Ruf's word choice, so unlike others at the *Darmstädter Gespräche*, when he was asked to speak.

### **Atmosphere and Spatial Building**

The *Darmstädter Gespräche* of 1951 took place several weeks Ruf completed construction on the Bavarian State Bank and in the hiatus between cornerstone and construction of the Academy. Hans Schwippert, who as head of the *Deutsches Werkbund* would in 1954 involve Ruf in the representing the new *Bundesrepublik* in the German pavilion at the World's Fair,<sup>181</sup> framed the discussion around the plausibility of a Modern architecture that, in contrast to early Modernist paradigms, was *not* dependent on the technologies and materials of its era. Given his knowledge of construction and his wide-ranging experiences with building since 1945, including a series of "Messerschmitt" prefabricated housing blocks,<sup>182</sup> Ruf seemed predestined to answer. However, he evaded answering directly the fundamental questions that Schwippert had raised, choosing to speak instead about architecture's transcendental aspects:

"We must achieve the same creative freedom with these building elements as other creative human beings who use words, color and sound to achieve the artistic expression of their spiritual world in order to move in the same plane of formal creation. In architecture, this involves cognition of the essential form-defining elements: the pure measure, the vertical, the horizontal, in other words roof and column or wall, the opening that spans space....The decisive aspect, I think, is that we know how to form the atmosphere, the spirit's atmosphere, and then we will find the form, too. Because architecture has to create a specific spatial feeling."<sup>183</sup>

It is striking to read his enumeration of the "essential form-defining elements" relative to the *Akademie der Künste*, a building whose expression corresponds directly to the reduced tectonic language of "the vertical, the horizontal, in other words roof and column or wall, the opening that spans space." His plea for architecture as art form might also be understood relative to his position at the Academy, among artists whose consideration of the derivation of form was not located in direct, causal relationships between material, function and expression. However, his aim was not the creation of an independent art object but instead, the production of

“atmosphere.” “Atmosphere” describes the effect of an architectural environment upon its user, focusing on affect rather than on the architectural object. In its evolving usage throughout the 1950s into the 60s, it would encompass not only the architectural work, but its interior and exterior environment – the contribution of design objects, landscaping, and subjectivity.

### **Architecture as Art?**

No polite applause followed this statement. Schwippert’s painfully sincere interrogation of what had been a central tenet of Modern architecture – the unity of the era, material and spatial expression – was not addressed by Ruf’s shift to a paradigm, in which architecture represented ‘artistic’ value that “first begins” when functional requirements are fulfilled. For Ruf, the “many technical and economic problems and needs...required to complete a building”<sup>184</sup> represented for a simple baseline, whereas for Schwippert, the material conditions of architecture and spatial expression were equal contributors to architecture’s integrity and appropriateness relative to its era. In Ruf’s account, architecture’s value was in its transcendence of material and functional concerns; in Schwippert’s, it was in the negotiation of material and spiritual impulses, which may well be in contradiction to each other, through which space becomes transcendent.

Ruf’s aspiration for the architect to “advance into the spheres of the purely artistic” seems nonetheless quite close to the idea that art by definition is the expression of its era because it transcends material givens: formal freedom will allow the architect “fully to do justice to the tasks of our era.”<sup>185</sup> Unlike Schwippert, Ruf seemed confident that material specificity could be overcome, “since we have already understood the means of expression, the construction potentials of steel, concrete, even wood frame, as comprehensively in their essence, and can use them with the same economy and experience as we can earlier building materials.”<sup>186</sup>

Schwippert’s line of reasoning was insistent upon the consideration of material in discussing

expression – whether either the material or the expression is appropriate or inappropriate to an age, neither one can be discussed without the other. Ruf made very different assumptions. For him, regardless of whether the medium is “words, color and sound” or architecture, the artist could find an expression appropriate to the era.

Both in his understanding of the author of an architectural work and of the nature of its reception, Ruf seems here to have assumed a singular individual, in contrast to the collectivity implicit in Schwippert’s characterization of architecture as an expression of societal or collective desire – “Wohnwollen.” For both, the spirit of their era was one that required openness – in Schwippert’s case, ‘tent-like’ structures, and in Ruf’s, “a sense of life that seeks connection not to light, air and sun in a sporting sense, but in the sense of these as elements.”<sup>187</sup> Whereas Schwippert’s approach to construction recognized the architect as only one author in the production of the building, and his design process foregrounded the questions of consensual reception, as in the plenary hall of the *Bundeshaus*, Ruf’s approach ratified the architect’s ability to bring his control to bear in the most exacting of ways. Nonetheless, their architectural projects of the late 1940s and early 50s express their shared desire for openness in ways that are formally compatible, and, together with the other buildings exhibited at Darmstadt, defined a new common style for German Modern architecture.

### **Reprise: Material and Expression**

Ruf was allowed two opportunities to respond to Schwippert’s prompt. Towards the first day, Bartning “made good on his debt of the morning”<sup>188</sup> and asked Ruf to the microphone again. Ruf took the opportunity to recast his initial insistence on the transcendental aspects of architecture relative to the day’s agenda, and to reframe his ideas once again relative to Schwippert’s questions:



“...if contemporary building makes use of steel and glass, then not for formal reasons but out of the need to represent an originary and undeniably new sense of life.... And if these were no longer available to us – as Schwippert speculated at the beginning – then we would do it with wood. It is really not formal preconditions, but decisively spiritual ones under which we exist, and if you had let me say one more sentence earlier, I would have said that we must not only live, act and create using these means from this sense of life. We must also achieve the functional solutions which required, and represent them so simply and clearly. We must do so in order to know what the fundamental element of building is, the element with which we wish to create not only in drawing and design, but really in building. Assuming that we have already understood that the purely functional will itself no longer suffice, you will deduce that we also want the artistic and have already stated that claim.”<sup>189</sup>

Here, Ruf restates his position in a subtly different way: the selection of those materials with the greatest affinity for “open” architecture is not a matter of formal preference but rather, motivated by the need to represent the “new sense of life.” It is interesting to note that Ruf has recourse to the terms “form” and “function” which Schwippert had largely eschewed. Equally interesting is the example Ruf chooses to illustrate his point: Rudolf Schwarz’s *Gürzenich* reconstruction, in which an entirely new set of public spaces was inserted between the shell of a former Medieval guild hall and the remains of a church left in its bomb-wracked state. Schwarz’s mural architecture is utterly different from Ruf’s; but Ruf seems to have felt a clear affinity for “that which expresses directly the celebratory and the joyful... One forgets that it is a functional form that represents this expression. And we call this art, we aspire to it.”<sup>190</sup> He cites Schwarz’s presentation of the preceding day, a reference that complicates the idea that “atmosphere” is an individual response: perhaps Schwarz’s thesis, that space is constituted by the assembly of human beings in the interest of some greater transcendental good, appealed to Ruf’s desire to describe a value beyond the functional or formal:

“we want more than only a place of gathering, a hall spanned only by technical means: a steel frame and trusses. We will be inspired to know that it is technically possible. No, we want, here again, to create that place of occupation in which even the over-stimulated modern human being can, and must, pray once again. We want to create this atmosphere. It is truly something spiritual that moves us to do these things and not only for formal reasons, as some might accuse us of.”<sup>191</sup>

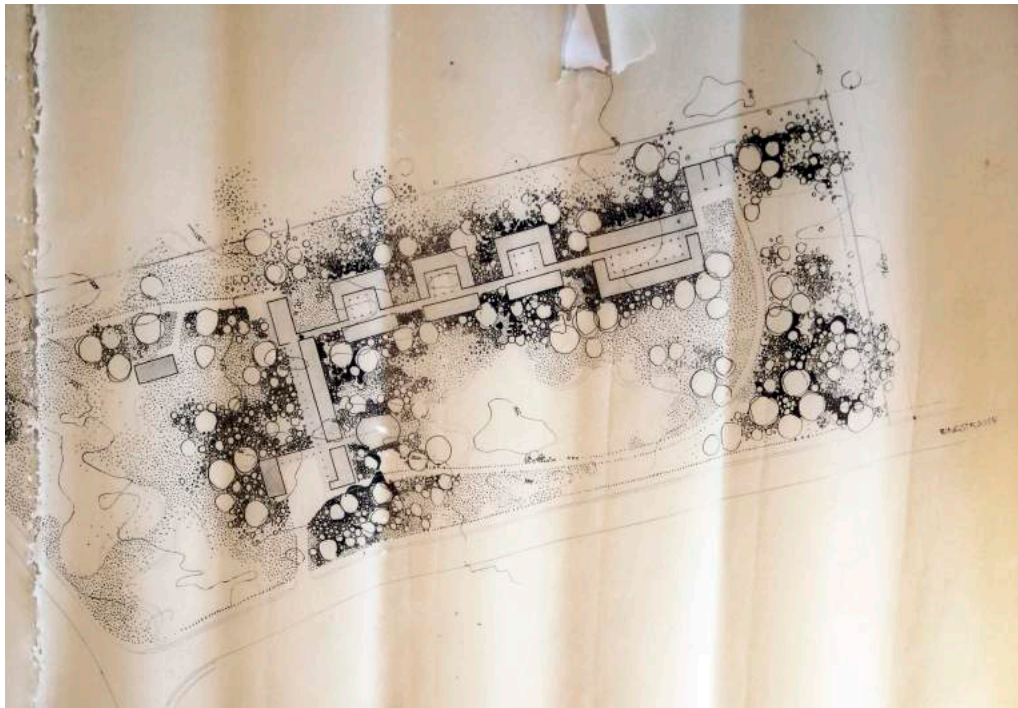
Over the course of the decade following the completion of the *Akademie der Künste*, Ruf's idiom underwent significant changes. Some of the reasons for these changes can be sought in changes in building culture, contact with other architects and their thinking, and the natural evolution to which such a prolific architect would naturally be subject. But it is also worthwhile remembering Ruf's words at Darmstadt: his belief that the architect can best realize the expression of his era when he transcends material limitations to work as an artist; and that spatial expression becomes meaningful through the construction of "atmosphere", evoking an empathetic, spiritual response in the people whose occupation will, finally, complete that space. For an architect as skilled in building construction as Ruf, the fine points of tectonics may well have been subordinate to these larger, dynamic interests. The material culture of building, framed by Schwippert as a primary contributor to an era's appropriate expression, was in Ruf's thinking subordinate to the creation of an atmosphere through which the artist-architect could help to evoke the spiritual response sought even by the space's most "over-stimulated" occupant.

### **The Essence of Light, Air and Sun**

Among the project documentations are a series of corrected invoices for the delivery of the trees and shrubs delivered to the site. Although this intensive oversight can be found in every aspect of the project, it is unusual for an architect to keep a representative on site once construction has largely been completed and landscaping is underway. In the Academy, the interface between the buildings and the adjacent non-built environment, comprising largely plant life rather than vistas or dramatic landscape, was integral to the project's conception.

An undated site plan drawn in ink, but without a title block, speaks volumes about the relationship among interior, exterior, built and unbuilt. Fully drawn lines, dots indicating columns,

grey tones and a full array of dots, squiggles, kidney shapes and blackened figures are the palette used to express in ink the spaces as envisioned. The L-shaped building complex looks as if it had been carved out of dense vegetation or, alternately, as if it had served as a reef onto which tangles of freeform elements had grown. The grey tones laid onto the built elements allow the elision of inside and exterior spaces. For example, the long administration building and its connection to the auditorium is drawn no differently than the columnar porticos in the courtyards of the atelier buildings, although the latter are all glazed, interior spaces. The covered walkway which defines the cross axis onto which the ateliers are aligned is rendered in a single, solid line, equal in weight to the walls of the buildings, although the former is an edge defined by a plane above the ground whereas the latter mark the edges of interior spaces. Clearly, the significant spaces were conceived holistically. Whether they were tempered or open to the elements was a functional consideration; the buildings' expression was predicated on the diagram here, not on the retention of wintertime heating.



Sep Ruf, Site Plan. Undated. *Collection of E. and N. Ruf, Gmund*

The depiction of plant life is painstaking and luxuriant. Thinly drawn contour lines indicate the gentle slope of the site of two meters across the building's length. Stipples indicate the edges of footpaths and the complex entry; condensed into tighter, irregular patterns, they indicate the edges at which the plantings that belong to the school complex give way to adjacent meadow, forest or other greenery not included in the architect's scope. Circles of varying size – bushes? ground cover? hedgerows? small trees? – edge the open colonnade along the administration building and complete the second edge of the exterior corridor connecting the ateliers. Finally, at six specific points, blackened squiggles seem to indicate denser vegetation, perhaps concealing the building entry from the street or obstructing the view back to the street at the transition point between administration building and atelier enfilade.

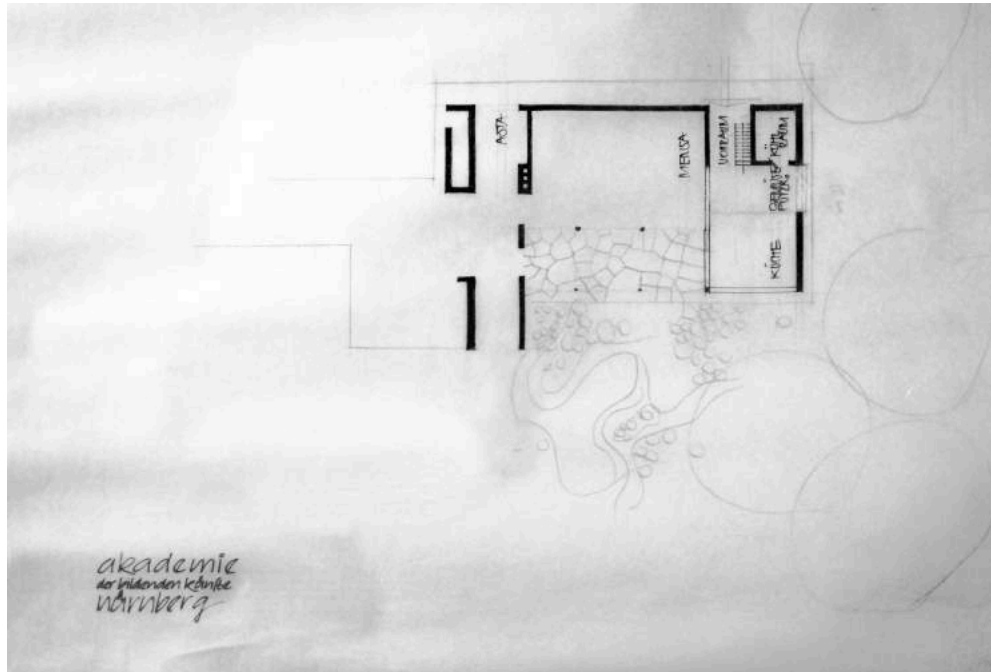
The drawing's texture transforms the texture of vegetation into pattern, amenable to the medium of pen and ink. At its densest, the pattern defines the edges of spaces as strongly as if it were a single line. In its individual figures, it resembles the fabric curtains designed by Margret Hildebrand for the *Bundeshaus* restaurant, described by Schwippert as "happily colorful, beyond which the large terrace and the Rhine are seen."<sup>192</sup> *Der Spiegel* magazine used other words, comparing the curtains to "the colorful style of an American girl's blouse" beyond which the terraces "concrete grid is arbitrarily broken by flower beds and six year old evergreens."<sup>193</sup> Whether as a stylized pattern on a two-dimensional surface or as an equal partner in giving definition and value to an "architecture of openness and encounter,"<sup>194</sup> the non-built environment was integral to the all-important relation between interior and exterior. Ruf's copious attention to the landscapers' work was a practical consequence of his architectural concept.

The sensibility expressed in this drawing, in which the built is depicted as a scaffold for vegetation, itself an equal partner in the definition of space, appears in other design study drawings. One, an early plan study for the cafeteria, shows the space encompassed on three

sides by masonry walls. The fourth side is marked at about two-thirds length by two columns which sit on the dividing line between a floor pattern left unannotated and another depicted as pieced fieldstone. Two small mullions aligned with the columns, from which the roof would have cantilevered to relieve the end wall from any vertical loads, indicate a glass façade, beyond with the fieldstone pavers continue. Circles and swirls, similar to those in the site plan, indicate shrubs directly in front of the fieldstone and beyond that are circles indicating trees. Another drawing, for a fence, shows only the basic height and centerline measurements of a diagonal partition held up on metal verticals; but the real subject of the drawing are the trees, shrubbery and ground cover which obscure the fence. Although the trunks and some leaves are rendered naturalistically, others resemble a Calder mobile. Stylized but unmanicured, the non-built components at the *Akademie der Künste* are indispensable.



Fence drawing. Undated. *Collection of E. and N. Ruf, Gmund*



Cafeteria with adjacent exterior spaces. Undated. *Collection of E. and N. Ruf, Gmund*

### **Subcutaneous Construction**

Ruf's choice of exterior finish – white paint and white stucco – was not the extent of his entire palette. The coherent, well-aligned surfaces that defined interior and exterior spaces were not as simply put together as they might have seemed. Ruf availed himself of nearly all means of construction conceivable – steel as bearing and framing member, cast concrete of varying capacity, masonry, finish and carpentry-grade wood, veneered plywood and natural stone finishes. The complexity involved in conjoining these sub- and surface structures is apparent in even as small a moment as the information window at entry.

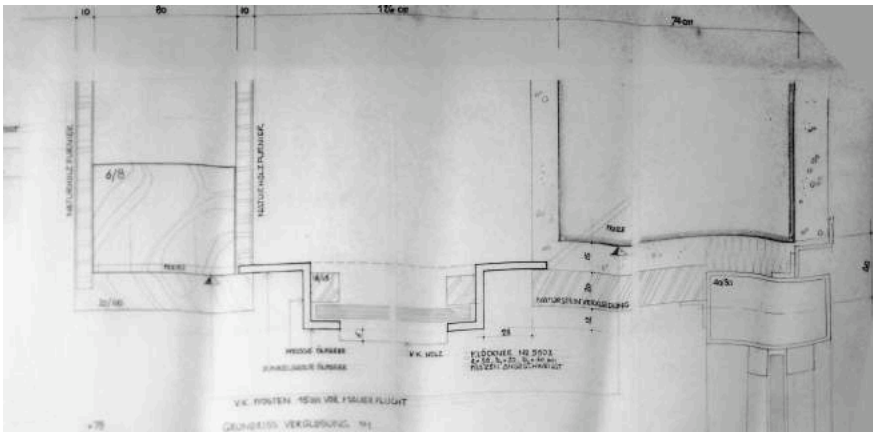
A large piece of fixed glass spans from the inner surface of an exterior wall to a thin, wood-clad partition wall, and from the height of a wood counter to the ceiling. The glass is held in place by a metal angle of the same dimensions equidistant from adjacent surfaces on all four sides. The element holding the glass, as shown in the drawing, is a standard Z-angle from a *Klößner*

catalogue, painted dark grey on the leg attached to the wall and white on the two other legs that hold the glass, which is secured with a small 16x16mm wooden glassstop. The angle is anchored into the exterior masonry wall which was then to have been plastered equally with 15 mm of stucco on all sides, except at the juncture with the exterior steel and glass façade at the entry. On the other side, the angle abuts a wood-framed stud wall. As the drawing notes, the vertical stud supporting the wall and into which the metal angle connects had to be positioned 15 millimeters proud of the exterior masonry wall; this note indicates that the wall was located and framed before the exterior wall was plastered, since the offset accommodates for the plastered surface. Both plastered masonry and wood frame wall were then clad to align, although the former was clad in 20 mm of natural stone and the latter, with a floor to ceiling long piece of solid wood – no easy task to find without twisting or warpage, unless the wood had been carefully and slowly dried after harvest. Wood such as this was likely left over from the period before the war; recently harvested wood could not have been used this way.<sup>195</sup>

The sides of the framed wall were then clad in veneered plywood, chosen to match the solid wood at the wall's face. In order to ensure that the glass partition sat symmetrically, the steel angle anchored to the masonry would have had to be absolutely precisely installed, plumb and perfectly located, so that the overlap between plywood and angle on the framed side was matched. With no tolerances given in this detail, the negotiation among trades – mason, plasterer, wall framer, metal worker and glazer – would had had to be organized seamlessly. It is a beautifully executed detail, and one which by reference explains the distinction between exterior and interior wall by virtue of cladding. But it never belies the materials beneath any of its surfaces.



View to portier's booth. 2011. Photo by author

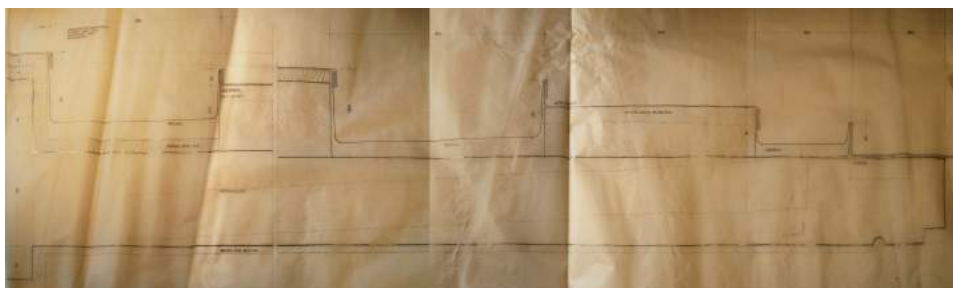
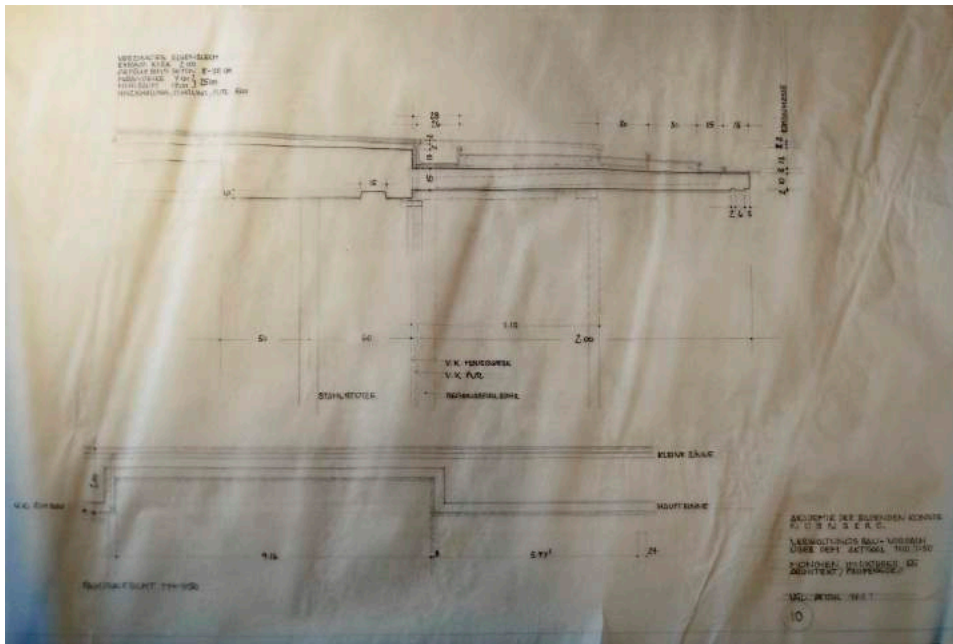


Detail drawing of the portier's booth. 1956. *Collection of E. and N. Ruf, Gmund.*

The deep roof eaves on all the buildings strike a continuous, attenuated datum, accomplishing the intention expressed in the site plan discussed earlier to elide interior and exterior spaces, especially the spaces of circulation, which conjoin the component buildings. The eaves' thin edge is achieved by off-setting the gutter to the point of support, at the column line, and



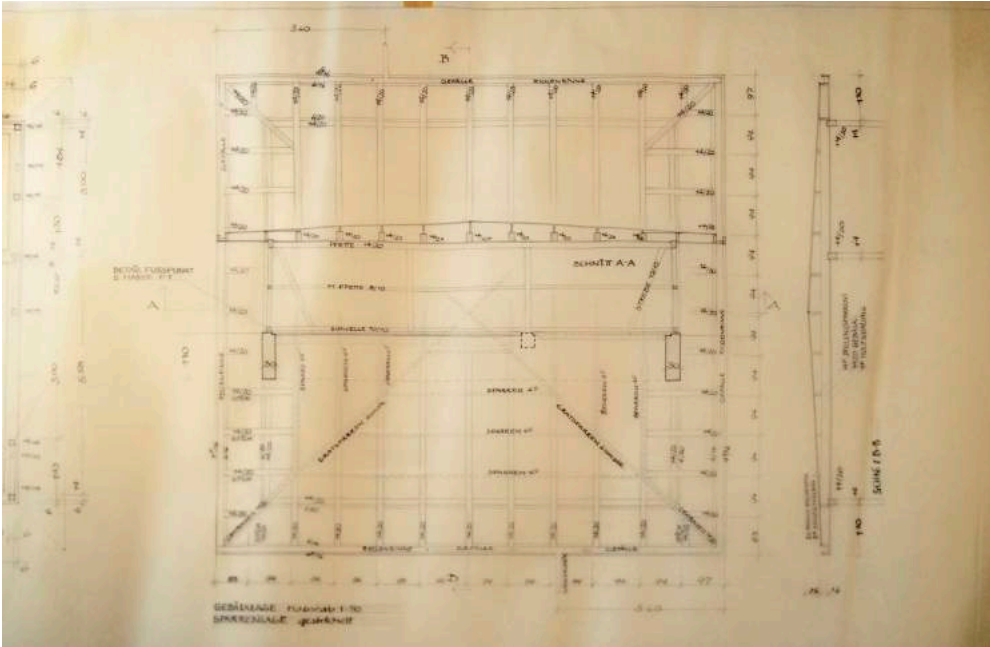
extended a much thinner plane of concrete beyond that point. The deep eave, in addition to creating shadows which reduce the reflectivity of the glass facade and facilitate visual connection between interior and exterior, conceal from below both the method used to conduct water off the building and the much thicker bearing slab which spans the interior spaces. In addition, the flat eave belies the slope of the primary roof, necessary to shed rain and melting snow, leading even careful observers to characterize the building as having a flat roof.<sup>196</sup>



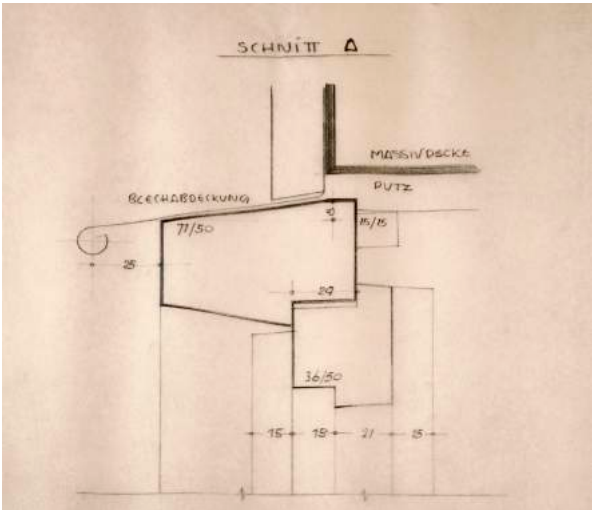
Sections through the roof overhang. 1955. *Collection of E. and N. Ruf, Gmund*

But not all the roofs were concrete, nor were all the windows and doors steel. Drawings for the caretaker's house opposite the main entrance and a small storage building specify a gently sloped, deeply overhanging roof in traditional *Zimmermann* framed wood construction. In these

buildings, carefully drawn and dimensioned details show wood windows and doors, with countless variations on the angle of the window frame and glass stop to achieve the most slender sightlines possible. Nothing in the literature on the building would indicate that this difference in material application or subconstruction was ever much noticed.



Storage room, framing plan. 1954. *Collection of E. and N. Ruf, Gmund*



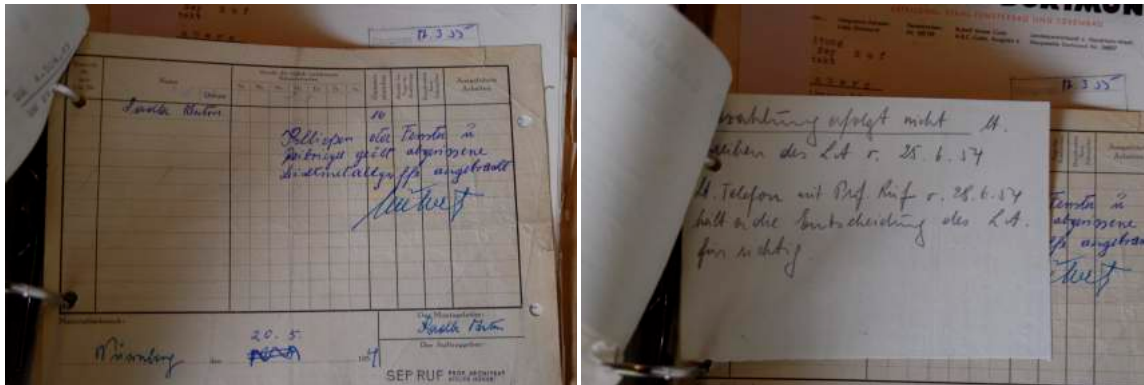
Wood windowsill detail. 1952. *Collection of E. and N. Ruf, Gmund*

**The Role of Labor on Site and in the Factory**

The relations between the labor and material invested to construct the built environment offers a good barometer of the shifts in architectural character and its underlying construction in the late 1940s and 1950s. At that time, economies of scale were still sought in more generic elements with multiple applications, not in highly specific building systems or larger-scale components. In a sense, this meant that steel construction, regardless of its application as façade, light-gauge structure, truss or other context, was pieced together using sections that all bore close family resemblances to generic rolled L's, Z's, U's and tube sections. Differentiation for specific applications occurred not in the factory production phase as an inherent characteristic of material components, but rather, through the input of labor on site. This meant that the balance between work in the shop and on the site, between specific trades and a more flexible work force was the vehicle for the adaptation of generic materials to specific purposes. The architect who specified the assembly determined how materials were transformed from generic to specific by virtue of his directives to those who completed the transformation. In this context, the hierarchy of architect, construction firm and building product provider was steeply vertical, with the architect at its apex, as certainly was the case at the *Akademie der Künste*. A close look at the various steel windows, doors and fixed glazing confirms this: Ruf's archives include even such minutia as the time sheets submitted by the glazers, and the correspondence in which Ruf and one of the window contractor contest payments.

The job book<sup>197</sup> from the *Akademie der Künste* project includes, for example, brief minutes from a telephone conversation held on June 30, 1954 between Prof. Ruf and his Nuremberg office, the outcome of which was to withhold payment to the window manufacturer Jucho. The minutes are stapled to a time sheet dated 20.5.54 for repairs to windows. The disagreement about payment continued for some time thereafter. A letter from Jucho dated 16.3.55 references the fact that the 196 individual steel windows had "16 different widths" and were ordered in different

batches, which created “additional costs to the total amount of DM 4,725.30.” There is much that is still current in this exchange – the architect’s position as one of defending his client’s budget, the contractor’s need to remind the architect that post-contract changes must be billed. On the other hand, these three documents attest to a specific set of responsibilities accruing to architect and fabricator, and a specific condition of the means of production that are quite different from current practice. A case in which additional window sales translated into lost revenue, rather than gains was at best a tenuous business model for suppliers of building products as the construction boom in Germany accelerated.



Telephone call minutes and receipt. May and June, 1954. *Collection of E. and N. Ruf, Gmund*

Ruf’s office was apparently charged with construction management in the most immediate and intimate way. For an architect to be able to judge the veracity of a time sheet, of which there are many in the archived job book as well as corrected invoices for the purchases of plants, trees and other landscaping materials, Ruf and his employees must have had a constant, near-omniscient presence on the construction site. Trade foremen would have had to accept the architect in this role; and the architect’s contract would have had to include this phase of work explicitly. The responsibility is immense and the kind of knowledge required very different from that needed in the daily life of an architecture office.



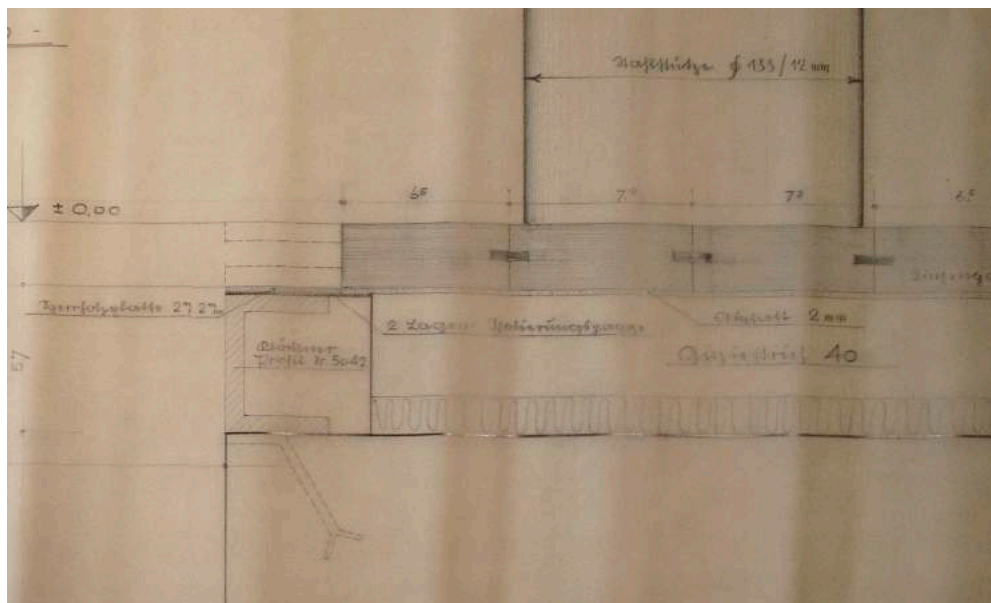
This supposition is underpinned by the detail drawings from Ruf's office archive showing the steel windows used in the corridor of the administrative building. The shop drawing from September 1954 depicts fixed glazing with a hopper window above in section, and in plan, two fixed units flanking an operable unit. The fixed glazing is built up from exactly drawn tubular steel sections and steel angles, glazed with 15/15mm tubular steel stops. In the operable window, only the glass stop is dimensioned, also 15/15mm to match the fixed glazing; it is safe to assume that this window's dimensions were manufacturer-determined, with the glass stop as the only variable. The window's constitutive components are only slightly less generic than those in the fixed frame: the Z-shaped steel section used for the lower frame is configured to integrate a drip edge and the vertical leg of the T-shaped fixed frame bent 90 degrees to nest against the fixed frame. Nonetheless, the window's parts closely resemble standard steel sections, indicating that the window components were still produced using means standard across the steel production industry, not specially developed for window production alone.

The drawing also contains an unequal distribution of information for the windows' production and installation. Although extremely specific about the dimensions and types of steel sections, it offers no information on order of construction, ways of making connections or installation. No fasteners or welds are indicated and no notes are made on how the subconstruction is to be prepared at the floor to allow the glazing to be anchored – presumably bolted through around the location of the interior glass stop, which could then be screwed into place by making threaded holes in the 80/40 tube. It is a drawing made for discussion with three different areas of competence: with a fabricator, who would determine the best way to conjoin the steel sections to make a frame; with a glazer, who would verify the sizing of the glass stop and the location of its connections; and with an installer, who could determine provisions needed for the anchorage. In the case of Jucho, the fabricator, glazer and installer were all the same firm. The drawing

expresses both the architect's insistence on the exact outcome of the building process, and full confidence in the ability of the workers involved to understand the desired outcome. The inclusions, and the omissions, both anticipate a skilled construction workforce capable of a high level of precision.

### **Floorboards, Dimensioned in Millimeters**

A February 1955 drawing of the glazing at the cafeteria, between the main dining area and the adjacent exterior terrace, speaks directly to the project's architectural ambitions and to the way the architect's ability to piece together each element of the construction ensemble allowed him to realize those ambitions.



Detail with floorboard dimensions of column and steel framed façade, cafeteria. 1955. *Collection of E. and N. Ruf, Gmund*

The full-scale section is taken through the heating vent set level with the solid wood floor on the left and the Jura marble terrace on the right. In this case, unlike the drawing discussed above, the detail's context requires information on order of construction, registered in the millimeter precision of the floorboard dimensions and the tight fit of glass to floor, with no margin of error.

Its information is almost anatomical: on the right, an anchor angle is cast into the concrete subconstruction; to it is attached a standard steel L-angle whose legs are slightly longer than the depth of the 2cm floorboards. Next, the first floorboard on the right, carefully routed to accommodate the L-angle's depth and to bypass the punctual anchor angles, would have been slipped into place. Each tongue-and-groove floorboard thereafter would have to be specially milled either to 6.5 or 7.2cm in order to allow the seam between the two 7.2cm boards to sit symmetrical to the 133mm diameter steel column. On the left-hand side, a C-channel, stabilized in the concrete based with another anchor angle, supports the heating grille. The only concession to imprecision is the thin plywood shim resting on the C-channel, which would permit adjustments in height between the top of the angle and the bottom of the floor boards, and adjustments in length, just in case the improbably precise measurements in the floorboards could not be maintained. It is hard not to shudder at the responsibility assumed by Ruf's Nuremberg site office to ensure that the steel column and concrete angles were perfectly positioned in order to achieve such precisely dimensioned finish assemblies. On the other hand, because all the materials involved arrived on site in a more or less generic state, the architect could stipulate their installation with incredible precision. For example, were the floorboards pre-milled by a larger fabricator rather than by the installer, it would hardly have been viable to order both 6.5 and 7.2cm boards, and to keep them in order on the job site.





Photo of floorboards and steel framed façade. 2011. Photo by author

The conflation of fabricator and installer, the relatively generic nature of available building materials and the capacity of the architect to stipulate such exactitude – and to assume responsibility for that exactitude during construction supervision – corresponded to a specific architectural expression. The continuity of the floor plane across different materials installed flush to each other (the heating grille, the wood floorboards) is central to the desired continuity between interior and exterior. The L-angle to which the fixed glazing is anchored makes a precise, minimal edge while providing a daringly brief height differential of only 3cm between interior and exterior. The glazing profile itself is little more than a C-channel with canted legs and an additional flange which acts as a glass stop. The cant in the legs, which creates a shadow line where the profile meets the floor, minimizes the frame's apparent height. Finally, the thermopane glass itself, all that separates interior and exterior, is held in place against the steel

by a tapered wood stop whose strength comes from its depth – which would presumably blend visually with the floorboards – and not from its height, which would have reduced the glazing's sight lines. The detail remains in near-perfect condition even in 2012. All the dimensional precision, and all the careful selection of building materials, is in the service of a spatial idea that, in true Modernist fashion, holds true from site planning down to the detail.

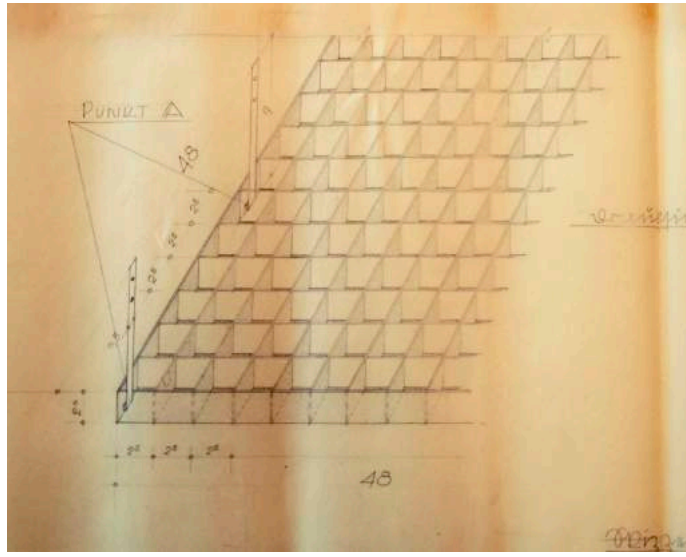
### **Standards and One-Offs**

In Germany as in the US,<sup>198</sup> the immediate post-war period was characterized by competition amongst many smaller fabricators whose workmanship and skills were often required to repurpose existing components for a desired architectural effect. Unlike the US, many of the smaller German firms had much deeper historical roots in machining and metalworking but had lost significant ground towards the end of the war. The construction industry served as a means through which to reestablish solvency and market share. The firms under contract at the *Akademie der Künste* are remarkable for their abilities to navigate this immediate post-war competition and prevail, as witnessed by their continued existence to the present. Some of these companies, such as Jucho, which had been founded as a bridge-building firm in 1877<sup>199</sup> and continued as a window manufacturer into the 1970s, had longer histories. Other newer firms, such as the glazier Brehm, now a window manufacturer, and Schuster Schmitt, which supplied the steel door frame and now focuses on prefabricated steel buildings and their installation, were able to leverage their modest beginnings as subcontractors within a much larger network of building trades.

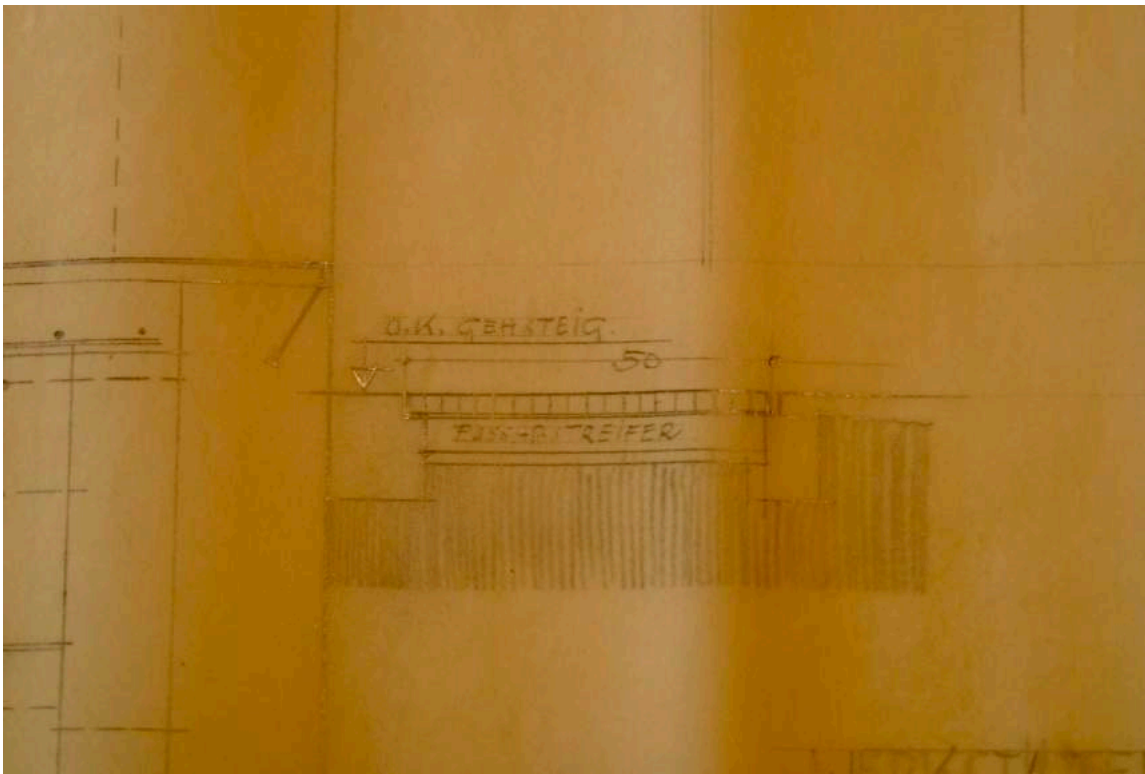


cases, products emerged from one-offs developed for a specific project, as is the case with the balustrades developed for the Akademie der Künste. In other cases, the adaptation of products already existing on the market for special purposes presaged later developments.

Even seemingly simple, standard details required the architect's effort. One of the many details through which the ideal of interior/exterior continuity is materialized at the *Akademie der Künste* is the mirroring of steel grates on both sides of the glazed façade. On the exterior, the grates mark operable doors and serve both as doormats and secondary rainwater catchments. On the interior, they cover subfloor radiators and act as heating grilles. A 1:20 drawing from Ruf's archive makes clear the degree of customization required even for a seemingly standard product: height and grid dimensions are given; welded mounting tabs are specified. The carefully shaded drawing evidences a degree of care in execution and interest in visual effect that exceeds a standard construction document and certainly would seem to belie the standard building material depicted. It is possible to imagine that in this case, the 'standard' grate was actually made to specifications; the Sutterlin lettering on the drawing matches that on the drawing of the cafeteria wall already discussed, with its specifically dimensioned floorboards and finishes. The two drawings suggest characteristics of their author worth mentioning: the assumption that tolerances would be minimal; the comfort with which he demands specificity from such standard products as floorboards and metal grilles; and the intensity with which he studies every element which contributes to the formulation of the boundary between interior and exterior. The precise piecing of these seemingly quotidian (but secretly customized) components is understood to be essential for the building's spatial continuity with its immediate environment.



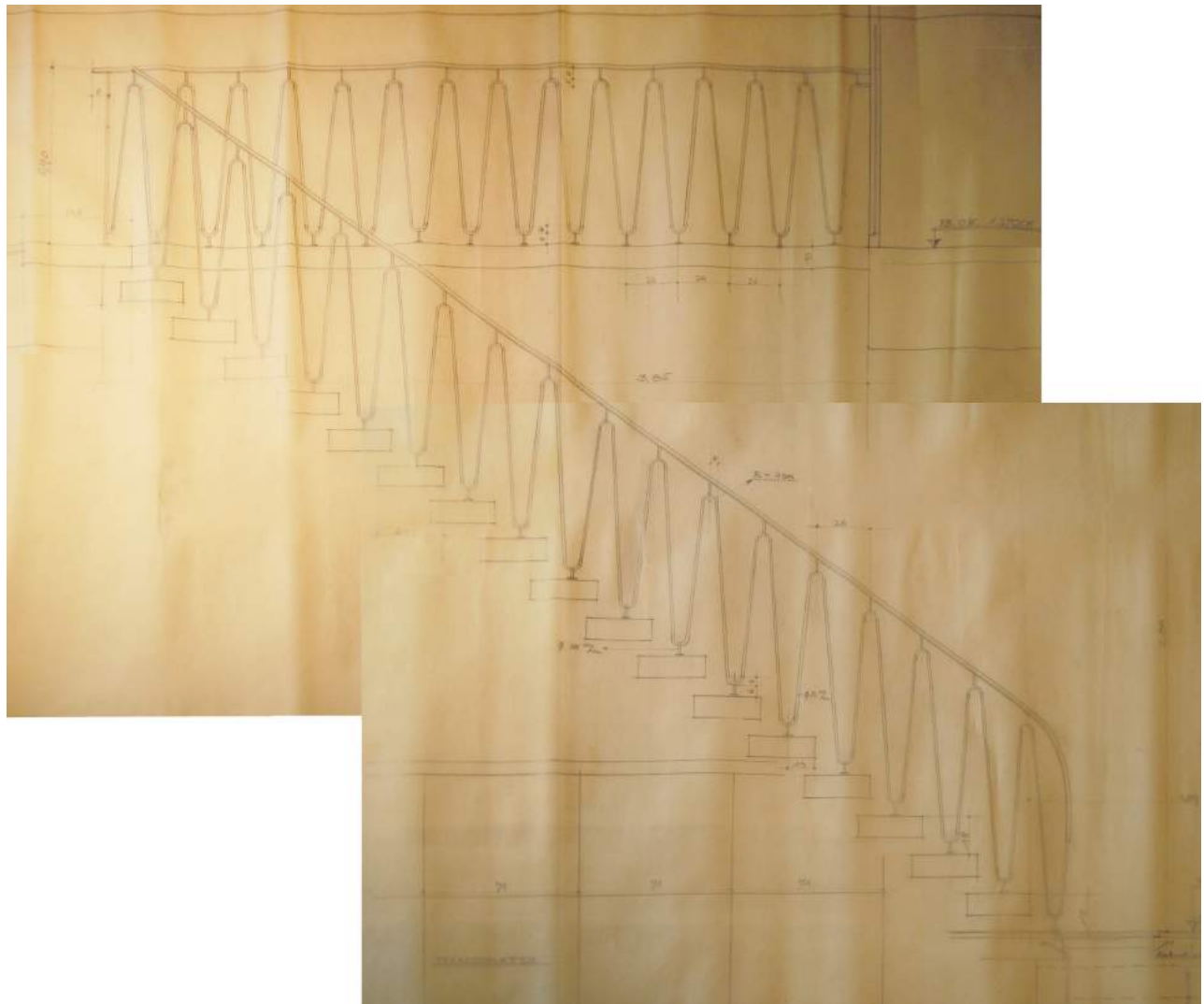
View from main building. Photo, Roland Halbe. 2008. Nerdinger, ed. *Sep Ruf: Moderne mit Tradition* Detail drawing of the grillework. *Collection of E. and N. Ruf, Gmund*



Detail of the exterior grille installation. 1954. *Collection of E. and N. Ruf, Gmund*

The stair rails developed for the workshop building at the *Akademie der Künste* offer a counterexample to the customization of standard steel grates: what began as a project-specific

design problem would eventually create a true economy of scale in Ruf's *Maxburg* renovation only a few years later (1952-1957), where it was used as a significant design element in the articulation of the glass façade. Its splined zigzag motif resonated, too, with larger stylistic trends: similar balustrades can be found in mid-to-late 1950s projects throughout Germany, indicating that this kind of splined pattern was eventually the basis for a building product available for specification.



1:50 drawings of the workshop stair railing. 1954. *Collection of E. and N. Ruf, Gmund*



Workshop stair rail and the balustrade at the *Maxburg*. 2011 and 2005. Photos by author

### **No Time to be a Lost Generation**

“Those returning from the first World War, who during the decade of their 20s or 30s had been cast out of the orbit of secure, bourgeois daily life, felt after all the horror was over that they were a lost generation.... A similar age group after the Second World War did not even have the opportunity or the time to perceive themselves as a lost generation....

In the meantime, we no longer speak about education or the school system, since many of those with whom we gathered for discussion earlier are now professors, and the practice of architecture has hopefully given them the possibility to develop those methods about which we had then only tried to think.”<sup>200</sup>

Leitl’s open letter to Ruf in the issue of *Baukunst und Werkform* devoted to the latter’s work was as much as meditation on the path taken by the generation of architects to which the two men belonged as it was a specific reflection upon Ruf. Nonetheless, the contention that this had been a generation called to action, with only a brief moment of reflection together upon which to base

their architectural development, was not inaccurate when applied to Ruf. His career proceeded apace, despite the challenges of realizing Modern architecture in a stylistically conservative environment. While acknowledging the exigencies of professional practice, Leidl in no way questioned the quality of Ruf's buildings, noting as evidence that Neutra, on a visit, had photographed the spaces of Ruf's own home, and that Leidl, too, found an echo of Neutra's work, whether conscious or subconscious, in Ruf's buildings. It is nonetheless odd that rather than introducing an issue of the magazine he had founded and for more than a decade led as editor-in-chief by describing the architect or explaining the importance of his work, as might be expected, Leidl chose to place that work in the context of a moment of expressive heterogeneity in Modern architecture. This was not a moment led by geniuses, he contended, but determined by the need "to refine the basic intentions of the founding fathers in their full array and to realize them with consistency."<sup>201</sup>

Leidl's language positively values a characterization of post-war German architecture that elsewhere was phrased as critique. Outside of Germany, however, the emigration of Mies, Gropius, Mendelssohn and other significant figures in Germany's interwar Modern movement was used to explain the 'merely' competent work emerging from the *Bundesrepublik*. A typical instance of this reception of West German architecture was offered by Patwant Singh, editor of the CIAM-connected Indian journal *Design*. He wrote, after returning from an early 1960 tour sponsored by the German cultural ambassador in New Delhi,

"Contemporary architecture in Germany reflects functional competence, technical skill and meticulous detailing; in addition, some of the building reach a high aesthetic standard. But what is lacking is a powerful, creative, original expression. If one might put it this way: there are no trail-blazers in architecture there at the moment.... Their understanding of the materials of construction is equally impressive: there is no question of any hit and miss methods. A great deal of research and analysis goes into determining the behavior of different materials under different conditions, before they are incorporated in a design. The detailing reflects precisions and thoroughness, with the result that the efficiency of buildings is at their peak."<sup>202</sup>



The virtuosity of Ruf's achievements in construction at the *Akademie der Künste* was, in a sense, the precursor to the circumstances, which Singh could characterize as having "no question of any hit and miss methods." In fact, Ruf's adaptation and invention of available materials in the building constituted an experiment, conducted on the basis of deep knowledge and the acceptance of enormous responsibility to oversee all its outcomes. It was, however, specifically this decision to develop architectural ideas in the context of practice, which Leiti characterized positively as the modesty of a generation called to action rather than, in Singh's critical words, as mere competence without brilliance. For Ruf, tightly controlled and well-executed construction remained the basis for his architectural expression and the values it communicated.

Ruf nonetheless did not insist on the connotative materialization that such figures as Mies, Aalto or even Le Corbusier developed in the post-war period. As he implied in his words at Darmstadt, he did not wish to be considered as a technician. When he asked not to speak about construction, he reminded the audience of two assumptions: that construction was no longer a primary challenge or a primary form-giver, and that materials had been understood and mastered. As his oeuvre developed through the 1950s, Ruf found new means to express his interest in the relationship between interior and exterior spaces, and in the relationship between the occupants of his buildings and their non-built environments. His controlled experiments in building construction as realized so skillfully at Nuremberg gave way to more complex experiments which deployed all that the developing West German building industry had to offer, and which allowed for a richer and more robust architectural syntax.

## Chapter 4

### Whose Modernism? German Transatlanticism

#### The Proxy War: The Bauhaus Debate of 1953

There was vehement response to Rudolf Schwarz's episodically narrated observations on the relationship between the architect as thinker and as maker, for which he extrapolated on Goethe's axiom 'Bilde Künstler rede nicht!' ('create artist, speak not!'). Schwarz, whose published texts were characterized by a messianic, exalted tone, had doubtlessly calculated the innocuous manner in which he, in this case, couched his thoughts: upon the request of his friend Alfons Leitl, editor of the architecture periodical *Baukunst und Werkform*, he had agreed to write a forward for a special issue dedicated to Leitl's less well-known built work, to be published in January of 1953. A chat between the two men over a late dinner in a Cologne hotel, its clubby atmosphere spilling into Schwarz's prose, provided the alibi to a text which made no reference to Leitl's architecture and instead descried a progressive evacuation of true moral and humanist values from the architectural discipline over the course of the 20<sup>th</sup> century. At the kernel of Schwarz's argument lay an explosive recrimination, that this disciplinary moral vacuum was not only attributable to the intervention of the National Socialist regime into intellectual life, but also to the heroic stature which the Bauhaus allotted to crass functionalism. The January issue of *Baukunst und Werkform* was only the beginning: the magazine's February issue was in turn given over to the letters of protest against Schwarz's assertions. Leitl, feeling compelled to print these responses, created in his magazine the forum for what would become known as the 'Bauhaus Debate'. The resulting documents offer a rare but pointed microcosm of the tensions between the German architects who remained in Germany after the war, and their more internationally known colleagues who had left for the US. These tensions were in part exacerbated by the advisory roles given to expatriate Germans by US Army-sponsored

reconstruction programs; but as the intensity of the Bauhaus Debate shows, there was more at stake than personal affinity or rivalry.

To understand the assertions, some work is needed to decode the insinuations in Schwarz's meandering article and to put it in the context of Schwarz's other writing. Although not read in this way at the time, the text, which reiterates many ideas Schwarz developed elsewhere, is tantamount to a counterproposal to the better-known lineage of Modern architecture as represented by the Bauhaus in its new Americanized permutation. Despite the fact that Schwarz's turgid style and encoded references often obscure his essential objectives, the text's reception among architects in Germany and in the German ex-pat community in the US, and the escalated controversy to which it led, is revealing. It says much about the struggle to assert a specifically appropriate Modern architecture in Postwar Germany, and the conflict between an emergent, uniquely German architecture and the International Modernism in which assimilated German architects in America had played a founding role.

The claim to this new Modern architecture as an intellectual position had been initially staked at the *Darmstädter Gespräche* of 1951; in the Bauhaus Debate, the claim to a new, specifically German Modern architecture was expressed through direct confrontation over its birthrights and the values they carried. Gropius' intervention in the controversy and the tone taken by his minions in their letters to the editor of *Baukunst und Werkform* demonstrate clearly that more than trivial posturing was at stake in the rhetoric deployed on behalf of the Bauhaus and its legacy in the US at the time. The way positions were constructed serves as an indicator of how German and German expatriate Modern architecture defined themselves in opposition to each other in the early post-war period.

## The Man Behind the Curtain

Behind the scenes and beyond the magazine's pages, the short weeks between the initial January publication and the press date of the February/March response issue saw a flurry of correspondence between those who had been outraged by Schwarz's claims and the master himself, Walter Gropius. In January of 1953, Gropius was newly retired from his professorship at Harvard's Graduate School of Design amid accolades and an exit victory in the "battle over basic design" against his former ally Joseph Hudnut.<sup>203</sup> He was ensconced in a successful and growing professional practice with The Architects' Collaborative, the firm with whom he, by 1953, had already been tagged by the US Department of State, ultimately leading in 1956 to the commission to represent his new country architecturally in the US Consulate in Athens.<sup>204</sup> A leading figure in CIAM, a force in contemporary architectural education and, as the experience of the UNESCO commission of 1951-1952 had shown,<sup>205</sup> an able – if not always fully successful – powerbroker, Gropius had little to fear in assuring his fame for posterity. Nonetheless, Schwarz's argumentation struck a nerve in him.

Despite the fact that Gropius deliberately chose not "to answer Schwarz directly"<sup>206</sup> on this occasion – in fact, there is absolutely no correspondence between Gropius and Schwarz in the former's meticulous archive – he was anything but averse to encouraging his advocates and their attacks on his behalf. His response to the event seems strangely choleric, given *Baukunst und Werkform's* small and largely domestic circulation even in comparison to the relatively limited field of German architectural journals of that period. Moreover, it was not a publication that Gropius regularly read or even took notice of: it appears nowhere among the sources of clippings in Gropius' voluminous, thorough scrapbook. Upon learning of Schwarz's editorial, Gropius made the extra effort to request that Leitz to send him the two 1953 issues by special order; this letter is the only documented correspondence between Gropius and Leitz.<sup>207</sup>

As he indicated sardonically in the article's introduction, Schwarz had already made his criticism of the Bauhaus public in a 1929 essay on the "Neues Bauen".<sup>208</sup> These critiques, written as Gropius transitioned from his directorship at the Bauhaus to private architectural practice in Berlin, produced no documented ripples in Bauhaus circles. As such, there was no precedent in any interwar sparring to the bitterness of the confrontation that was carried out publically, with *Baukunst und Werkform's* readership as audience, in the first quarter of 1953.

What was it about this article that provoked Gropius to respond so forcefully to this particular Bauhaus critique at this particular moment? And what does the heated exchange in the pages of the magazine communicate about the complex allegiances among the German architects – all advocates of Modern architecture – on both sides of the Atlantic?

At moments, Schwarz's article seems petulant, full of insider barbs directed at Leitzl and his publication or thinly veiled slights at other contemporaries, even those he otherwise counts as allies. Behind the text's scolding, ironic tone, however, is an articulate, systematic refutation not only of the ideals associated with Bauhaus *per se*, but of the fundamental tenets of International Modernism as they had been codified by the early 1950s. This process of codification had in no small part been carried out by the primary individual and institutional protagonists of the International Style then located in the US – particularly in Cambridge, Massachusetts.

### **'Bilden' and 'Reden'**

Schwarz set up his argument simply, in a way that for readers "comfortable with the Schwarz'ese diction," promised "an aperitif not without its own bitter drop [that] invoked an appetite for the subsequent menu which would, as one may expect of a master chef, really have something to offer."<sup>209</sup> With more than a little irony, he described Leitzl's irritation at the fact that, while accepted

as a journalist and editor, he was completely unrecognized as an architect. Leidl's postwar work in the late 1940s and early 1950s comprised mostly churches and other buildings belonging to the Catholic diocese, most in the area around Cologne, to which architectural publications had paid no attention. By comparison, Leidl had been established as a journalist for almost two decades, writing about Modernist architecture throughout the 1930s and early 1940s for the Berlin-based periodical *Wasmuths Monatshefte für Baukunst*. Apparently seeking a way around the embarrassment of self-publication,<sup>210</sup> Leidl appealed to Schwarz to author the texts that were to accompany documentation of his post-war church buildings. This ploy ultimately did him little good.

As Ulrich Conrads noted in his introduction to the 1994 reprint of the documents around the Bauhaus Debate, he warned Leidl about the dangers to his journalistic reputation that would accompany self-publication, but Leidl was driven nonetheless to proceed with the project. Conrads recalled that, "Leidl not only refused to acknowledge the argument [that he would risk his authority and believability as a critic by publishing his own work] but with annoyance, he reined me back to my role as editor. None other than Rudolf Schwarz would write the commentary on his buildings."<sup>211</sup> True to his word, Leidl published Schwarz's text without any editorial changes although it was in no way the architectural commentary he had asked for, and "rushed and peeved, went about writing the commentary on his buildings himself...under the title *A Few Reservations...*"<sup>212</sup> It was Schwarz's text, not Leidl's architecture, which drew attention from the architectural community; the editor-in-chief's built work remained marginal, failing to emerge beyond the alibi role it served in Schwarz's essay.

Rather than speaking directly to Leidl's projects, Schwarz explained the apparent incompatibility between the roles of editor and architect by suggesting that recognition of Leidl's achievements

as a journalist did not merely overshadow, but rather, entirely precluded acknowledgement of his ability as an architect:

“...they [Leitl’s readers and fellow architects] apparently cannot imagine that someone can write so well and nonetheless still be an architect who knows how to build as clearly and cleanly as he can write and they counter with the sentence I have used as a title....These base people seem to think that an artist should rather not think, since there are other people around to do that....They would apparently like to aver that in the discipline of building, there is a similar division of labor since there are actually quite a few people who can write beautifully and with extraordinary depth. They were trained by universities especially for this purpose and then spend their whole, long lives doing nothing else. I therefore trickled balsam on the torn heart of the master [Leitl]: ill-meaning people misinterpret the words of Goethe and rewrite them as ‘Mess around, artist, think not.’ I tried furthermore to console him with the observation that it is probably the fault of these “art historians” if so many clever lads in our line of work think so little of the written word.”<sup>213</sup>

These initial sentences displace the blame for Leitl’s predicament to his audience, and to a culture that segregates verbal capacity from visual. Schwarz unfairly ridicules Leitl’s consternation about this dilemma by using deprecating, if not trivializing diction when he speaks of the “deep grief that gnawed at his soul”<sup>214</sup> because his architectural work remained unrecognized. As consolation, Schwarz then singles out those who have led his audience astray: the “art historians.” The distribution of labor that has split those who write about architecture from those who make it, Schwarz implies, is the fault of the “universities” and of the “clever lads” whose distinction between making and speaking has corrupted the unity of thinking and making. Hereafter, Schwarz departs from any pretext of writing about Leitl and his work. His text careens associatively between his own speculations on topics seemingly unrelated to Leitl’s architecture or his publication until he returns to the sharply-phrased claims that raised Gropius’ ire.

The article begins in a deceptively avuncular tone. After telling the story of the evening he and his friend Leitl spent together in preparation for this issue of the magazine, Schwarz casually drops the Goethe citation from which the article’s title is borrowed. As if simply communicating the flow of conversation, he uses Goethe’s words as a vehicle to describe the various corrupting

influences Leidl and he diagnosed: photography, impoverished architectural education, loss of cultural depth and the presence and absence of historical continuity in German culture. Within its free-associative flow, the text makes good use of Goethe's distinction by separating, and then arguing for the reunification of, physical and intellectual architectural work.

### **Same Same but Different**

Schwarz's deceptively narrative and episodic-seeming article returns to four interrelated primary points of critique: the rise of the "art historical" perspective on architecture; the loss of cultural depth in architectural training; a tendency Schwarz defines as "Materialism;" and the ruptured relationship to history which these three tendencies helped to create. This final point serves as a platform for the most direct attacks on the Bauhaus. Schwarz used the claim that he had developed similar lines of thought in his statement at the *Darmstädter Gespräche*<sup>215</sup> his earlier texts for *Die Schildgenossen*, the periodical he co-edited from 1923-1935, and in his 1928 publication *Wegweisung der Technik*, a fact he disingenuously offers as a way to deflect any surprise or outrage which his current statements might provoke.

In the twenty-five intervening years, however, his professional position had become significantly more influential: by early 1953, Schwarz had emerged as one of Germany's foremost church builders and was only a few months distanced from his position as general planner for Cologne's reconstruction, a position he used to reimagine entirely the historic city. The need, and the capacity, to redefine the trajectory of German architecture was an ambition expressed years before Schwarz's essay in the founding of statement made by Leidl's board of editors and reiterated in the proceedings at the *Darmstädter Gespräche* of 1951. In the 1947 preface to the periodical's first issue, Schwarz and his fellow editors of *Baukunst und Werkform* had claimed



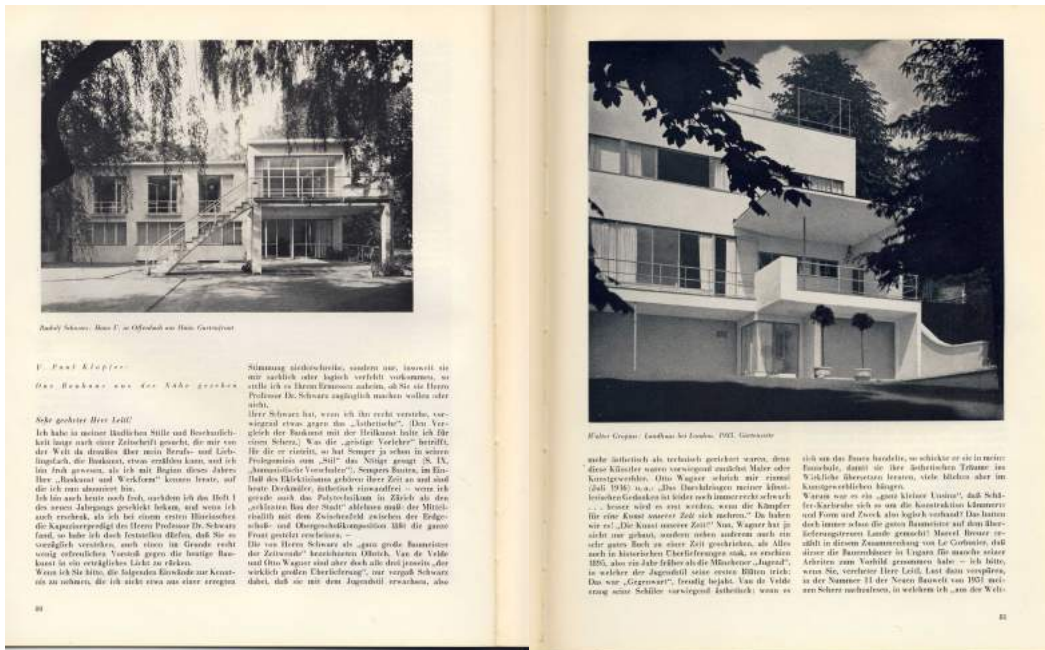
that they were forced to choose between “desperation” and a “return to the foundation.”<sup>216</sup> As such, their only option was to rescript architecture from its “foundation.”

By 1953, however, the desperation had given way to greater normalcy, and the “return to the foundation” had assumed a different cast: on the one hand, Modernism had become a style shared across the political spectrum in Germany’s *Wiederaufbau*, and on the other, the possibility of a nationally specific Modern architecture in Germany seemed increasingly remote. The latter was motivated not least of all by Germany’s physical political significance to the original occupying allies, particularly to the US. America’s cultural agenda in Germany and its related interest in rebuilding German industry wielded an increasingly strong influence on the planning, design and realization of new buildings, especially larger-scale projects.

Despite these clear, emerging trends in the fast-paced situation on the ground, Schwarz’s text addresses Modern architecture as a polemic, making no reference to any specific built works that might illustrate the Modern idiom he references; the only mention of built work is his tangential praise of the *Jugendstil*, itself only marginal to the Modernist canon. This rhetorical differentiation between architectural artifact and architectural culture is fundamental to Schwarz’s position in this text, which focuses on the intellectual and philosophical weakness of contemporary architectural thinking, not stylistic preference. In the following issue dedicated to reader responses to Schwarz’s initial text, Leitzl’s layout reinforces the importance of this differentiation. By choosing photographs for the magazine’s pages which emphasized the superficial similarities between Schwarz’s work and work culled from both Bauhaus and Gropius’ oeuvre, he encouraged his readers to think more deeply in order to understand what – if not appearance – Schwarz objected to, and to question a simplistic, purely visual definition of Modern architecture.

## Consonant Images, Dissonant Texts

Buying himself time by combining the February and March 1953 issues of his magazine, Leitz assembled seven responses, some commissioned and some readers' letters. He accompanied the seventy-odd pages dedicated to responses with selected images, spanning more than thirty years of Schwarz and Gropius' architectural production from the 1920s to the present, including buildings completed after Gropius had departed Germany. No explanation is offered of the heterogeneous images chosen; but their juxtaposition encourages comparison between the two. For example, a letter written by Franz Munier, a close associate of Leitz's and text editor for *Baukunst und Werkform*, accompanies two Herbert Bayer images, although the letter doesn't reference them. The upper image, dated 1931, shows a still life of a cone, sphere, drafting triangle and pen, which cast a sharp shadow onto a folded newsletter with the heading 'Bauhaus.' The overleaf depicts a 1928 project by Schwarz for a church composed of three tall cylinders, reprinted from *Die Schildgenossen*. Cone, sphere and cylinder: the Platonic solids imply formal common ground between these two contemporary strands of German avant-garde.



Houses by Schwarz (left) and Gropius, *Baukunst und Werkform* v.7, No. 2, p 80-81

Several pages later, above a text by former Bauhaus student Paul Klopfer, Leiti chose two photographs of prismatic, white stucco and glass villas, both viewed past a fringe of overhanging foliage. On the left is Schwarz's Volk House (Offenbach, 1933-1934) and on the right, Gropius' 1935 house for British Politician Benn Levy near London. The two photographs' captions, composition and leafy frames foreground their similarities: garden-side views, pipe railings, flat roofs and expansive glazing, despite differences in the windows' configurations – tall French doors in Schwarz's building and horizontal band windows in Gropius'.

Throughout the issue, the juxtaposition of consonant images and dissonant text sends up the tried and true Avant-Garde practice of eliding the work of radically different architects under the rubric of *Neues Bauen* in order to assert it as a unified style. As a graphic argument, Leiti's choice of images and their affinity-promoting layout might have been intended to assuage offended sensibilities by pointing to the two protagonists' similarities. It might, however, also be read differently as underscoring the distinction Schwarz had made in his original article, and emphasizing the fact that Schwarz's critique of the Bauhaus was *not* concerned appearance and could not be reduced to formal or stylistic preference. Understood this way, the photographs' similarities parody the opportunistic use of photography to insinuate 'white modernism' as a homogenous tendency while prompting readers to think more deeply at the distinction made in the accompanying text. More than a mere distinction in critical locus –philosophical, not stylistic – Schwarz's suspicion of purely visual argumentation also set him apart from the publicist methods of the Gropius Bauhaus and its progeny in the US.

## **Building at Last**

Schwarz used the distinction between architecture as rhetoric and as practice to distance himself from the most banal and common attack on Modern architecture in general, and the Bauhaus in particular – its impracticality, its poor construction, any of the other flaws that might result from an architecture which sets more store by rhetoric than by building – by *Reden* rather than *Bilden*. Given the real difficulties of building well amidst the material scarcity of the early 1950s, this distinction was historically and practically relevant. The criteria for an architect's integrity, Schwarz points out, cannot be derived only from his success in keeping rain or cold out:

“It is a riveting moment when an architect finally, finally, is permitted to build his glass cube, even if the excuse for it is a factory building, and it is reassuring and almost metaphysically necessary that its roof leak and that as a whole, it perform as if it were a greenhouse. There is nothing aggravating and nothing wrong about that, but the architect should merely not contend that this glass cube might have result from functionalist calculus. It is touching when someone creates a work of art out of slats and blocks, even if the excuse for it is offered by the human practice of sitting on chairs.”<sup>217</sup>

Schwarz's target here might easily be construed to be Gropius' Bauhaus building, with its concrete structure and glazed façade adapted directly from contemporaneous factory buildings. But, he seems to imply, even the construction of a factory with architectural aspirations is “riveting” as long as its intellectual underpinning is not its functionality per se. Schwarz takes Functionalism to task not on its claims to construction integrity, a flaw from which many early Modern buildings suffered, but instead, on its claims to a capacity to bridge the gap between intellectual ambitions and their physical expression. By separating the physical work from the polemic that makes use of it, Schwarz also positions himself to critique one particular trajectory of Modern architecture – the Modern architectural imperative to expression function, construction and material as one. Architectural ambitions are myriad, and the validity of any individual built work was its attempt at *Bilden*, not a crude ‘Materialist’ mandate to express the activities it housed and the way it was put together. The Goethe citation and the article's title, a play on Leidl's own concerns at being recognized as a writer on, but not as a producer of, architecture,

were alibis which gave Schwarz the latitude to speak to what he considers the primary failures of the Modernist ideology, embodied by the Gropius Bauhaus' putative focus on image, negation of history and style, and technology.

### **An Aesthetic Location**

The article's meandering tone often makes it difficult to separate the author's alibis from his primary discourse. His critique of photography, which marbles the essay, is only one example. Schwarz's position on photography is a complex one, troubled by his conviction that space had to be generated through synaesthetic and theocentric human experience, both individual and communal. The substitution by the photograph of a singular 'eye' for binocular vision, the pseudo-naturalism of an image produced slightly above or slightly below natural eye level – these are the manipulations which belie that seeing in motion, for Schwarz, was a sine qua non for the constitution of space. Art history, with its mania for reproducing architectural experience in photographic form, bears the brunt of Schwarz's ire, in its role as handmaiden to the deculturalization with which he associates the Bauhaus.

In his speech at the 1951 *Darmstädter Gespräche*, Schwarz had conflated the visual technology in the form of photography with the technocratic "cage" that had been imposed on space through a specific kind of architectural practice. In this article, his critique was slightly different, desecrating on the one hand the glorification of technology over intellect in the Bauhaus' version of "materialization"<sup>218</sup> and on the other, the intellectualization of technology in the practice of art history dependent upon photography. Both symbiotic tendencies undermine the genesis of space through the collective, detailed in Schwarz's *The Church Incarnate* and referenced here:

"Unfortunately, one cannot be angry, since it is really somewhat difficult with art historians. They occupy an aesthetic location and view the world from there. They betray that fact by printing so many photographs in their books, because the photographic machine is just what they need. It steers the eye from a singular point into the architectural stratosphere, whereas the true architect elevates a community of people into a common, completely clarified form."<sup>219</sup>

Easily dismissed as the author's self-indulgent inclusion of a topic dear to himself but irrelevant to the topic at hand, be it Alfons Leidl as architect or the other ideas Schwarz threads through his article, this revisited attack on architectural photography contributes to his unmasking of the Bauhaus as a "success of publicists."<sup>220</sup> The centrality of the photographic image to the interwar Avant Garde throughout Europe, both as a means of working and as a means of assembling a larger cultural movement, is well documented.<sup>221</sup> The Bauhaus had participated in and benefited from this photographic and publicistic exchange; perhaps Schwarz was, however, particularly sensitized to the power of photographs in his particular disciplinary context, especially the impact of images coming from the US in such exhibitions as *Gebaut in den USA* or *So wohnt Amerika*,<sup>222</sup> on the fragile attempts in Germany to establish an alternate architectural culture.

The perspective on American architecture offered by *Baukunst und Werkform* in 1953 was utterly different from the presentation of buildings by Breuer, Gropius, Johnson, Neutra and Skidmore Owings and Merrill that comprised such exhibitions, meant to persuade lay and professional audiences of the power, wealth and eloquence of American architectural production. These exhibitions also reflected slow but essential social change. An advertisement on the back cover of the July, 1951 issue of *Baukunst und Werkform* for no fewer than thirty American books on architecture, planning, décor and lifestyle makes this change clear. The titles reveal an American market at odds with the serious, text-heavy content of the magazine on which the books are advertised: *Window Displays*, *The Specialty Shop*, *Furnishing with Color*, *America's Best Small Houses*. These are books directed at the middle class homeowner and the industry charged with attracting his (or her?) disposable income. The presence in Germany of a market for specialty advice focused on consumer culture indicates the rate of change in material conditions by 1951.

Edited by Leidl and the classically trained art historian Conrads, *Baukunst und Werkform* featured mostly German projects and industrial arts. As an example, in the only eight 1953 issues not dedicated at least in part to texts related to the Bauhaus debate, the featured articles and illustrations showed recent work in Scandinavia, Northern Italy and France. Only two representatives of American architecture were included, neither canonical or commonly known: Saul Steinberg, whose ironic architectural drawings sent up big cities, highway-hugging suburbs and stick-built 'machines for living'; and Bruce Goff, to whose inimitable art and architecture the entire July issue was dedicated without comment by the magazine's editors.

The tendency to keep to a minimum any reporting on American architecture holds true for the magazine's earlier years. One notable exception are the pages dedicated to Mies van der Rohe on the occasion of his 65<sup>th</sup> birthday in 1951: the special affinity felt for him and his work amongst this cadre of German architects set him apart from the other expatriate Germans in the US.

Leidl's hyperbolic text, accompanied by a series of construction details and photographs otherwise rare in the magazine, ends with a quotation from Mies on the men's last meeting in Germany. In the context of the Bauhaus debate and its recasting of recent German cultural history, the last sentences are particularly striking:

"Surely, Mies' trailblazing work has already become part of the history of Modern architecture, but the creative, pedagogic power that emanates from him is the strongest reality. Mies van der Rohe is a classic of Modern architecture. His work, his path – followed with unshakable calm and magnanimity – is disturbed neither by conflict nor by fluctuations in the opinions of the day. Every building and every detail which comes from his hand had the absolute balance and clarity that only few architects have achieved in the haste of everyday building....When we last met Mies van der Rohe in Berlin, the newspapers were full of complimentary reports on the record-breaking accomplishments for Speer's *Reichskanzlei*, which had risen from the ground in only a year. Mies said only one sentence on the subject: "Now they are proud that they accomplished this in one year but they don't know how difficult it is to make even only a baseboard correctly." It is this knowledge that we can all always learn from Mies again."<sup>223</sup>

Leidl juxtaposes Mies' deliberateness and slowness, an unlikely characterization given his prolific postwar American production, with Speer's vulgar speed; the photographs of towering steel

frame and foundation footings many times the size of the construction workers were cast not as examples of cutting edge technology, as another rhetorical strand would have had them, but instead, as classics beyond “the opinions of the day.” Could a baseboard detail be the essential difference?

### **The Clever Lads**

“I tried to console him further by noting that it is probably the fault of the art historians that so many clever lads in our branch no longer think much of the written word....We began to ponder why the architects have allowed themselves to be so bowled over by the art historians without even the most quiet of sighs, whereas the physicians have remained the masters of their own homes. It became clear to us that it arose from their inadequate educations - they learn constructive geometry while medical students internalize intellectual discipline. We decided to reconfigure the education of the architect. In the future, they would have to complete a basic course in humanities, to include philosophy, theology, sociology, economy, mathematics, natural science and the German language. That way, no one could intimidate them and we thought, at this glorious moment, of our friend Mies, who openly admitted that he had learned much more from the pictorial orders of St Augustine and Thomas than from the whole of Functionalism.”<sup>224</sup>

As he mounts his diatribe against the art historians for their role in the degradation of architectural discourse, Schwarz, too, invokes Mies, whose dismissive mottos seem to have been directed as evenly at a figure such as Albert Speer as at the ranks of Modern architects. Not only have art historians with their penchant for photography displaced true spatial practice, Schwarz maintains, but they have also contributed to intellectual decline among architects who learn “constructive geometry while medical students internalize intellectual discipline.” This rhetoric is at least in part self-congratulatory: Schwarz himself had interrupted his own study of architecture to study theology in Berlin. He and Mies shared a long-term relationship with the Catholic theologian Romano Guardini, with whom Schwarz had edited the periodical *Die Schildgenossen* in the 1920s, and whose influence was determinate in Schwarz’s understanding of technology.<sup>225</sup> It was Mies who, in 1958, supported the American edition of Schwarz’s only text to be translated into English, *Vom Bau der Kirche (The Church Incarnate)* of 1947. Thus, the



recourse to Mies and his preference for theological readings as a basis for spatial thinking was no coincidence.

To direct vitriol against art historians seemed particularly cruel since the article's subject, Leitzl, was himself an art historian, albeit one who chose increasingly to practice as an architect. However Leitzl, who came from a comfortable, cultured Berlin family, had acceded to both professions without formal academic training. At the age of 19, immediately upon receiving his high school diploma, Leitzl had joined the staff of the periodical *Die Bauwelt* as an intern and worked his way to an appointment as editor. His path to architecture was equally practical, beginning with a professional partnership in the late 1930s with his friend Hermann Lahmé, with whom he had co-authored a book on housing.<sup>226</sup> Appearances aside, Leitzl had never been trained to judge the world from a rarified 'aesthetic viewpoint' nor had he been subject to mind-numbing "constructive geometry." By the same token, Schwarz was no more opposed to art history per se than he was to photography: he used the techniques of both avidly in *Die Schildgenossen*, and in his collaborations with the photographer Albert Renger-Patzsch. All that he wished to criticize in the excesses of both, however, could be handily embodied in the Bauhaus' pedagogy and self-promotion, both during the period of its actual existence in Germany and thereafter, as its denizens developed career paths underpinned by their years together in Weimar and Dessau.

In their defense of the Bauhaus, the authors who would respond to Schwarz's essay cited repeatedly the school's sustained influence on architectural education, discourse and style. From Schwarz's perspective, this influence spoke against, not in favor, of the institution. The divestment from architectural education of all the traditional humanities in favor of codified visual training had created the mass of "clever lads," ready to rid their discipline of its intellectual

baggage and to drag others down with them. By appropriating an architectural idiom and proclaiming its ideology loudly, so Schwarz, the Bauhaus had closed down alternate paths to Modern architecture: “Those others of us were marred for decades, we were thrown into the same tub and cast out at the gutter with the same bathwater, and we were compelled to complete tedious detours in industrial building, urban design, church building and literature to show that we were entirely different.”<sup>227</sup> It must have deeply irritated Schwarz that precisely this ideology had propagated itself abroad at no less powerful institutions than Harvard and Yale, and was now readied for re-importation. Gropius’ successes achieved by pulling the levers of publication were no less an affront than his ability to expand his visual courses for a new, even larger cadre of future architects at Harvard’s Graduate School of Design.

### **The Unification of Existing Forms**

A codification of both technical and artistic thinking, the visual training adopted from the Bauhaus model and developed at the GSD under Gropius relied upon the return each year to first principles of composition, space and color. Placing these visual principles at the center of an architect’s training ran counter to Schwarz’s call for an intellectually integrated pedagogy; the implicit ahistoricity of these first principles, and the idea that each student should return to the basic elements of original visual production was no less subject to Schwarz’s disapprobation. This is made clear in his follow-up article published several months later, in which he spoke explicitly to the claim that “architecture is a free art form.” Addressing the architects of the *Neue Sachlichkeit*, Schwarz wrote “Certainly architecture cannot float freely in space as if it were objectless painting; precisely this was the greatest danger of the ‘Bauhaus Style.’”<sup>228</sup>

Schwarz offers critique and his own alternate ideas when he addresses historical style, the perennial nemesis of Avant-Garde Modern architecture. He dismisses the idea that style is a

criterion for quality, claiming “I consider it to be a sign of an ignoble and narrow mind to despise a genius only because it makes use of an appropriated language. A genius goes its own infallible way and changes its garb.”<sup>229</sup> After urging a reconsideration of the 19<sup>th</sup> century, he focuses particularly the Gothic and the Antique, which he sees as the two primary poles around which German architecture developed and which, as he notes, suffuse German culture from Goethe and Schinkel to Novalis and Brentano:

“For the untalented, style is a recipe for making art without actually being able to; for the talented, it is a vocabulary....Perhaps the great historical achievement of the Germans it less the invention of new forms, but in the illumination, amalgamation and unification of existing forms. Gothic and Antique were actually never historical topics for the Germans but rather, intimate potentials....For the young Goethe, the Strasburg Cathedral was not the past but rather, a living sign of German and Christian spirit. It was not a matter of remaking everything that had ever been German...

Perhaps the two forms of the world have remained until today the German fate, and it is our destiny to be located between both possibilities of existence. We are charged with the effort to unify the two in a third...Is it so difficult to discover the living Gothic in Bartning’s Star Church or the living Antique in the great works of Mies? What matters to us is that there is a great, living heritage in our art which is sufficient up to the present day and is carried by great architects whose interest was not in making buildings but in offering humanity its great space, and who all speak with one another across time...

Perhaps these two world forms have remained until today the German fate, and it is our fate to be located between both possibilities of existence and to devote our efforts again towards their unification in a third form.”<sup>230</sup>

As the discussions at the 1951 *Darmstadter Gespräche* had already made clear, there was not universal acceptance among those in the *Baukunst und Werkform* circle of the dictum that each era had its architecture, as mandated by the technological *Zeitgeist* of the times. Schwarz echoes that position here, imagining an architectural discourse not of a time but “across time.” Even more striking is his other claim that the ‘German talent’ was that of recombination, not invention – and that the quest for this recombination into a “third form” was in fact fate. By casting the Antique and the Gothic as “intimate potentials” which give rise to vocabularies, not raiment, in which the “talented” can work, Schwarz is in clear opposition to familiar characterizations of historicizing architecture as inherently eclectic and retrograde. By claiming

that German talent was better suited to work through adaptation rather than invention, he implies that the Bauhaus' ambitions were misguided from the start. And by ascribing the Gothic to Bartning and the Antique to Mies, he can both provide examples of the way these "intimate potentials" may come to fruition. These references assert a different path to Modern architecture than the one that ran, via originality, through the Bauhaus.

That *Baukunst und Werkform's* editors understood Schwarz's distinction was evident. In choosing an appropriate Gropius text as an interleaf in the February/March issue, Leitl decided in favor of a quotation from the 1925 book *Internationale Architektur*. Paired with a photo of the Bauhaus master in his GSD studio, backlit and towering over a student, the text focuses on the need for an architecture appropriate to the technology and spirit of its era, one that could liberate building from its degradation to "a bearer of external, dead decorative forms...instead of being a living organism."<sup>231</sup> This standard rhetoric, certainly familiar to all the magazine's readers, could only have served to underline the fundamental differences between Gropius and Schwarz, translated into terms that were perhaps easier to parse than Schwarz's original diatribe.

### **The Zero Hour and Historical Rupture**

Schwarz's intention to rewrite the lineage of German Modern architecture was not an idle academic undertaking, but a means to reassert Modern architecture's historicity *de facto*. The Bauhaus' putative contribution to the rejection of history, according to Schwarz, was inherent to its curriculum: by expunging the humanities from the education of future architects and designers, the Bauhaus had silenced an architectural discourse that stretched across history and human experience. Schwarz introduced this argument early in his article:

"As our conversation intensified, I expressed the opinion that the origin of the strange muting of the conversation among architects might be deeper, and perhaps could be sought in a greater

break with Western tradition that we had experienced. The master dictated to me that I was to write all this down, and I promised, although with concern. He was still convinced that the break with tradition was the fault of the Nazis; I nurtured in my heart the more terrible conviction that this had occurred when materialism had entered Western thinking. He was genuinely distressed that I seemed to consider the entire Nazi mess entirely inconsequential; the Reichskanzlei has been taken apart and next year, the Federal Building Department will build an entirely functioning replacement in Bonn....Anyone who allows himself to be seduced by Nuremberg culture is as much beyond help as anyone who is electrified by a parade march; such things will always be, it belongs to the stupidity of nature that such things recur....I said I believed, however, everything that occurred before then was much worse because it was more traitorous and more seductive. The master was truly unhappy when I revealed to him that I had never thought much of the Bauhaus and the activities around it, and had said as much even as a tender youth. But I had already agreed to write an essay and he had promised to print it as it was; that is what he now has to do. It would really be an outrageous injustice if it is always others who are aggravated by *Baukunst und Werkform* while the editor enjoys himself! Let Leidl be aggravated for once.”<sup>232</sup>

There is no mistaking either the irony or the polemic in this passage, after which Schwarz’s text abandons the conceit of a reported conversation. His comments on the Nazi regime, coming in late 1952 from an architect who, although never a member of the National Socialist Party, had spent the latter part of the war planning towns for “a new agricultural people,”<sup>233</sup> presumably relocated from Eastern Europe, in the Lorraine region in occupied France, are at best irresponsible. His depiction of Leidl, whose journal was among the few who had tried to define a considered but non-inflammatory position on the activities of architects and planners during the war and the immediate after war period, was simply unfair. It was Leidl in 1949 who had chosen a careful stance on his journal’s attitude towards what was certainly the most sensitive issue of the day, an evaluation of architects’ allegiances ‘then and now’. As the magazine’s editor-in-chief, he had justified his position, writing “We all, or most of us, were no heroes, or only very partially. Otherwise, we would no longer be here. We were all somewhere, and we also did work...Our contracts all bore the signatures of military financial ministers, Gau leaders or SS-leaders (even my own).”<sup>234</sup> This hardly seems the kind of journalism, which would prompt one to wish to “let Leidl be aggravated for once;” indeed, it is a much more differentiated position than Schwarz’s own in the passage above. Why, then, would Schwarz choose to equate the Bauhaus’ role in

destroying the 'great Western conversation' of the interwar period to that of National Socialism?

What was at stake when he descried the "anti-spiritual terrorism of dictatorial groups, namely the Bauhaus literates and later, of course, the masters of the Thousand Year *Reich*?"<sup>235</sup>

At several points in his text, Schwarz refers to the insistence of those he criticizes – called almost interchangeably Bauhaus, Materialist and Functionalist – upon their own "year one," before which no relevant culture is said to exist. It was the Functionalists, for example, who in the years after the First World War had built a wall between themselves and history, "with their appearance dated as the Year 1 and before, everything was barren and empty."<sup>236</sup> Only when that wall had been breeched could one "freely view a young Europe, unfurling in a thousand hopes, as it had been in the decades before the war."<sup>237</sup> Even today, so Schwarz, one finds the same 'charlatans' as one had then, distributed equally between false history and false ahistoricity: "the masters of the Thousand Year Reich have become the keepers of tradition... We want to make their squinches and architraves difficult for them: tradition belongs to us... or the monastery of the Avante-Gardistes who today still believe in their Year 1."<sup>238</sup> Here, too, Schwarz conflates the cultural impact of the Nazis and the Bauhaus.

With the end of the war had come a new *Stunde Null* ('zero hour') in Germany. It promised, on the one hand, a clean slate in contrast to the punitive claims to which the country had been subject in the interwar period but on the other, created a void in terms of national and cultural identity. Schwarz's conflation of Bauhaus and Nazi regime may be understood in response to the fact that, to his mind, the actions of both had condemned Germany to this cultural vacuum. The total rejection of history after the war was an immediate reaction to the abuse of history, albeit a fictive history, by the Third Reich to fuel its bloated Germanicism as justification for its intra- and international aggression. To Schwarz, a perennial critic of Bauhaus Modernism, the Bauhaus "year one" elided with the political "zero hour" used to describe both the physical devastation of

the post-war landscape and the need to denazify (or simply to de-germanicize) German culture to the point of harmlessness. His elision, the most controversial part of his article, sensationalized the gravity of the *Stunde Null*, whether celebrated or reviled; his conflation of Bauhaus Modernism and Nazi culture was, in fact, not far from the truth of West German architectural and urban planning practice in the 1950s.<sup>239</sup>

Whereas neither a year one nor a zero hour permit of any tradition or history, Schwarz produced his architecture in relation to both, advocating for an historical continuity that has been described as “the flow of time.”<sup>240</sup> His particular sense of continuity with pre-WWI Modernism, specifically the *Jugendstil*, was integral to his resistance to the ‘Bauhausization’ and homogenization of Modernism. His passionate advocacy for the historiographical reconfiguration of contemporary architecture as continuity rejected revolution or rupture out of hand.

### **Intoxication and Eroticism**

Schwarz’s premise, that historical architecture was absolutely relevant to Modern architectural production, threaded through larger discussions within *Baukunst und Werkform* at the time. This is borne out by a photographic essay contributed to the August, 1953, issue by Ulrich Conrads. Entitled ‘Material Intoxication and Play: Notes on the Situation of the Neues Bauen’, the article argued against the assertion that “play and intoxication have nothing to do with Modern architecture, they are remnants of a time in which court and church architects were always compelled to achieve the most precious, splendid, celebratory and largest...but today etc., we know the arguments too well: Socialism, need, hard times, sobriety, functionality.”<sup>241</sup> Careful to tell the reader that his article is “no more than notes. Their order is totally associative,” Conrads juxtaposed full and half page photographs of historic and current building to argue

*Materialrausch* against *Materialgerechtigkeit* and to propose *Erotik* in favor of the “joyless harmony” purveyed by “serious” architects.

The essay’s photographs were carefully chosen and constructed: two shots of illuminated domes, one contemporary in concrete pierced by small round glass block and the other, the 14<sup>th</sup> century stalactite dome of the Alhambra. A reverse print of a 1905 cable and truss drawbridge, its filament-like members white seen from below against the largely black background, faces an interior image of a Gothic cathedral, its massive stone tracery foregrounded in strong two-point perspective. Another spread compares a cast concrete storage building by Nervi to an oblique exterior photograph of a 16<sup>th</sup> century guild house in Strassburg; the two photographs’ perspective lines meet almost symmetrically in the magazine’s binding. Perhaps the strangest pairing is a photograph of the UN secretariat building, still surrounded by the construction site that would produce the rest of the complex, with a 17<sup>th</sup> century Wurzburg façade: the comparison apparently rested in the use of repetitive windows and their embrasures to create façade articulation.

Although he did not quote Schwarz directly, or reference the conflict between the two different visions of Modern architecture to which the Bauhaus debate gave voice, Conrad’s final sentences left no doubt as to the motivation for his essay.

“This is not a call for ‘back to nature,’ as it might be misunderstood. Because when we speak about ‘fundamental experiences,’ we meant *our* experiences, the experience of the ‘here and now’...But those who – since we have spoken about material – define this approach as truncated Materialism should be told, in lieu of any number of other retorts: ‘Physicality is the endpoint of God’s path.’ It seems to us that there is enough in this word to meditate upon for a good while longer.”<sup>242</sup>

Using the force of images and text, including the strategic capitalization of key terms, Conrads picked up Schwarz’s diction and arguments but made them accessible: Modern architecture



participates in a larger historic undertaking whose ethics comes not from Materialism but instead, from God.

### **Who's Who, Who's Where**

For the disgruntled readership of *Baukunst und Werkform*, however, the Bauhaus may have signified a connection to, not disruption from, a meaningful history.<sup>243</sup> In analogy to the role played in asserting an untainted German cultural identity by such expatriate figures Mann or Adorno, the Bauhaus served as a reference point of German culture untainted by association with the National Socialist regime – in fact, by virtue of the school's closure in 1933 under political duress, it had come to represent an oppositional culture despite factual contradictions to that interpretation. Such reference points were particularly important in the development of a new German identity, lodged uncomfortably between a 'zero hour' and whatever might come thereafter. The reception of the Bauhaus in West Germany after 1945 indicates its importance to cultural memory, if not directly for the practicing architects.<sup>244</sup> The apotheosis of the Bauhaus in the writing of Modern Architecture was, from this perspective, to the credit of German cultural achievement.

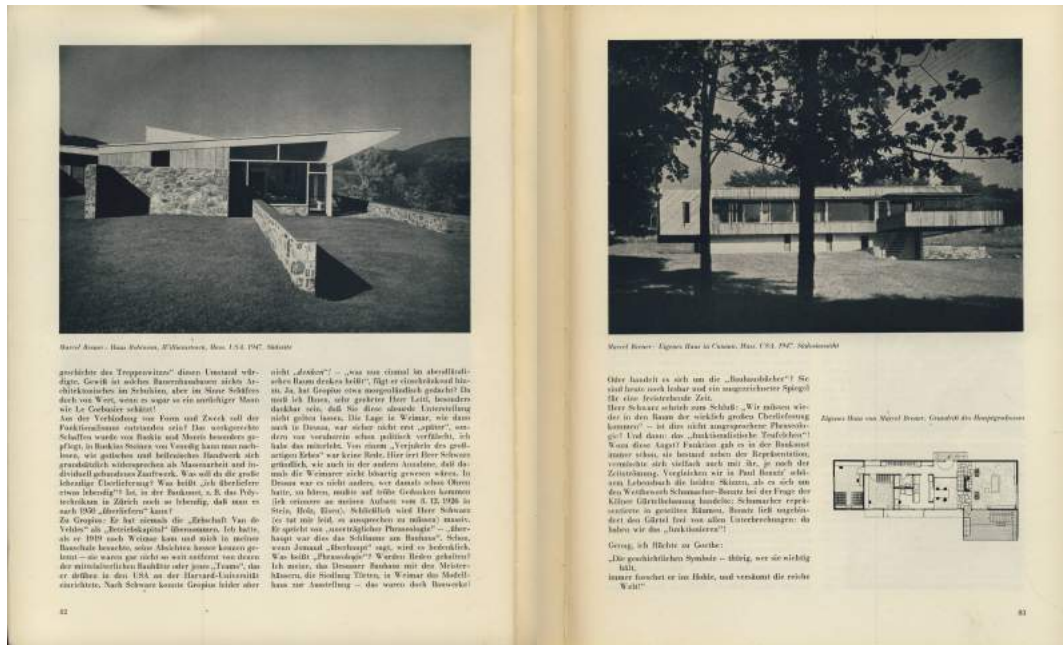
Hermann Mäckler's letter of response, published in the February/March double issue, reflects this tendency. He countered Schwarz's critique by asserting the ongoing significance of the Bauhaus in Germany, Europe and ultimately, internationally. His title 'Praeceptor Germaniae et Europae?' – Master of Germany and Europe – referred ironically to Schwarz, who, Mäckler implied, had claimed this title for himself, "like others before,"<sup>245</sup> by which Mäckler could only have meant the Third Reich. By contrast, Mäckler described Gropius as "worthy of affection."<sup>246</sup> As he took Schwarz to task, Mäckler made clear that it was not Schwarz, the self-proclaimed

master, who could lay claim to Germany and Europe, but rather the Bauhaus, whose teachers and heritage had achieved almost ubiquitous importance:

“What is the state of *your* historical desires?...Why, in fact, are you so deeply concerned with the Bauhaus in its historical form? Was it not liquidated almost 20 years ago? Shouldn't this only really be of interest to historians? Is it not true that a bit has happened in the world of building since the departure of the Bauhaus? ... Are there not 'things that are being decided' and thus offer matter for legitimate discussion? Important and valid things that, nota bene, are fundamentally connected with the past existence of the Bauhaus?”<sup>247</sup>

Mäckler set out to prove the extent to which “important and valid things...are fundamentally connected with the past existence of the Bauhaus” by offering a list of the current positions and locations of the original Bauhaus masters. At the top of his list was Gropius, “Architect, founder and director of the Bauhaus, most recently Chairman of the Department of Architecture, Harvard University, USA.”<sup>248</sup> Given Mäckler's recent trip to the US, which he mentioned later in his letter, he must have known that Gropius was no longer at Harvard, a fact which lends intentionality to the imprecise attribution. The next four names – Albers, Bayer, Breuer and Feininger – shared with Gropius an American domicile and, in the case of Albers and Breuer, the title of professor at an Ivy League university. Moholy-Nagy's name appeared towards the end of the list, “photographer, set designer, writer, Director of the Institute of Design, Chicago, deceased 1940 in Chicago.”<sup>249</sup> In fact, of the thirteen men named on Mäckler's list, six had emigrated to the United States and four of those had attained leading academic positions. As if aiming to add weight to his claim that the Bauhaus was active where “important and valid things” were being discussed, Mäckler concluded his list by asking, “How do things stand, for example, with Johannes Itten, with Gerhard Marcks or with Paul Klee, whose most beautiful pictures I saw in Chicago in the home of Mies van der Rohe?”<sup>250</sup> Presence in America, it seems, had become a touchstone for validity. In this way, by the end of this paragraph, Mäckler had argued for the Bauhaus' importance by virtue of its exportation to where “important and valid things” were happening, the United States.

Just as Leidl had used many of the images in his February/March issue to emphasize superficial similarities in the work of Gropius and Schwarz, he had also suggested the translation from a German Bauhaus to a new, US permutation by use of photography. The architectural photographs in the response issue traced the route taken by Schwarz, Gropius and their architectural idioms from the 1910s to the present, albeit with much greater play given to Gropius' oeuvre. Four examples of Schwarz's work communicate his consistent interest in the simple 'box:' the Corpus Christi Church as published in 1930, the Anglican garrison church as published in 1952 and the cylindrical church and house in Offenbach already discussed. By contrast, the magazine included four different images of the Bauhaus building and two of the masters' houses, including plans of both buildings, and a view of Gropius' housing in Berlin-Siemenstadt from 1929. The overleaf following the spread juxtaposing the Schwarz and Gropius villas concluded the architectural images to accompany the text. This spread showed two Breuer houses in Massachusetts. These images are markedly unlike the preceding photos of the two villas, whose white stucco'd surfaces appear in naturalistically gradated shadows in classically composed frames, both using the foreground tree boughs to balance the diagonals of a stair, in the case of the Schwarz villa, or the curved wall and slight perspectival recession of a balcony overhang in the Gropius villa.



Breuer Houses, *Baukunst und Werkform* (1953) v. 2/3, p. 82-3

The Breuer houses shared with the two earlier images only their bucolic contexts; Breuer's own house, like the other two villas, had also been photographed through overhanging foreground trees. Here, however, the similarities end. The Breuer houses are not stucco but instead are clad in vertical and diagonal wooden siding, and sit on fieldstone bases. The photographs emphasize the houses' dynamic forms, not through classical compositional technique but through the use of heavily contrasting shadows and the dramatized perspective made possible by new photographic techniques.<sup>251</sup> Although unattributed, the photos appear to be by Ezra Stoller, who had photographed Breuer's contemporaneous projects and was at the forefront of the style of architectural photography, which drew upon these new techniques to create a photographic idiom that would become synonymous with American postwar Modern architecture. An error in the captions, locating Breuer's own house in "Canaan, Mass" rather than New Canaan, CT and dating it a year earlier than its 1948 completion date, would indicate the editors' lack of familiarity with the American work.

Nonetheless, the choice of two Breuer buildings in lieu of Gropius' own house in Lincoln, or even one of the several house projects on which Breuer and Gropius had collaborated, is curious. Gropius' Lincoln house of 1938 would have been a more obvious choice to create continuity with the villas on the prior page; Gropius' larger projects, which by 1953 included housing and institutional buildings, would have complimented the Siemenstadt housing depicted earlier in the article. Either would have yielded images expected of a Bauhaus idiom. Perhaps this was the point: crossing the Atlantic had changed what could be attributed to the Bauhaus heritage. As Mäckler pointed out, "Who still builds to the letter of the formal laws of that Bauhaus?"<sup>252</sup> Could the Bauhaus still be legitimately considered part of living German cultural heritage and a plausible constituent part of a new West German identity? Or had it become something else, and someone else's, entirely? Leidl's selection of images begged these questions.



Images of the Breuer's New Canaan House and Gropius' Lincoln House respectively, portrayed in a more recognizably Bauhaus idiom. 1940s. *Photos, Andrew Wayne. Artstor*

### **No Joy**

"One might accuse me of stirring up old dirt unnecessarily. But no, there is bitter necessity to do so, so that fronts can finally be dissolved which are not fronts at all. The Bauhaus has achieved a great success, a success of publicists. As reprehensible as its ideologies were, the literarily-inclined lapped them up like milk and honey, and in an instant it was the defined dogma of all writers that vital architecture was indeed that of the Bauhaus and that the truly contemporary architect was only he who had broken with Western tradition. All others of us, however, were marked for decades. We were placed in the same tub and thrown out with the rest of the bathwater into the gutter. We were forced to make difficult inroads in industrial building, urbanism, church building and literature to show that we were of a completely different nature.

Our opponents have learned the entire phraseology by heart and have not forgotten it, even today. One need not expect of one's enemy that he be any more gifted than average. Anyone who thinks that all this is past should read the diatribe that Mr. Tamms from Düsseldorf has sent, as I write, to the *Neue Zeitung*: the masters of the thousand year Reich have become the defenders of tradition... We do not want to make their squinches and architraves easy for them: tradition is ours. Or he might visit the bastions of the Avant-Gardists who even today believe in the 'year one'. He would be immersed in a deadly lack of ideas and boredom in their publications which have slowly become fashion magazines (everyone is wearing corrugated metal and human organs).

Dear Mr. Leidl, I sincerely believe that my text will not cause you any joy, but I believe that it has to be. We really must return to the space of truly great tradition and divest everything that is counter to its spirit; we must return to true discussion."<sup>253</sup>

Schwarz was right: his article caused Leidl no joy at all. In his two-page editorial to the February/March issue, Leidl explained his decision to include seven different authors' critique, a journalist, a painter, a former Bauhaus student among them. Although he was at pains to express his admiration for both Gropius and Schwarz, and welcomed "everything that is vital within our time,"<sup>254</sup> he did not explain why Gropius was not one of the authors included. Within a week after the publication of Schwarz's article, however, Gropius had been informed by mail – included among those letters were some by German architects with whom he was otherwise not in regular correspondence – to which he responded with alacrity. Despite much urging from his minions, Gropius chose to respond only indirectly, through a letter sent to his faithful correspondent Richard Döcker, which the latter made sure was forwarded for publication to both Leidl's modest journal and to *Die Neue Zeitung*, the newspaper published by the American occupying forces.

Gropius' letter intended for publication was brief; it dismissed Schwarz's article as "rude and condescending in tone." Moreover, he wrote, the "contention of Mr. Schwarz that we had 'celebrated our conversion to historical Materialism' is purely invented."<sup>255</sup> Nowhere does Gropius engage the specific content of Schwarz's critique; even after receiving both the January and February/March issues of *Baukunst und Werkform* from Leidl directly, Gropius still insisted to

Leitl that he found Schwarz “extremely confusing and verbose.” He continued, “I don’t intend to go into the debate....If you want to publish the material I sent to you, which gives an insight into my thinking and working during the Bauhaus time, please feel free to do so. This may be enough from my side.”<sup>256</sup> In the accompanying letter to Döcker, Gropius had parried with his own Goethe quotation, “Lass dich nur zu keiner Zeit/Zum Widerspruch verleiten./Weise fallen in Unwissenheit,/wenn sie sich mit Unwissenden streiten”<sup>257</sup> (“Never allow yourself to be misled into contradiction/The wise fall into ignorance when they fight with those who are ignorant”). Gropius’ letters to Döcker and to Leitl explain why he, tactically, refused to answer Schwarz directly: to answer would be tantamount to recognizing a false argument, to “fight with those who are ignorant.”<sup>258</sup> The unresolved question is why he still found it so important to allow others to carry on the battle in his name.

### **“Gropius was not German”**

Gropius’ relationship to Germany in the postwar period was tempered by the manner in which emigration, first to England and then to the US, had redefined the way he understood himself. The American tradition of assimilation, given particular urgency by the fact that his country of origin was an aggressor nation in a world war, had played out in particular ways for Gropius; his scrapbook attests to his compulsion to remain informed of his German reception but his letters communicate much greater ambivalence. This is evidenced by his exchange in 1946 with Fritz Hesse, mayor of Dessau during the Bauhaus years and again in the post-war period. Hesse, whose city lay in ruins, had written to propose an international exhibition of Bauhaus work in Fall 1946, so that he could contend, as it was phrased in a clipping from the Dessau *Tägliche Rundschau* enclosed in the letter, that “the Bauhaus building has once again become a central location of important work.” Hesse wrote, “I would like to add that we place inordinate value on the fact that the Bauhaus show have submissions from emigrated Bauhäusler, so that the world

can see the value of the Bauhaus idea and the work of the Bauhaus in Germany documented as clearly as possible.”<sup>259</sup> Gropius responded with several suggestions for the exhibition, then continued:

“I have learned much here about democracy. I believe that the United States is closest to what we once anticipated in a true democracy. That, although we do seem reactionary at this instance as a victor nation. You would observe many aspects of life here with particular interest.”<sup>260</sup>

The “we” of which Gropius speaks shifts between a German “we,” once anticipating a “true democracy” and another “we,” that of a victor nation. As strange as it seemed at the time, there was nothing ironic about the response when in 1998, former Gropius GSD student Edith Aujaume, somewhat surprised by a question about having studied with a German during the war, answered with her own question: “What do you mean? Gropius was not German!”<sup>261</sup> And so it was: in a 1951 letter to Theodore Heuss, during period in which Gropius unsuccessfully attempted to secure civil servant pensions for the families of Bauhaus masters, he referred to himself directly as a “former German,” troubled by the way his country of origin treated the bearers of its cultural heritage embodied by the Bauhaus.<sup>262</sup>

By 1951, the Bauhaus was, arguably, no longer any more German than Gropius himself, but rather part of the story of Modernism, a story whose prologue was European but whose primary action was American.

### ***Praefector Germaniae et Mundi***

The transplantation of European Modern cultural production to the post-war United States has been well and critically studied.<sup>263</sup> Certain sectors of American intellectual culture had, by the early 1950s, taken a dismissive, if not combative, position toward Europe, creating a strangely nationalistic undertone to the purported international validity of Modernism. The editorial



statement which introduces *Partisan Review*'s oft-cited 1952 forum, 'Our Country and Our Culture', articulates this position, from a presumably liberal standpoint:

"The purpose of this symposium is to examine the apparent fact that American intellectuals now regard America and its institutions in a new way....The American artist and intellectual no longer feels "disinherited" as Henry James did, or "astray", as Ezra Pound did in 1912....We have obviously come a long way from the earlier rejection of America as spiritually barren...and the Marxist picture of America in the thirties as a land of capitalist reaction. Essential in the shift of attitudes is the relationship of America to Europe. For more than a hundred years, America was culturally dependent on Europe; now Europe is economically dependent on America. And America is no longer the raw and unformed land of promise from which men of superior gifts like James, Santayana and Eliot departed, seeking in Europe what they found lacking in America. Europe is no longer regarded as a sanctuary; it no longer assures that rich experience of culture which inspired and justified a criticism of American life. The wheel has come full circle and now America has become the protector of Western civilization, at least in a military and economic sense."<sup>264</sup>

This sense of superiority was, however, not without nagging doubts, to which Gropius himself gave voice when he admitted that "we do seem reactionary at this instance as a victor nation." It became the responsibility of the émigré to assuage those doubts, a role given voice in the *Partisan Review* in a 1953 article by the expatriate philosopher and critic Ludwig Marcuse, who was part of the large German ex-pat community in Southern California. In an article translated from German, he characterized European intellectuals as "a species, which cannot live without a protective ideology, for they are professionally accustomed to it. They need a scapegoat who is to blame for everything...In the lives of many European intellectuals, America plays a leading role as scapegoat."<sup>265</sup> He continued,

"It has always been Europe's revenge to degrade America to the rank of a country of barbarians, but never before has there been so much reason to crave revenge. Europe's megalomania needs America as a contrasting background for its own greatness—which no longer exists...Europe's Anti-Americanism is simultaneously European self-hatred, a split personality which tries to insist the judge and the accused are two different people. But judge and accused are one—even though day after day sees the publication of the same old books about America, in which the authors shed crocodile tears over American technology, notwithstanding the fact that it impresses them so profoundly that they would love to crawl into every big machine, provided they got the chance."<sup>266</sup>

Marcuse's own biography shows the depth of this split personality: as part of the German diaspora in southern California in the 1930s, he observed with distaste the resentment of "Heinrich Mann, Alfred Döblin, Leonard Frank...Walter Mehring unable to speak English, knowing nothing of filmmaking, full of contempt for the industry" trying to work in what he called "film factories."<sup>267</sup> Yet less than five years after writing the article published in *Partisan Review*, Marcuse too had completed his own return emigration, moving back to Germany where he lived the rest of his life.

### **The Return of the Man behind the Curtain**

It was against this background of self-redefinition and critical reevaluation that Gropius' return to post-war Germany should be considered. Gropius seemed to bear only good will towards Germany in his role as US Army adviser; his relationship to Richard Döcker, however, speaks of a stance slightly different, more paternalistic and less that of a compatriot. Döcker, whose architectural career had been so aborted by the NS regime that he had taken to the study of biology, had maintained his contact to Gropius from the London interlude onward, even writing a note of congratulations in 1937 upon Gropius' invitation to Harvard.<sup>268</sup> The tone of Döcker's letters is melancholic and resigned, except for a brief period after the war when he suggests to Gropius the reinstatement of the Ring. According to Döcker's plan, Gropius, Mies, Hilbeseimer, Wagner, Mendelsohn and May,<sup>269</sup> all of whom had chosen to emigrate from Germany, would nonetheless rejoin the Ring and the German delegation to CIAM. Gropius gave vague encouragement to Döcker's plans, which were destined only to become another of the major disappointments in Döcker' life. When Döcker hinted in his letters that he would like to attend the CIAM conferences nevertheless, mentioning invitations to London and Bergamo in his letters, Gropius' responses ignored these advances. Although Gropius was never explicitly disdainful towards Döcker in their correspondence, he never offered to use his influence to overcome

CIAM opposition to a German delegation, nor to assist Döcker in any of his professional crises. It was Döcker who was sent, however, as Gropius' vassal to do battle with Schwarz.<sup>270</sup>

For the US occupying forces, Gropius' professional advantage was that he could represent both cultural and practical positions, advising on the rebuilding efforts. He could also be perceived as readily as a German advocate with the American occupying forces, as a source of inside knowledge on Germany for the Americans, or as an American cultural imperialist with no real understanding of conditions on the ground. All of these interpretations are reflected in the press and correspondence related to his numerous tours. His archives preserve the positive responses. For example, his 1947 trip prompted Otto Bartning, head of the professional organization Bund deutscher Architekten, to write to him, "All of us who are wrestling with the new rebuilding, hope for great assistance from the weight of your visit and thank you for it."<sup>271</sup>

Döcker wrote,

"Your visit in Germany was doubtlessly very many-sided but perhaps inadequate to give you a full image of the actual situation, particularly in regard to our professional work and chances...But I do assume, that you have gotten an overview of the desperate state and horrible conditions in our cities and their people. It is not easy to find recipes for help, particularly not when all means, even the most primitive, are so limited as they are among us at the moment."<sup>272</sup>

That Gropius saw himself in a limited way as an advocate for his former colleagues is implied by his recommendation to General Clay to finance the reconstituted *Werkbund*,<sup>273</sup> and in his efforts in 1948 to support what amounted to de-nazified German building norms, replacing (albeit unsuccessfully) those established by Ernst Neufert.<sup>274</sup> The importance of the tours to Gropius personally, as acknowledged elder statesman, is evident in the countless newspaper clippings discussing him from the American paper *Die Neue Zeitung* which he preserved from 1946-7 onwards, indicating that he regularly received the paper.

The lectures Gropius held during his 1947 tour, however, were not only positively received. He spoke in Berlin, Frankfurt and Munich, and focused on American town planning, prefabrication and standardized house building, and the relationship between technology and human in the built environment.<sup>275</sup> Published as an open letter to General Lucius Clay, his conclusions and recommendations amounted to a combination of advocacy for organizations and people to whom he had personal affinities, such as the German Werkbund, CIAM and the *Bauhaus-Bewegung*, by which he may well have meant the Gebrüder Scholl Foundation, founded in 1946 at least in part with the intention to translate the Bauhaus curriculum into a form appropriate to the new German Republic. Other suggestions, such as the establishment of an eminent-domain-like mechanism at the scale of cities, and the definition of urban ‘planning units’ of 5-8,000 people suggest that the remaking of German cities he envisioned was likely to result in the overwriting of historic fabric and the configuration of a smaller, agglomerative village-scale units – both reflecting the prevailing American preference for suburbanization. In a German context in which re-agriculturalizing major cities had been seriously discussed, visions of suburbia were clearly out of place. Over and over, he made the material and technological wealth of the US a prerequisite to true contemporary city building, and never failed to point out that this was missing in Germany – hardly a way of endearing himself to his audience.<sup>276</sup> His emphasis on the need for patents to stimulate market forces in innovation and his critique of salvaged building materials as a true alternative to fast, high-quality building offered an excellent argument for the virtues of his own General Panel System, which provided the primary illustrations for his open letter as published in Germany. His insistence on the need for architectural libraries, exhibitions and guest lectures imported from “cultural areas in other countries,”<sup>277</sup> like his condemnation of the DIN-norms invented by “Nazi Ministers”<sup>278</sup> convey his disdain for his colleagues in West Germany, and his conviction that progress could only come from outside the country.

Given Gropius' self-serving and self-aggrandizing demeanor, it is no wonder that many critics bridled at the perceived condescension in Gropius' demeanor when he reiterated basic Bauhaus principles, which had long-since lost their acuity or pursues themes irrelevant to the obvious existential burden of the rebuilding effort. Elsewhere, Gropius was lionized, most visibly in the magazine *Baurundschau*.<sup>279</sup> The report's author, Rudolf Hillebrecht, epitomized those architects "between the two fronts,"<sup>280</sup> who had successfully transitioned from a position of prominence within Albert Speer's Ministry to one of equal prominence under the Allied government of Germany. Beginning in 1941, Hillebrecht had been second in command for the *Amt für Kriegswichtigen Einsatz*, the city planning and reconstruction agency led by Konstanty Gutschow under the auspices of Speer's ministry. After internment as a POW in the British sector from 1944-1945, Hillebrecht was 'denazified' and released to work with other 'German experts' in establishing strategies for the reconstruction of war-damaged cities in the British sector. In 1948, he was elected Hanover's Head of Urban Planning;<sup>281</sup> Gutschow, whose wartime party affiliations had caused the British tribunal to prohibit his completion of public commissions, became Hillebrecht's advisor and over the course of the next decades, completed numerous projects in a simplified Modernist idiom in Hanover. Although not mentioned in Hillebrecht's report on his meeting with Gropius, the two men had collaborated on a competition in 1934, the year in which Gropius fled the country. Hillebrecht's article ended on a personal note, perhaps surprising to the average reader not acquainted with the two men's past affiliation, but nonetheless telling:

"Gropius himself, always at pains to keep his intellectual horizon as broad as possible; who on the one hand radiates his influence in all civilized countries of the world; whose thoughts stand at the center of a broad international circle – he is and remains stamped by Germanness. And I was happy to have this impression verified by him."<sup>282</sup>

Hillebrecht's impression seems strangely at odds with the language Gropius used in the open letter to General Clay, printed on the pages that followed Hillebrecht's article: throughout,

Gropius used first person plural in discussing the American perspective on German reconstruction. Who knew best, was Gropius 'really' German?

### **Apollo in the Democracy**

Gropius' position in the context of post-war politics may best be located via his speculation on the new relationship between architecture and politics, or rather the way in which an abstract modern 'visuality' supported a new, supranational democracy. As 'democracy' gained currency in the form of a Western export product, propagated using the entwined tools of development and reconstruction,<sup>283</sup> the cultural production in which this exportation was clothed had gained currency. For Gropius, the visual training he had long nursed and sought to codify was inherently and indelibly linked to a new kind of democratic agenda. He elaborated his ideas about this relationship in the speech he gave in Hamburg upon receiving the Hansische Goethepreis in 1956, and later published a more developed version in the US in 1968 under the title, *Apollo in the Democracy*. If his thoughts do not explain directly his proxy war tactics within the Bauhaus Debate, they certainly indicate to a much larger-scale set of interests which the recriminations made by Schwarz might have threatened and which, in the end, underpin the attitudes behind the phenomenal rise of the Modernist credo in the post-war period.

Gropius' speech expressed the opinion he had voiced to Fritz Hesse in 1946 about the value of American democracy and expanded upon it, to propose an all-encompassing ideal which supersedes history, politics and aesthetics. His text began by redefining democracy and the role that the arts have to play within it:

"By the word 'democracy' I mean neither the antique Greek form of government...nor do I mean the politically stressed European, American or Russian special forms of present democracy. I speak of the form of life which, without political identification, is slowly spreading over the whole

world, establishing itself upon the foundation of increasing industrialization, growing communication and information services and the broad admission of the masses to higher education and the right to vote. What is the relationship of this form of life to art and architecture today?

*In a long life I have become increasingly aware of the fact that the creation and love of beauty not only enrich man with a great measure of happiness but also bring forth ethical powers.*” (Emphasis original)<sup>284</sup>

A key part of this love of beauty, according to Gropius, depends upon visual training and what he calls the ability to “reconstruct...the relationships between the individual phenomena of our world.”<sup>285</sup> The Gropius Basic Design course at the GSD, an extension of his Bauhaus program, offered the model for precisely such a visual and relational education. In the context of Gropius’ abstract definition of ‘visuality,’ the Bauhaus heritage had transcended discipline-specificity and assumed the capacity to function as a constitutive element of pure democracy. As a cultural imaginary, ‘visuality’ found wide-spread favor in the US in the post-war period, reflected in the adoption of visual training to fields as diverse as early childhood education teaching methods and efforts to quantify intelligence: standardized testing practices, which used tests of spatial cognition as a proxy to determine Intelligent Quotient in pre-literate children, had been widely studied during the War. Military researchers, interested in quantifying aptitude by means that cut across differences in schooling, had administered tests of spatial cognition using visual cues only to adults during the same period. To see the Bauhaus legacy as part of a new world order must have been a compelling belief for Gropius, even more so than his own personal success or reputation. It was tantamount to his contribution to World History. In this light, Schwarz’s attack on the Bauhaus’ intellectual integrity took on far greater significance as a threat to the transubstantiation of art school curriculum into a constituent of true Democracy.

**“Harassments of a *Weltanschauung* sort”<sup>286</sup>**

If nothing else, Schwarz and Gropius were equally adamant about the Bauhaus as touchstone in developing a new German architecture that would adequately represent the spiritual and political

reawakening of the new Republic. For Schwarz, the Bauhaus belonged to the intellectual collapse which marked the descent into Fascism. It was to be rejected entirely. For Gropius, the Bauhaus was the cradle of a new visuality inherent to a global Democratic spirit emanating from the United States. It was to be celebrated, along with its originator, as the Pax Americana spread around the world. Even those architects who argued against Schwarz for the value of the Bauhaus, however, expressed reservations about Gropius' larger vision. They held fast to the belief that German culture should be empowered to determine the degree to which it adopted impulses coming from the United States, especially from their former colleagues now returning triumphant.

Well before the Bauhaus debate had erupted, Hermann Mäckler, who would eloquently defend Gropius and the Bauhaus legacy, wrote to Gropius, expressing his and other's discomfort at the disequilibrium in any imagined architectural exchange between Germany and the US. In early summer of 1950, Mäckler traveled from Frankfurt to the US, undertaking a cross country trip that took him to destinations as widespread as New York, Washington, Chapel Hill, Knoxville, the Grand Canyon, Los Angeles, San Francisco, Chicago and Boston, where he visited Gropius. He also visited the group around John Entenza in Los Angeles, including the Eames, as well as an earlier émigré to a different American architecture, Richard Neutra. In Chicago, he met Serge Chermayeff, then director of the Institute of Design prior to its merger with IIT; Chermayeff, born into an émigré Russian family in England, had moved to the US after practicing with another German émigré, Erich Mendelsohn. He owed his position in Chicago to Gropius' recommendation.

Cities and towns, émigrés and Americans, new architecture and broad landscape features:

Mäckler's visit served to give him a sense of what was afoot in postwar America. He described



what he saw in a report that he sent, with a letter, to Gropius, dated July 7, 1950. He also conveyed to Gropius the consensus he had gathered after discussion with his peers about the way in which Germany might best engage culturally with the US. Although Mäckler confines himself to a discussion of schools and education, it is not difficult to project his reservations onto the discipline of architecture as a whole:

“In conversation with Bartning, Eiermann, Leistikow, Schwippert, Schwarz and others, however, it was always ascertained that a connection with American could only then have a serious meaning and enjoy a thorough success if we in Germany had, as a sort of reception station, an independent school. Only then would it be possible, free of harassments of a *Weltanschauung* sort, to do something for architecture within a new generation....Likewise, the question of German participation in CIAM is also weighed down by such considerations.”<sup>287</sup>

Without parity, Mäckler implied, German architects would be susceptible to the “harassments” of an American way of life. Despite the attraction of cultural exchange with the United States, the threat of its lifestyle – and perhaps of the Apollonian Democracy? – was a greater hurdle than this circle of German architects felt that they could clear. Mäckler’s ambivalence is distressing. On the one hand, the Bauhaus heritage offered the opportunity to be part of an increasingly powerful architectural culture. On the other, once subsumed in American *Weltanschauung*, the Bauhaus was no more than the Trojan Horse that would overpower whatever bits existed of an architecture inherent to the new German republican spirit.

### **Return Emigration**

In 1951, Gropius returned to Hanover to see the *Constructa* building exposition. While he was there, he attended a private meeting, planned by Rudolf Hillebrecht, with whom he had met in Stuttgart in 1948 during his tour on behalf of General Lucius Clay. Hillebrecht was by then head of city planning in Hanover, and, as a leading example of the many architects who had skillfully ‘switched sides’ in the years between the war’s end and the initiation of reconstruction after the

currency reform, interested in brokering détente within the German architecture scene. His purpose in organizing the meeting was to bring together the ‘two sides’ – the Modernists and the architects of the Third Reich – in an attempt at reconciliation overseen by Gropius. This would, of course, have elevated his Hanover *Constructa* to a symbol of Germany’s fresh start.<sup>288</sup>

Scharoun, Bartning, Schwippert and Schwarz were among those who declined his invitation.

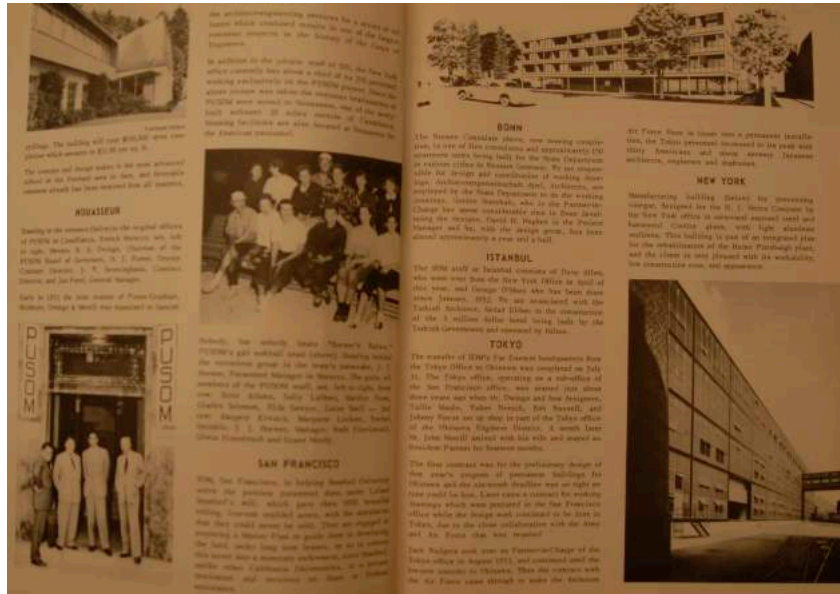
Gropius accepted nonetheless. As Rudolf Wolters, one of Speer’s former *Kindergartners*, reported,

“We met ...in a private home and grouped ourselves unforcedly around Gropius....Shortly before the meeting began, Bonatz entered the room...He introduced himself to Gropius: Bonatz. To general surprise, it became apparent that the seventy-three year old Bonatz and the sixty-nine year old Gropius, both institutions for German contemporary architecture, met here for the first time in their lives. It was touching to observe how awkwardly and modestly, reserved and yet friendly, the two greeted each other and sat down smiling, their claws retracted.”<sup>289</sup>

The symbolic value of this meeting, although at a private venue, cannot be underestimated. No more than niceties were exchanged, but as a fact, it indicated clearly that the discussion of “then and now,” as Leitl had put it, was no longer particularly relevant. The Americanized Bauhaus ideals that Gropius now espoused could accomplish their purposes even without ‘engaging directly’ and the Modernist tradition he represented could make peace with its dubiously traditionalist former enemy. The assertions that Schwarz made two years later were, to Gropius and his claim to posterity, not so terribly wide of the mark, and as such, worthy of extreme reprisal. To correct Schwarz regarding the true intellectual atmosphere at the historical Bauhaus was unnecessary; to speak directly to any of his proposals for an alternate history of Modernism was equally irrelevant. Gropius’ need for the mythical Bauhaus coincided with his vision of “a form of life which, without political identification, is slowly spreading over the whole world,”<sup>290</sup> and within which “the creation and love of beauty not only enrich man with a great measure of happiness but also bring forth ethical powers.”<sup>291</sup> The Pax Americana meant that wars, even ones on the pages of small architectural magazines, were not to be fought openly.

Chapter 5

Preparing for Export – SOM and Building Construction, 1943-53  
An Assembly and Combination of Known Facts and Techniques



SOM News, August 15, 1953. D&A Bunshaft, Avery Library, Columbia University

Despite the fierce debate about the Bauhaus' legacy, the situation on the ground in West Germany was about to shift significantly in favor of the new American-based International Modernist idiom – not through academic or intellectual debate, but through practice. The very first issue of the internal publication *SOM News*, dated August 15, 1953 prominently featured Skidmore Owings and Merrill's US Consulate in Bremen. A rendering of the building shared the page with a photograph of the recent J. Heinz Company manufacturing building and news from SOM's offices in Istanbul and Tokyo. SOM's international reach and its growing oeuvre of large-scale glass-fronted buildings as represented in the newsletter was implicated in broader tendencies: the fact that the United States identified itself in the post-World War II era with Modern art and architecture to communicate its values has been well documented, from Jane Loeffler's impeccably researched *The Architecture of Diplomacy*<sup>292</sup> to Serge Guilbaut's Pynchon-  
esque *How New York Stole the Idea of Modern Art*.<sup>293</sup>

Less information is available on the ways in which US building abroad influenced architectural developments out-of-area through the material cultural and managerial practices embedded in project realization. Though relatively few, the buildings completed by SOM in Germany were harbingers of later changes in German construction as transforming construction and administrative norms accelerated shifts in architectural expression. The interactions between SOM's construction specifications and the German draftsmen, architects, fabricators and installers who ultimately realized them are exemplars of knowledge transfer. This may well at least as influential as the SOM buildings in Germany themselves or the publicity SOM enjoyed there at that time.

Domestically and internationally, SOM cultivated an image of competent business savvy and efficiency in its architecture and corporate structure alike. Nathaniel Owings, writing in 1947 for a real estate-sponsored journal, described in audience-appropriate terms how the construction of new, market-correction-resistant architecture would "require nothing particularly new."<sup>294</sup> For a new architecture that required nothing more than recombining technologies and know-how that already existed, Skidmore Owings and Merrill's in-house teams of specialists were perfectly positioned. The firm had been responsible for large projects since its founding, but as it emerged from its war efforts, it had become a comprehensive building consultancy, a development greatly accelerated by work in the 1940s for the US government at Oak Ridge, Tennessee. Because of the scale of operations and speed of construction, this project was developed, of necessity, in close collaboration with the US building industry, pioneering the co-design of materials and methods for mass production.<sup>295</sup> Equally important to SOM's capacity building was the corporate climate that developed in the transition between the war's end and the solidification of the military-industrial complex. Because of its scale and organizational demands, Oak Ridge proved to have been the incubator for SOM's cadre of specialists and consultants. For this reason, it is

important to recount the development of the Oak Ridge project to explain fully the SOM of the 1950s, when its overseas efforts began in earnest, in no small part through its work in Germany on behalf of the US government.

The ideas and approaches adapted from the wartime projects to SOM's architecture and construction were evident in their projects for the High Command in Germany, which Sep Ruf would encounter directly through his work on the American Consulate in Munich. These projects, the office that produced them and the way in which they were realized offered an aspirational precedent for West German architecture and construction in the early 1950s. The climate in which West Germans received American culture both propagated curiosity and provoked suspicion: the line between 're-education' in a positive sense and cultural imperialism as an unwanted imposition was fine, even then. Nonetheless, the new paradigms developed in the US for the businesses of planning and realizing buildings had increasingly clear advantages as West Germany's economy stabilized and grew; the same paradigms had equally clear implications for architectural expression. Those architects and construction firms in direct contact with the American consular program and its construction norms contributed much to the shift in the mid 1950s towards changing both architectural practice and expression towards what would now be recognized as International 'High Modernism'.

To understand the organizational, construction and architectural working methods that SOM brought with it to Germany, the construction research that resulted in the Oak Ridge commission is a good starting point. This includes the ways in which Oak Ridge fostered a new business relationship among building industry, construction management and architectural consultancy. Equally relevant is a study of the context in which American spatial culture, of which SOM had become an integral part by 1953, was communicated and received in West Germany. This

broader history adds specificity to the assets SOM had at its disposal: not merely the resources of a victor nation, but an entirely different technical and business-based architectural lineage. On the side of West German reception, this broader history helps to explain the alacrity with which an SOM-pioneered construction idiom had such appeal during the *Wirtschaftswunder*, a development whose specifics will be further elaborated in this and the following chapter.

### **From Houses to Cities**

In January of 1943, SOM was commissioned to prepare a design for a town, Oak Ridge, for 2,500 people in an undisclosed rural location, depicted only in aerial photographs provided by the client, the US Army Corps of Engineers. Four weeks later, SOM had received the commission, beating out Stone & Webster, the much larger engineering firm from Boston originally entrusted to plan a city for the people working on The Manhattan Project and their families.<sup>296</sup> By the spring of 1943, the town's projected population had grown to 13,000; at its peak in 1945, the actual population numbered 75,000.<sup>297</sup> For SOM, the project was unprecedented in scope: to develop and implement the plan for all roads, infrastructure, hospitals, schools, shops and housing.

Because of its experience in low-cost manufactured single-family houses, a relatively small and ultimately, an architecturally less interesting aspect of the Oak Ridge project, SOM received the commission. Each stage of this commission, from the research outcomes upon which the project was based to the execution of the project, reflected the values and expertise, which would contribute to making SOM an early model of corporate success.

As part of what might now be designated 'in-house research and development' and perhaps to bridge the construction-dormant Depression years, SOM had collaborated with the John B.

Pierce Foundation beginning in 1939, to build ten prototypical houses using new manufactured materials on the farm belonging to the Foundation's General Manager Joseph O'Brien. The Pierce Foundation had been established in 1924 from the inheritance of John B. Pierce, the Vice President of the American Radiator & Standard Sanitary Corporation for whom the foundation was named. As appropriate to a research entity funded by the owner of a company doing business in both plumbing fixtures and radiators, the foundation's mission was to promote research and educational activities in heating, ventilation and sanitation that advanced human comfort and hygiene.

The Foundation's work in the 1940s and 50s was focused on thermally high-performing materials for clothing and building, and on mass housing that would ensure comfort and safety.<sup>298</sup> Its eminent applicability to the needs of the era, and the product-based approach taken, reflects a pragmatism typical of the building industry: to pursue applied research with the greatest potential for market uptake. The Foundation established a Housing Research Division in 1931, headed by Robert Davison, who had directed the Technical News and Research department at *Architectural Record* magazine in 1929 and 1930.<sup>299</sup> Davison had traveled in Europe during the interwar period to study new façade construction, providing American architects with the technical details of industry and architectural achievements there. Although it was through O'Brien, not Davison, that SOM became involved with the Foundation, the contact with Davison would prove significant for the development of SOM's work on the curtain wall.<sup>300</sup>

Beginning in the Depression and continuing during the war, despite limited civilian manufacturing capacity, consumer resources and capital, prefabrication was touted as a solution to housing in the United States. The enormous housing demand that had arisen in the 1920s would, so the logic went, inevitably return after the Depression and this time, the building industry intended to

be well-prepared.<sup>301</sup> The work done at the Pierce Foundation, too, was therefore predicated on some degree of prefabrication, which the Foundation came to champion.<sup>302</sup> Prefabrication did not only relate to the assembly of building components, but also to the development of building materials designed to consolidate the functions of what otherwise would have been multiple materials and construction components into their performance. Gypsum wallboard, plywood and fiber concrete board are all examples of such materials, and their application to standardizable housing solutions was also part of the Pierce Foundation agenda.

Early experiments included the use of light-gauge steel framing, plywood cladding and a board made of calcium hydrosilicate. All of these products were produced by building product manufacturers with a vested interest in promoting the use of their particular brand of innovation. In the case of the houses designed collaboratively by the Pierce Foundation and SOM, Cemestos, manufactured by the Celotex Corporation of Marrero, Louisiana, was the product around which research was organized. The ability to thrive through collaboration with industry and construction innovators would come to characterize SOM's post-war activities and spur its development.

### **'Dry' Construction**

First marketed in 1925, Celotex's early products were insulation boards made from compressed waste sugar cane stalk, bagasse. Not content to see its insulation material used in such industrial products as cars, refrigerators and cold storage box cars, the corporation aggressively pursued the ability to market all the components needed to modernize 'dry' panelized construction techniques to which Celotex products were suited. By 1940, sheathing, rigid insulation and roofing materials were all part of its portfolio,<sup>303</sup> by which time it had also acquired the American Gypsum Company and entered into sales agreements with Certain-Teed Products

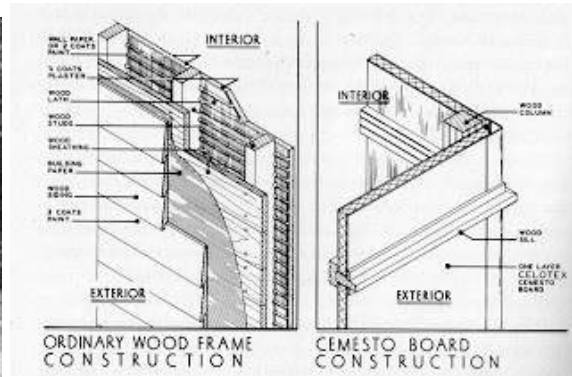


Corporation, a manufacturer of exterior building cladding. These business decisions reflect the vision of Bror Gustave Dahlberg, the corporation president after the company's initial bankruptcy after 1929, who was profiled in a 1943 item in *Time* magazine entitled 'The Cemesto Future.' Dahlberg's Cemesto future was an anti-urban one, in which cities were abandoned except for bankrupt investors "clutching their worthless real-estate mortgages and municipal bonds,"<sup>304</sup> in favor of legion single-family houses populated by workers who, after their 24-hour work week, could fly home in personal airborne vehicles. The frivolity of his vision aside, his business approach was one that corresponded to developments in the US building industry during and especially after the war. The turn to 'dry' framed construction and the emergence of large, market-dominant companies facilitated quick, reliable project realization. By providing factory-dimensioned, ready to use products for all surfaces of the house, interior and exterior, the company could offer a full package for the quick construction of weather-tight, free-standing buildings.

Residential timber construction had a high level of acceptance in the US, proliferating primarily thanks to full-timbered traditions that arrived and moved across the country with German, Scandinavian and French Canadian settlers. American light frame construction was pioneered at the end of the 19<sup>th</sup> and beginning of the 20<sup>th</sup> century as a means to accelerate construction by standardizing and optimizing the required materials. Balloon framing, in which multiple lighter members were intercut to create a frame in which all elements worked together to form an active structural network, was a transition between older full-timbered carpentry and the much less craft-dependent platform frame which proliferated after 1945. Balloon frame houses were also often a hybrid of dry and wet construction methods: interior walls were often wood structures sheathed using plaster and lath. This technique involved sheathing thin, balloon-framed interior walls with thin, rough wood slats between which gaps of around 1/8" were left. Several layers of

plaster reinforced with animal hair were keyed into the wooden lathe. This symbiosis of dry (wood) and wet (plaster) techniques was facilitated by a symbiosis of immigrant-carried techniques, with a largely northern European wood framing tradition completed by a southern European plastering tradition. Balloon framing was devoid of wind barriers or insulation, both of which were addressed in platform framing with the use of plywood and organic insulating fibers within the wall. These developments increased expectations for interior comfort, an aspect of postwar residential building rarely discussed. New demands for a steady-state interior climate were facilitated by construction techniques and materials in residential and commercial building alike. The deployment of the building envelope as part of the climate control system was part of tall building culture even in the 1920s but the postwar period saw their expansion to all areas of building.

The low-rise Pierce Foundation prototypes using the Celotex products presaged the replacement of the many layers required by typical balloon frame house construction – exterior siding, board sheathing, vertical structure, plaster and lathe interior – and the concomitant trades. The prototypes used a simpler, panelized system in which self-structuring insulated wall boards, not unlike contemporary structural insulated panels (SIPs) would be abutted using pre-milled wooden mouldings, and vertical structure would be provided by small, solid wood columns on the house's interior. By covering a cellulose insulating board on the interior and exterior with layers of asbestos fiber-reinforced concrete, the Cemesto product came pre-finished with a weather-resistant exterior surface and smooth, paintable interior surface. The panels were factory sized to provide adequate interior height. SOM's contribution was the architectural design for the buildings which this system would produce.



Images from The Celotex Corp. <http://instanthouse.blogspot.com/2011/08/celotex-cemesto-homes.html>

The design of the house involved in equal measure considerations of lifestyle and its spatialization, and the logistics of construction. In a 1941 publication by the Celotex Corporation,<sup>305</sup> the two-bedroom houses were pictured aligned in a row, each with a symmetrical path of stepping stones leading to the street from which they were set back amid their own shade trees. Peaked roofs, simple lattice pergolas above the front door and the incipient lawns conform to a ‘Cape Cod’ suburban image. An interior view of the living room shows well-stuffed furniture occupied by a well-nourished couple. Floral upholstery and curtains, oriental carpet and a faux drawn-iron floor lamp locate the lifestyle in an eclectic, Cape Cod suburban idiom, which belies the modernity and clarity of the house’s layout. On the other hand, the compact, open kitchen adjacent to a dining alcove, entry directly into the living room with no accommodation for privacy and the alignment of closets and built-in furniture in the partition wall between the two bedrooms resemble more closely a well laid-out urban apartment, in which alignments and views are used to give a sense of more generous space than the actual square footage might allow.

As depicted in the photos, the “35 man hours”<sup>306</sup> needed to build a Cemesto house describe a construction process as efficiently designed as the house’s spaces. The houses were placed on concrete block footings with precast concrete lintels, onto which floor joists were anchored.

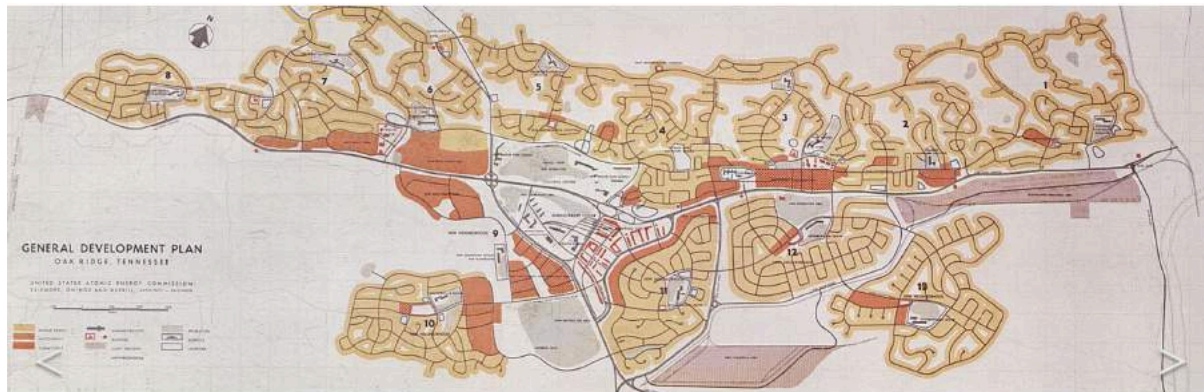
Wood columns, which supported the vertical loads rather than the walls as in balloon framing, were sistered to the joists; wood trusses fabricated at a central on-site shop were placed atop the columns and the peaked roof framed above. Pre-milled rails into which the wall panels would be set were installed horizontally at the sill plate between the columns and the building was ultimately sheathed. By reducing the number of components, limiting on-site cutting and measuring and rationalizing the order of construction, the house's production was streamlined. Although an important component in creating an on-site economy of scales, the use of an on-site production facility to prefabricate construction elements, in this case the roof trusses, was an interesting adaptation from precedents such as those used in Germany during Weimar era construction,<sup>307</sup> but the advent of hand-held power tools in the 1940s<sup>308</sup> would obviate the need for this kind of centralized saw shop. Forced-air furnaces, another staple of the post-war suburban housing boom, provided on-demand interior climate tempering.

The unconventional separation of vertical support from the exterior wall in low-rise structure bespeaks SOM's core expertise and interests. By virtue of this separation, the Cemesto house owed more to the logic of a tall building, in which exterior walls were not primary contributors, than to traditional wooden house building. The analogy to tall buildings rather than smaller houses is also borne out by the way in which the insulating capacity of the Cemesto panels facilitated the use of a forced air heating system, rather than the industry-standard hydronic radiator. Steam and hot water systems rely upon the heavy metal radiators, traditionally cast iron, to sustain the system's heating capacity and to account for heat loss through the exterior wall. Radiators are placed along perimeter walls, where cooler temperatures that result from thermal transmission through an uninsulated building envelope creates convection to move the re-radiated heat throughout the space. Forced air heating operates on entirely different principles, addressing the air temperature within a given volume of space rather than considering

the thermodynamics of the building envelope. This is possible only when the envelope is insulated and as such, a contributor to the creation of an interior climate. The interplay of building system and building envelope as the basis for interior climate was fundamental in the development of the curtain wall office building, in which the façade was seen as “mechanical equipment” or an “organ” in a larger homeostatic network.<sup>309</sup>

Both in the layout of the houses and the conceptualization of construction and thermal comfort, SOM revealed its predilection for very new construction technologies, which the prototype houses’ Cape Cod image belied. The firm’s success in developing both the lifestyle image and construction logistics required by the demand for low-cost housing as it would be deployed at Oak Ridge lent it the reputation that ultimately positioned the firm to take on the increasing number of large-scale projects which the war effort and the post-war boom would demand.

### **New Paradigms of Corporate Consultancy**



Oak Ridge site plan. *som.com*

The scale and diversity of work at Oak Ridge was unprecedented even for SOM. Generally, the planning of new cities was the product of long negotiations among governments, various agencies, private parties, planning professionals and temporal processes. In the case of Oak Ridge, as the SOM employees sent to the site soon found out, there was little time for planning

and none for revision. Both the scope and the implementation of the project would demand a decision-making and execution apparatus far beyond even a large architectural office as traditionally structured. The anticipated pace at which the community was to move from conception to execution was clear upon the first deployment of architects to the site, in February, 1943, immediately after an initial master plan had been approved. John Merrill and five other SOM employees went to Tennessee to establish a site office. They arrived to find that the preliminary site plan they had presented in order to win the commission based upon a contour map and a few aerial photos was already being implemented.<sup>310</sup> The demand for buildings of increasingly diverse natures did not cease until the war ended. By then, SOM had become an entirely different organization than it had been just years earlier.

The site strategy as laid out recalls the precedents of planned industrial towns, both American company towns and such European utopic exercises as Garnier's *Cité Industrielle*, although SOM's four-day design process would not have allowed much time for precedent study.<sup>311</sup> Organized linearly along a primary road, the buildings were grouped functionally, with a cultural district and administrative district at the center, light industry on the south eastern border, multiple occupancy dwellings closer to the main road and tendrils of smaller, single family house-lined roads pushed into the contours of the surrounding hills. Smaller commercial subcenters were located at hubs within the residential areas. The large technical buildings for uranium enrichment, serviced by Oak Ridge's population, were outside the town altogether, in part for security reasons but also to reinforce the sense of normalcy within the community. An explicit goal of the project's military administrators was to maintain a stable workforce with minimal turnover by ensuring the highest possible quality of life and stability for all categories of workers, their families and their larger communities.

The town was an evolving hybrid of military, consultant and popular management.<sup>312</sup> From the start, even those military officers involved in the undertaking saw it as a utopian and inherently American undertaking, in analogy to a frontier town, an analogy which the “gravel roads, wooden sidewalks, constant construction, dust and the eternal mud”<sup>313</sup> on site made visceral. In reality, the town required tight, top-down coordination, even when those providing it were actually learning on the job.

SOM was only one of many companies whose corporate practices were developed through commissions associated with Oak Ridge. The on-site graphite reactor and gaseous diffusion plants were designed, operated and managed by Monsanto Chemical Corporation and Union Carbide.<sup>314</sup> Turner Construction, the New York-based construction firm whose earliest commissions included the city’s subway stations and which had already been a government contractor for barracks, labs and storage buildings in World War I,<sup>315</sup> formed a new subsidiary, the Roane-Anderson Company, to take on the administration of the town in fall of 1943. Originally a full-service management company, Roane-Anderson fulfilled not only the functions of a municipal government including waste collection, a 900 bus transportation system, schooling, water and electrical infrastructure and general street maintenance, but also the management of 35,000 houses, dormitories for an additional 15,000 residents and the concession granting for all the businesses in Oak Ridge. The company determined the nature of everyday life:

“Roane-Anderson supervised 17 cafeterias serving 40,000 meals a day. It operated a cold storage plant that handled 1,200,000 pounds of perishable merchandise a month, 75 percent of which was meat. It ran a farm with a herd of 3,000 cattle and a chicken ranch. It operated a 35 mile railroad line with five locomotives and a crew of 105 workers. It operated a million-dollar-a-year laundry business. It supervised the assignment of more than 500 housemaids, laborers and even had a group of hostesses to orient newcomers to the city.”<sup>316</sup>

At its largest in 1951, the company employed more than 10,000 people of diverse professional capacities and expertise. The impact of this managerial challenge, even for a company versed in

the challenges of construction administration and logistics, was enormous. By the early 1950s, Oak Ridge's managerial paradigm changed with the advent of the Cold War and the responsibility delegated to Roane-Anderson was reduced to that of overseeing specialized managerial consultants individually charged with the many aspects of operations formerly overseen by Roane Anderson. Nonetheless, the precedent set by a private company operating at this scale and scope provides some sense of the opportunity offered by the Oak Ridge project for the various corporate contractors involved. It also brings to life the scale of logistical expertise around the built environment which SOM and its collaborators at Oak Ridge could marshal.

### **Empirical Knowledge to Knowledge Transfer**

It is fair to say that none of those contractors arrived on site with all the expertise and managerial structures, which the project required. In the case of SOM, when forced to work beyond the limits of what their professional training afforded them, the architects took a pragmatic, empirical approach to tackling the project. There was, perhaps, no other choice when the first design team on site was forced to develop a means by which to transpose their initial site plan drawing to the terrain on which the roads needed to start construction would be laid out. Walter Metschke recalled:

"I initially designed my site plan on an aerial contour map which was reasonably accurate for preliminary planning purposes but not for construction. A procedure needed to be established to avoid costly and time-consuming construction errors. The first move was to randomly stake an alignment, which the survey party would accurately locate in the field as a basis for preparing a computed vertical and horizontal alignment. This stationed alignment was then staked in the field. It was again walked for required adjustments. The roads were located on top of the ridges and in many situations had to be precisely on the center line of the ridge to accommodate housing on both sides. This often required shifting the road by as little as ten feet to avoid losing houses on either side. Each time the road was restaked in the field it was again walked for possible revisions, a new alignment prepared, computed and restaked. This procedure was repeated as many times as necessary to achieve as nearly perfect an alignment as possible to avoid construction errors and delays."<sup>317</sup>



A similar process was used to site houses, with a maximum offset of ten feet from the ideal location to avoid any incursion on an adjacent building site. The houses' footprints were staked and only those trees cleared which were within the building footprint. The housing sites were not graded prior to construction. Instead, the concrete block footings were used to level any elevational change, meaning that some houses had foundation walls up to eight foot high on one side because of the sloping site. The process valued expediency above all, and the ability to make fast, on-site decisions to allow work to continue at the desired rate of 50 houses staked out each day. There was little margin of error, and no room for equivocation.

Metschke had arrived on site with six SOM architects and thereafter, at Nathaniel Owing's request, assembled a site team of some twenty more, including the architect for whom Metschke had previously worked in Arkansas. A single engineer was charged with overseeing the computation of site elevation, and two architects were responsible for the generation of building design and construction documents assisted by a staff of twenty-one other personnel. Metschke was also permitted to set salary rates and organize personnel, who worked twelve-hour days, seven days a week. Metschke's small, highly dedicated local team was responsible for design decisions, interface with the Army Corps of Engineers to determine design guidelines for water and grading, and construction supervision. As work progressed, lessons learned through trial and error were quickly translated into formulae and systemic knowledge. In this way, no single individual and his knowledge was indispensable to the project.<sup>318</sup> Despite his leading role, even Metschke was allowed to resign in July 1944.

Another example of the way empirical knowledge was systematized during the Oak Ridge project also indicates how SOM's post-war practice was predicated upon the experience of building a city during wartime. Because the military wanted Oak Ridge to function as a 'town' and

not a base camp, the calibration of amenities could not simply be based upon standard Army formulae. Constant changes in expected population, and the mixture of single workers, families, professionals, laborers and even racial diversity, made the estimation of amenities a moving target. To address this lack of information at the outset, SOM arrived at a novel, if statistically unscientific solution. Using the city of Lawrenceburg, Indiana, Louis Skidmore's birthplace, as a model, the staff was able to use a census survey to calculate per capita ratios of barber's chairs, beauty shops, and other non-essential amenities. Expressed as ratios, these numbers then guided the expansion of amenities as population increased. The technique simply repressed the strangeness of modeling a town run by the Army and dedicated to the production of enriched uranium on a main street farming town founded in 1802 on the Ohio River.<sup>319</sup> Nevertheless, Lawrenceburg's demographics remained embedded in the abstract ratios which SOM used from then on in planning communities elsewhere.

### **Technology Transfer and Building Products**

Because of the collaboration between the Pierce Foundation and SOM has been foregrounded in discussions of construction innovation at Oak Ridge, documentation of Cemesto has eclipsed the innovative deployment there of other materials developed during the 1930s. These included weather-resistant exterior plywood, latex glues, caulk, composition board and improved gypsum board, all components of the 'dry' construction pioneered in the 1940s and still in practice today. Many of these products were originally developed for use in other industries – for example, caulk was originally used as a superior alternative to canning wax for preserving vegetables – but had found new applications during the war. The use of marine-grade plywood in aerospace and shipbuilding is familiar in the literature of material technology transfer, but advances in adhesives were perhaps even more transformative of construction.

Early sheet construction materials, including Masonite, the first commercially produced sheet construction material in the US and Cemesto, were frequently wood or paper pulp-based.<sup>320</sup> The lignin in the pulp were adequate to create cohesion when subjected to the intense pressure exerted in the process of making panels or sheets. Naturally derived adhesives such as silicate of soda, asphalt, or even flour paste were added to complement the lignin's; other additives such as rosin, wax or clay were intended to lend fireproofing, water proofing and insect resistant properties.<sup>321</sup> The constituent materials and production methods used remained unchanged from 1928, when the first Masonite panels were produced, until around 1940.

The primary challenge to sheet construction materials was the development of a waterproof glue. Prior to World War II, casein glue, derived from milk whey, had the highest commercially viable degree of water resistance and was used for sheet materials, including in the production of plywood. This did not produce exterior grade sheetgood, however. Synthetic resin-based glues, chemically developed in the 1934, were far superior in performance.<sup>322</sup> Military demand for exterior grade plywood spurred the commercial development of resin adhesives; Oak Ridge represents an early large-scale application of exterior plywood for building construction, in advance of its widespread civilian availability.

The development of sealants during the 1940s, mostly for high performance machines, made possible the construction genre in which SOM would excel: the glass curtain wall. Putties made of organic oils, such as linseed, tung, castor or even fish liver, mixed with calcium carbonate had been commonly used to seal glass into window frames throughout the 1920s;<sup>323</sup> many famous Modern monuments with steel windows achieved their narrow sight lines by using putty, angled back with a knife or trowel, to hold glass against L- or T-shaped steel angles. The elastomeric sealants that emerged in the 1940s were different. Because they remained deformable rather

than drying, they could absorb much greater differential movement between material components. Derived from rubber, the first synthetic building sealants became available in the US in 1935 from Thiokol Corporation, a company whose name became synonymous with this type of sealant.

Rubber gaskets had been used since the mid-19<sup>th</sup> century in engines, pipe fitting and ship building. In building construction, compressible textile fiber served instead to tighten down components installed against the building frame, such as windows or doorframes. Often tar or oil-saturated rope or twisted cloth was positioned between the frame and the wall to fill gaps, block water and air infiltration and insure a snug fit. As the demand for reliable, steady-state interior climate grew, however, the use of compressible linear gaskets gained traction. In this area, too, wartime developments in material science and aerospace created new opportunities for more air-tight building envelope construction. Curtain wall construction would be unimaginable without gaskets to absorb tolerances and insure weather-tightness; but even in the Cemesto houses, gaskets were used in factory-built prefabricated windows, an early crossover of technology from military to civilian applications.

The ability to move technologies from high-performance to building construction spheres was empowering for architects. Invited to participate in an AIA-ACSA conference on the impact of new materials on architecture in 1960, Frank Frybergh of Skidmore Owings and Merrill's New York office described what SOM might uniquely have experienced for the first time at Oak Ridge:

“Gone are the days when the architect was forced to use building materials without being able to exert his influence on their design or quality. Now the architect not only invents new uses for familiar products but also influences the design and quality of new materials. Just as an illustration I want to mention the influence the architect has exerted on the use of sealants. As late as ten years ago polysulfide base of Thiokol sealants were used for sealing of jet fuel tanks only. Architects have seen the great potential of this material and have advocated

and pioneered its use for building construction. Now it is difficult to imagine a metal and glass curtain wall without the use of this or some other synthetic sealing material.”<sup>324</sup>

The conditions of production under which the Oak Ridge project was realized suggested the enormous potential of new technologies when applied to the problem of building construction. Because of the role assumed by SOM, as designers, overseers and researchers linked to the emergent building industry, the company had particularly good access to these developments. It was not only the company’s corporate structure and capacity for knowledge transfer, which positioned it to obtain and realize its postwar commissions, but also its connections to an emergent, eager building products trade.

### **An Entire Staff of Specialists**

In Gordon Bunshaft’s archive is a newspaper clipping from the winter of 1950 inscribed at the top margin ‘With Best Regards, Dr. Fritz Neugass.’ The article, published in the New York-based German-language American newspaper *Sonntagsblatt Staats-Zeitung und Herald* is entitled ‘The New Architecture: America realizes its own, contemporary style.’<sup>325</sup> Neugass was an expatriate art historian and photographer whose journalistic work for German and American German language periodicals ranged widely in genre and style: Gropius, Kiesler, Lever House, Abstract Expressionism, to mention only the most relevant.<sup>326</sup> The fact that Bunshaft chose to retain this particular clipping from among the many publications afforded SOM by 1950 may begin to indicate the importance to him of the German commissions, which would be negotiated only shortly after Neugass’ article appeared.

An art journalist for both American and German publications, Neugass’ contribution to the flow of cultural information from the US to Germany was only part of a larger undertaking. Like Walter Gropius’ lecture tours or Martin Wagner’s advisory visits, the intent reflected in licensing more

than fifty newspapers published in the American sector by 1948 was to use the persuasive power of culture as part of West German 're-education.' Those authors who were return émigrés or who wrote from the US, were enlisted to transform the nascent Federal Republic into a "cooperative member of that [Western] civilization."<sup>327</sup> The cultural exchange moved in various channels: naturalized German émigrés transmitted culture produced by Americans, and German cultural producers, who had embraced American culture, returned to share their skills. American cultural interests in Germany were of course tempered by economic interests, and the need to create European markets to "buy our products," as George Kennan bluntly stated.<sup>328</sup> As financially viable producers of culture, Skidmore Owings and Merrill had the unique ability to unify these two agendas.

Neugass' article took a familiar position on SOM, "So it is that today in America, large buildings are not designed by individuals but instead by an entire staff of specialists."<sup>329</sup> Neugass echoed a similar assessment offered in a brochure published by the Museum of Modern Art,<sup>330</sup> and designed by German-speaking Swiss designer Eric Nitsche, for a 1950 exhibition of SOM's work which ended the day on which Neugass' piece was published, November 5. Both texts began by contrasting SOM's authorial structure with the conventional paradigm favored by the first generation of Modern architects. Neugass listed Le Corbusier, Mies van der Rohe, Maillart and Alvar Aalto, a list, which could easily have been cribbed from Sigfried Giedion's 1941 *Space Time and Architecture*. Both the brochure and the newspaper article argued SOM's importance and validity, but beneath the surface, both revealed the differences between the firm's reception within a discipline-specific and a more general context. The latter, more focused upon the synergy between architectural production and capacity for business growth, best characterized the way in which SOM was received in Germany in the 1950s and into the 1960s.

The MoMA exhibition consisted entirely of projects under construction or completed in 1950, and featured models produced specifically for the exhibit by Theodore Conrad, a model builder who in his own words had “built all of lower Manhattan below Houston Street” and in the 1950s built the definitive models of the Seagram Building and SOM’s Air Force Academy in Colorado.<sup>331</sup> The exhibition byline, crediting both model builder and graphic designer, contrasts MoMA’s usual understanding of authorial culture with SOM’s:

“When the Museum invited Skidmore, Owings and Merrill to exhibit its recent buildings, it did so because this firm, composed of a group of single designers working exclusively in the modern idiom, produces imaginative, serviceable and sophisticated architecture deserving of special attention. The single designers who function within this organization have no fear of a loss of individuality. They are able to work within their corporate framework because they understand and employ the vocabulary and grammar which was developed from the esthetic conceptions of the twenties. They work together animated by two disciplines which they all share – the discipline of modern architecture and the discipline of American organizational methods.”<sup>332</sup>

This was fairly standard rhetoric for the firm, reflected in the way it represented itself and the way in which it was represented in the architectural press. The MoMA curators must have taken particular pleasure in quoting Henry-Russell Hitchcock’s text from ‘The International Style’:

“There is now a single body of discipline fixed enough to integrate contemporary style as a reality and yet esthetic enough to permit individual interpretation and to encourage general growth.”<sup>333</sup>

Framed in this way, SOM’s attitude towards authorship both ratified the proposition of the International Style and attributed its growing international dominance to a specifically American cultural context.

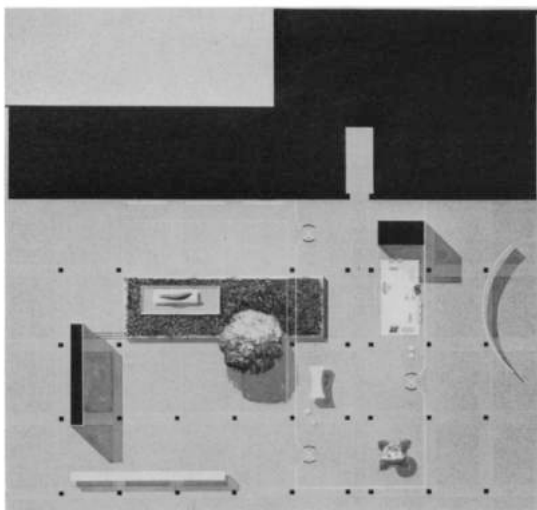
True to its cultural mission, MoMA’s evaluation of SOM suggested that even this anti-authorial structure had its roots in a more conventional history of architecture pinned on great masters. This ran counter to what Neugass, or even SOM itself, maintained. Even Gordon Bunshaft, one of the few SOM architects whose authorship would be celebrated rather than repressed, was famously resistant to any theoretical or architectural historical claims to his work.<sup>334</sup> The MoMA

catalogue assertively positioned SOM's architectural idiom relative to well-known referents of Modern Architecture. One of the few built projects in the show was the Northern Indiana Hospital for Crippled Children, a 53,000 square foot building organized around a courtyard, which the catalogue described as offering "privacy as well as a feeling of space by continuing the interior wall. This feature was introduced by Mies van der Rohe in the Barcelona Pavilion in 1929."<sup>335</sup> SOM's development of the courtyard type in such projects as the Lever House and Connecticut General Life, and in the German consular projects, would prove significant, particularly as the basis for its important collaboration with Isamu Noguchi. MoMA grasped the opportunity to give it an architecture historical pedigree, which SOM declined to volunteer.

**LEVER HOUSE**

Office Building for Lever Brothers Company  
New York, N. Y. (now under construction)

This office building of blue heat resistant glass and stainless steel will front on Park Avenue between 53rd and 54th Streets, occupying one third of a city block. The street floor is an outdoor concourse with clear open space from 53rd through to 54th Streets, interrupted only by the columns which support the building, and a glass enclosed lobby. In the rendering below of the street floor the columns are indicated by the black dots while the dimensions of the lobby can be traced by means of the white lines forming an oblong on the right side of the rendering. A single office floor on the second floor provides 22,000 square feet of office space and forms the base for the 21 story tower which occupies 25% of the site area. Each floor of the tower provides 8700 square feet of space. The third floor, enclosed in glass from floor to ceiling, will hold the employees cafeteria looking out on the terrace gardens.



10

Skidmore, Owings and Merrill, Lever House Model. *The Museum of Modern Art Bulletin* 18, No. 1, 1950, p. 10



An uncharacteristically suggestive model photograph of the Lever House evidences the importance to SOM in 1950 of the courtyard parti and its spatial implications. Whereas other projects in the MoMA exhibition brochure are represented in drawings so dry that it is difficult to imagine non-architects, even those willing to visit a MoMA show, able to appreciate them – for example, the façade drawings of the Heinz Vinegar Building or the Lake Meadows housing – the Lever House photograph is a tonal rendering of the ground plane elements defined by column grid, indoor-outdoor planter, two butterflyed elements that cast shadow and walls. This drawing makes a more plausible argument for a Barcelona Pavilion lineage. Barely visible white lines indicate the building's perimeter. As a photograph, it describes beautifully the continuities of interior and exterior, juxtaposition of built and unbuilt elements, and balance of orthogonal and non-orthogonal geometries that characterized Noguchi and SOM's courtyard buildings. Although it seems out of place with the other representations exhibited at MoMA, the spatial ideas it conveys were well-suited to the spatial ambitions and indoor/outdoor elision that had been thematized at the 1951 *Darmstädter Gespräche*, particularly in Ruf's words. In particular, Ruf's 1956 College for Public Administration in Speyer expresses his affinity for, and his debt to, SOM's handling of the courtyard typology.

### **Anonymizing Architecture**

Rather than discuss the aesthetic aspects for which he had been trained as an art historian, Neugass focused most of his article on how SOM had been able to use its corporate structure to develop an architecture appropriate to the unique scale and cross-disciplinary nature of contemporary life. This characterization would remain central to the general reception of SOM, and particularly to the way the company and its work provided precedents for West German practice in the 1950s.

Neugass' article does not mention SOM by name until the third paragraph. He began by describing the present moment as one in which the "bastions of individual style was increasingly replaced by a general, international style."<sup>336</sup> This development had shifted the focus of architectural work away from style, which Neugass characterized as "common property," and towards the resolutions of "a plethora of new problems...technical accomplishments and new materials."<sup>337</sup> Both these tendencies had, Neugass argued, transformed the architectural profession: the aesthetic iconoclasm of the "pioneer" generation no longer required charismatic individuals to carry it; and the complexity of problems to be solved required that architects make up only one area of expertise on teams whose other members could include disciplines as wide-ranging as "urban planners, traffic specialists, engineers, economists and landscape designers."<sup>338</sup> Neugass went a step further for his German-language and German audience:

"So it has happened that today in America, large buildings are not built by individuals but by a whole staff of experts. One of the most successful Modern architecture collaboratives today is the firm Skidmore, Owings & Merrill, which supports three offices in New York, Chicago and San Francisco. It comprises nine partners and keeps a staff of no fewer than 322 specialists and employees busy. As needed, this staff is swapped out among the various offices and construction sites....Thanks to their extraordinary organization, they are in the position to build whole cities..."<sup>339</sup>

One can imagine the impression this characterization might make in a country faced with the task of wholesale reconstruction: here was an organization capable of building "whole cities" in a country whose old cities were still intact. All this was handled by a staff that was entirely exchangeable, shifting from place to place as needed, in an organization led by nine equal partners, none of whom were named in the article. This ran counter to the traditional master paradigm that had dominated the office system – Behrens and Poelzig in Berlin, to name only two more prominent examples – in which the generation of German architects active after 1945 had trained. Neugass' position on this development is ambiguous. While the article seems to celebrate the firm and its buildings, there are at least two moments of apparent skepticism. A

glowing aesthetic evaluation of the Lake Meadow, Chicago, low-income housing projects ends awkwardly with the note that “the largest and most unpleasant problem in this project is the evacuation of 19,000 Negro families who currently live on the site and for whom a different living situation must still be found.”<sup>340</sup> In describing the Ford Motors corporate headquarters in Dearborn, Michigan, he referred to the 2,500-car parking garage as the “greatest innovation.” Could the most significant outcome of this new, powerful professional paradigm really be mass displacement of an underserved population and a two-story concrete slab structure for parking the largely anonymous employees of a large corporation?

### **Over There**

It was not only in the New York press that architecture was a topic of popular interest. Architecture and planning in the form of traveling exhibitions was a primary cultural lever in West Germany during the post-war era<sup>341</sup> and the Museum of Modern Art was a primary purveyor of that content, both independently and through US government-sponsored networks such as the ‘America House.’<sup>342</sup> These exhibitions and the accompanying catalogues may have provided lay and, to a significant extent, professional audiences, the first close look at American corporate architecture beyond the well-published United Nations Secretariat. Skidmore, Owings and Merrill’s buildings were regularly among those exhibited.

The purpose served by the America House network in the late 1940s and early 1950s determined the context in which these exhibitions and their content would have been perceived. By providing access to books, lectures, films and other events, the America House system quickly became an increasingly important means by which to ‘re-educate’ Germans and shift civil society towards greater democracy, by the American definition. Cultural reeducation, however, inspired both curiosity about the victor nation and the educational and financial support they

offered; but also provoked suspicion about the agenda of cultural propaganda. But in the absence of other possibilities, the libraries, films, exhibitions and lectures provided by the America House system was hard to pass up.

Although cultural re-education of German people had been stipulated both in the Potsdam Treaty and the directive that established the military occupying governments in Germany, the America House network was initially used only as an incidental contributor to that goal.<sup>343</sup> Established in 1945 with the founding of two small libraries, one privately and one government funded, whose collections were no more than cast-offs of military reference books, the network was not officially mentioned in congressional reports until two years later. By 1947, the ominous-sounding Department of Psychological Warfare, which had taken over responsibility for the two libraries, was dissolved and the *Amerika-Haus*/America House project passed on to the education department of the occupying governing body, the Office of Military Government in Germany (OMGUS).<sup>344</sup> The two initial libraries were consolidated and moved from Marburg and Bad Homburg to Wiesbaden the location of a major American garrison even to this day.

Prior to the deterioration of relations with the Soviet Union and the political exacerbation of the Korean War, the sole declared function of the America Houses was to effect re-education through publishing and promoting access to the American-published German-language daily, *Die Neue Zeitung*, and to “oversee”<sup>345</sup> the revitalization of non-political German public life and culture. Each America House had a library, whose book selection was determined – if not censored – according to clear policy guidelines. In the document that passed responsibility for building and maintaining these ‘information centers’ to the OMGUS, both library and exhibition spaces was mandated for inclusion in these facilities.<sup>346</sup> By the end of 1947, there were already 20 America Houses and at the height of the program, there were 27 in major cities as well as a

network of 136 libraries in smaller cities. The early America Houses were inserted into retrofitted existing buildings but as of 1951, funding was established to build seven new, dedicated America House buildings, with others to follow.

An overview of the kinds of lectures and exhibitions offered through the America House network gives a sense of the 'soft selling' of democracy as a governmental form and of the American lifestyle as its natural expression. Accompanying such lectures as 'The American Constitution,' 'Freedom and Slavery,' 'Organizations of World Peace' or 'American Democracy'<sup>347</sup> were exhibitions that explored the lives of women farmers or the interiors of American homes, both urban and rural.<sup>348</sup> The appeal to women as forces for change via the domestic environment had already been tested by such Weimar-era architects as Bruno Taut or Walter Gropius.<sup>349</sup> After 1947, it was a tactic more broadly used to export American cultural values not only in Germany but throughout Europe and Latin America.<sup>350</sup> As German reconstruction accelerated and the economy stabilized, the appeal of lifestyle and lifestyle objects grew apace, and the strategy of appealing to consumer desire, both female and male, grew in importance, perhaps reaching its apotheosis in the infamous 'Kitchen Debate' of 1959.<sup>351</sup> Architecture as a means to convey economic and technical achievement while appealing to lifestyle aspirations offered expedience.

For the newly purpose-built America Houses, architecture was not merely an exhibition or lecture topic, but an immersive experience. In the case of Skidmore Owings and Merrill's work, the architectural experience was not limited to photographs: the walls on which the images hung, the spaces those walls defined, the whole atmosphere of the slick, new America Houses – all had been based upon prototypes developed by Bunshaft's SOM team.<sup>352</sup>



German show.<sup>356</sup> Five projects by SOM were included, second in quantity only to Pietro Beluschi's six. Alongside the houses, schools and museums of these more well-known figures were hospitals, commercial and office buildings, and urban planning by lesser known names from cities less familiar outside the US: Pereira, Stevens and Williamson, Kump and Pei, working then for the firm Webb and Knapp. These were the 'corporate' Modern architects who had emerged since the war. The works were attributed not only to their architects but also to engineers and interior designers. A special category entitled 'recreation' even included temporary structures by John Lautner, later famous as the architect of houses appearing in James Bond films. As the introduction to the exhibition explained, "This exhibition shows emphatically – as a viewer in another country may not tend to observe – the remarkable progress which Modern architecture has made in the US since the war, both as in the planning of exterior areas and on the interior – lighting, furniture etc."<sup>357</sup> Whereas the lifestyle-based exhibition had included the true stylistic heterogeneity that characterized the American landscape, the exhibition mounted by the AIA was adamant about the increasing hegemony of Modernist design.

**"New, Clean and Spectacular:"<sup>358</sup> the American Lifestyle on display**

Upon taking control of the US Foreign Building Office in 1952, Leland King worked quickly to deploy Modern architecture as a means to represent "clean" America amidst the literal – and figurative – ruins of Germany's immediate past. Under pressure to show results before the next presidential election,<sup>359</sup> King also had SOM develop prototypical designs for the America House buildings, in addition to commissioning the firm directly for the new American consulates. Had it not been for the withdrawal of construction funding from the project after the 1952 election and change of party, SOM would have directly authored some twenty buildings in Germany. As it was, however, their designs served directly as models for the America Houses as they were

ultimately realized by West German architects, often lesser-knowns working for the local building department.

The architectural exportation of the American lifestyle also occurred via the Hilton Hotel chain between 1949 and 1956, resulting in 17 hotels internationally. SOM was only one among several corporate-scale American Modern architecture firms to build for Hilton around the world, creating an extraterritorial microcosm of United States' new sleek, well-heeled Park Avenue Modernism.<sup>360</sup> The building of the European hotels, run on concession by the Hilton chain, was a clever application of the foreign credits derived from Allied Force monetary regulations put in place, at least nominally, to avoid deflating local currencies as more stable currency, especially in the form of American capital, entered European economies. Because steel from the Ruhr Valley region was recognized quite early as essential to European reconstruction and later became vital to American success in the Korean War, controlling the reformed West German mark was particularly sensitive. Rather than purchasing goods in dollars, which would have competed with the local currency, the American government paid West German vendors in dollar vouchers, which had to be spent within the country. Construction was an effective investment strategy for these vouchers, and because the US Department of State administered such projects, the system favored American architects.<sup>361</sup> Skidmore Owings and Merrill had benefitted from this arrangement, which was also used to pay for the consulates, consular housing and the America House projects. International work required in turn a specific corporate structure which could be developed within the relative security of government contracts. The symbiosis of monetary policy, cultural re-education agendas and emergent corporate design structures also produced, and ultimately perpetuated, an increasingly ubiquitous 'High Modern' idiom, shared by both the consular buildings and the Hilton chain.



Designed by the San Francisco firm of William Pereira in a mode shared with SOM's projects of the same period, the example of the Hilton Hotel in Berlin is telling for the way in which the American lifestyle was translated into a German context via architecture.<sup>362</sup> The opening of the hotel in 1957 was celebrated in an enormous fresco-decorated hall, lit by a glass gridded dropped ceiling that could have been modeled SOM's upon contemporaneous Manufacturers' Hanover Trust Bank on 5<sup>th</sup> Avenue in New York City. The hotel lounge with plush carpeting, indoor fire pit and highly polished tropical wood bar needed only the Rat Pack to complete its replication of post-war American glamor. The arcade of adjacent clothing stores and airline agencies on a Budapester Strasse, in photos conspicuously empty of both automobile and foot traffic, except for a small group of black-clothed men, was a set ripe for a fashion shoot.



Postcard, Hilton Hotel and adjacent retail arcade. Undated. *Spiegel.de*

The conspicuous luxury represented by the Hilton Hotel, still incongruous even in the German cityscape of the mid-1950s, was not solely the object of desire, however. The Berlin Hilton was built between 1955-1957 just a stone's throw from the rubble of the Kaiser Wilhelm Memorial Church, for which a reconstruction project had yet to be conceived in 1955. The large luxury hotel provoked protest from the Berlin hospitality industry, especially when it was revealed that – as was the practice with all foreign credit-funded hotels – the Berlin Senate would pay the construction costs via vouchers but receive in return only a nominal leasehold fee from the “American Hotel King Conrad Nicholson Hilton.”<sup>363</sup> The weekly magazine *Der Spiegel* contrasted the appearance of a “man with a light-colored double-breasted suit and grey Homburg” and his “energetic...gesticulation of the contours” of a “four hundred bed hotel including roof garden, swimming pool and indoor skating rinks”<sup>364</sup> with the rubble piles on *Budapester-Strasse* across which he strode. Concerns about the project included the accusation of unfair competition by investing public funds in an American run hotel, to the detriment of local businesses; the insinuation that the Berlin mayor and his Senate were mere pawns – “carrier pigeons”<sup>365</sup> is the term used by *Der Spiegel* – of the US Department of State; and the anticipation that the project was in any case doomed to fail. “Even Conrad Hilton with his propaganda-apparatus in the other twenty-six Hilton Hotels in the US and abroad will hardly be able to seduce pleasure travelers into the four-sector city,” *Der Spiegel* wrote. As the magazine reported, the building of three large Berlin luxury hotels had been on the agenda of the US occupying forces since 1950, but had been tabled after the construction of the much smaller Kempinski Hotel on Kurfürstendamm, the new center of West Berlin.

It was the decision in 1954 to build an America House in Berlin that motivated the “American agencies to kill two birds with one stone”<sup>366</sup> and to move ahead with a Berlin America House and the Hilton. The presidential election in late 1952 and subsequent change in political powers had

ended King's ability to advocate for SOM. Construction funding appropriations in 1954 were much more modest than originally foreseen. Therefore, the America House buildings were completed by West German architects on behalf of local building departments, although on the models developed by SOM.<sup>367</sup> The ease with which these design strategies could be realized without the support of the American firm's known-how is a good indication that the SOM idiom had been fully assimilated by the second half of the 1950s. The fast-tracked Hotel opened at the same time as the much smaller building, in 1957. As it turned out, Hilton's proposal and Pereira's design drawings had already been approved by the time the critical *Der Spiegel* article was published in summer of 1955.

The two buildings' Berlin neighborhood also offers an interesting study in architectural technology transfer. Very different in expression and architectural status but close in physical proximity, the Hilton Hotel and Egon Eiermann's *Kaiser Wilhelm Gedächtniskirche* a block to the west (competition 1957, completion 1961) are surprisingly similar in construction technologies. The Hilton façade is built as a self-supporting steel 'shopfront' construction, infilled in alternation with windows and opaque panels, originally clad in matte glass.<sup>368</sup> Exposed steel mullions, their deeper dimension set perpendicular to the building's façade to provide stability, protruded beyond the plane of the opaque panels. Steel frame windows and dark spandrel panels were set in plane, behind the protruding panels. Although simple in its plasticity, the façade required precision work to ensure that the prefabricated panels would fit exactly at their points of tangency, slightly overlapped in plane to provide anchorage.

Eiermann's *Kaiser Wilhelm Gedächtniskirche* is realized in a very similar material vocabulary. His building ensemble also comprises exposed steel frameworks into which prefabricated concrete panels, albeit infilled with glass block, are fitted. Façade systems deploying exposed

steel with prefabricated concrete panels were rare enough in the Berlin architecture of the mid-1950s to suggest a relationship between these two buildings, if only on the grounds of façade construction. Although structural steel construction was common in Berlin office building in the 1950s, the use of steel mullions and precast concrete as a façade system was not.<sup>369</sup> Furthermore, other contemporary examples in West Berlin of panelized façade strategies were repetitive, unlike the syncopated play in relief of exposed structure and infill which Eiermann's church and the hotel façade share.<sup>370</sup> Their similarity may again reflect the sharing of construction knowledge rather than any stylistic affinity: Paul Schwebes, who served as Berlin contact architect for Pereira's hotel, was a prolific Berlin practitioner and the designer for many of the buildings on Breitscheidplatz, where Eiermann's church buildings also stand. Although none of the buildings Schwebes authored there use the concrete panel and steel mullion façade strategy, his office's realization of the Hilton façade created the capacity to build this kind of façade, which may well have served as a reference for Eiermann's work during the arduous construction period through which Eiermann worked. In the *Gedächtniskirche*, Eiermann hybridized the glass and concrete construction system he had pioneered a few years earlier in his *Matthäuskirche* (Pforzheim, 1951-1953) with the steel façade style he and Sep Ruf would so successfully use for the West German pavillion at the 1958 Brussels World's Fair. It is intriguing to imagine how the Berlin Hilton, a much less ambitious work of architecture, could have facilitated the construction know-how that Eiermann required.

### **Consultancy Reimported**

The German architectural press published surprisingly little of SOM's work through the 1950s, despite the firm's prominence in US-sponsored exhibitions and the fact that it was the first American firm to realize signature buildings in West Germany on behalf of any official client. One of the earliest, if not the first, German-language monographic studies on SOM was published

outside the context of building construction or even architecture. *Bürobau mit Blick in die Zukunft* (Office Building with a View to the Future) by Claus W. Hess, a seventy-page hardcover book thoroughly illustrated with Ezra Stoller photographs and architectural line drawings, told the story of its author's visit to the campus of Connecticut General Life (1957). Billed on the title page as a business consultant, Hess wrote in an accessible style, peppering his German language text with such English phrases as "A good place to work"<sup>371</sup> or "Work does not want to go upstairs."<sup>372</sup> He included verbatim his correspondence with the "six friendly women"<sup>373</sup> responsible for "curious international visitors"<sup>374</sup>, and described his visit to the Connecticut General Life campus, during which he claimed to have asked himself whether such a pleasant place could really be a place of work.

Hess' audience was apparently made up of German companies planning larger new corporate headquarters. His book offers reasons for building outside of the city, and gives directives on space planning, programming, the erection and use of test 'mock-ups' and the criteria for choosing architect, general contractor and interior designer. Hess recognized in the Connecticut General Life campus, its planning and its execution a new organizational paradigm. Despite using simple language, Hess described in great technical detail the lighting, heating and acoustic systems integrated into wall and ceiling. The architects' report, reprinted in his book, includes a three-page list of all subcontractors and suppliers involved in the project. Completed by the trifecta of SOM, Turner Construction and Knoll Furniture, with Florence Knoll as interior designer, the Connecticut General Life Building represented the state of the art in corporate headquarters to a West German audience in 1959.



Die Architekt zeigt eine typische Arbeitsgruppe im Hauptgebäude. Die Trennwände, nur 2 Meter hoch und abgehängbar, lassen einen Blick über die Büros hinweg erheben. Dieser beugt in der vertikalen Gliederung des Raumes. Die Arbeitsplätze sind nicht abgetrennt, in eine Richtung gestellt, sondern werden sinnvoll in Funktionsgruppen zusammengefasst. Auch der Gruppenleiter im Vordergrund ist im Gegensatz zu den anderen auf seinen Tisch, Laptop, Schreibgerät und Pflanzensammlung etwas zurückgeworfen. Wände in dunkler Grautöne, ähnlich wie bei den Büros in der Hauptgebäude.



Das Foto zeigt die Partner des bei uns transferierten Mitarbeiterinnen zu einem ihrer letzten Arbeitsplätze. Registrier- und Kontenstellen werden durch die Glastür, nicht als funktionell gesehen.

Hess, *Bürobau mit Blick in die Zukunft*, 1959, p. 16-17

Hess' study also included information relevant to what was emerging as the science of human resources. Of the 2,000 employees on the campus, only 400 were men; of the remaining 1,600 women, only one third were married, a fact Hess included. To ward off attrition and turn-over, a concern arising from the company's relocation to outside the city of Hartford, the campus included hair salons, shops, watch and shoe repair, a movie theater, bowling alley, shuffle board, ping pong – a corporate campus masquerading as a cruise ship for single women. Although Hess offered no information on the frequency or intensity with which these facilities were used, he did effectively communicate the all-encompassing environment beyond the glass partition walls, which SOM had specially designed to delimit each employee's cubicle.

Hess' report might be considered no more than anecdotal to a consideration of SOM's influence on spatial practices in post-war West Germany, were it not for the identity of his book's publishers, Eberhard and Wolfgang Schnelle. The two brothers had founded their consulting company in 1959,<sup>375</sup> the year in which Hess' book was published. Known later as the 'Quickborn

Team' for the city in which they were located as of 1962, they quickly became international consultants on the structuring of the *Bürolandschaft* – the maze of oversized offices, cubicle furniture, equipment and accouterments which comprised the work landscape of the late 1950s and 1960s. Their clients included such large German corporations as Lufthansa, Bertelsmann and Krupp; their success abroad extended to the establishment of a New Jersey office, from where they advised IBM and Kodak, and where they became known for the “democratization of the workplace,” in the words of *The New York Times*.<sup>376</sup> By 1972 when the Schnelles left the company, the Quickborn Team had managed in a unique way to repackage the architecture of American corporate culture as pioneered by SOM and imported to Germany in the 1950s, and to re-export its organizational schemata as a billable service.

### **SOM's Consular Projects**

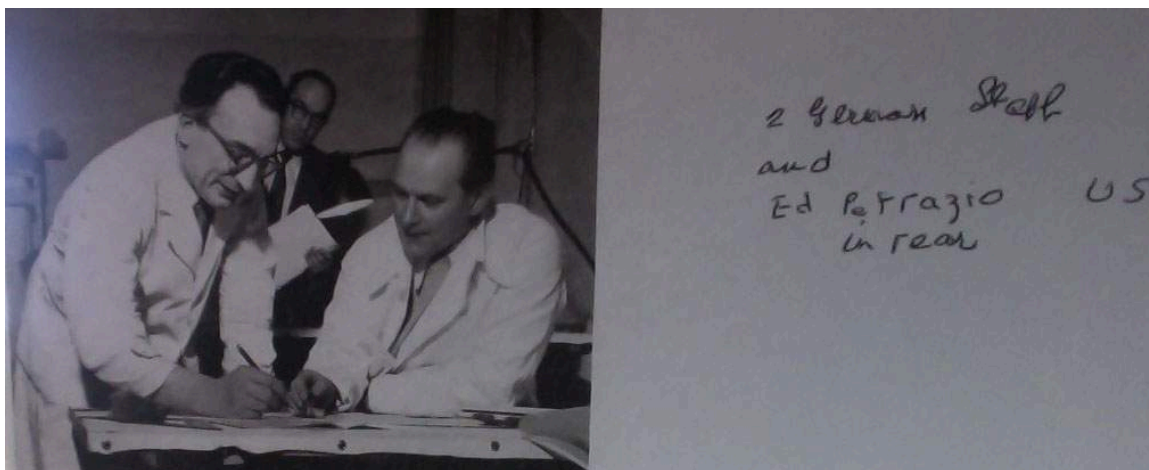
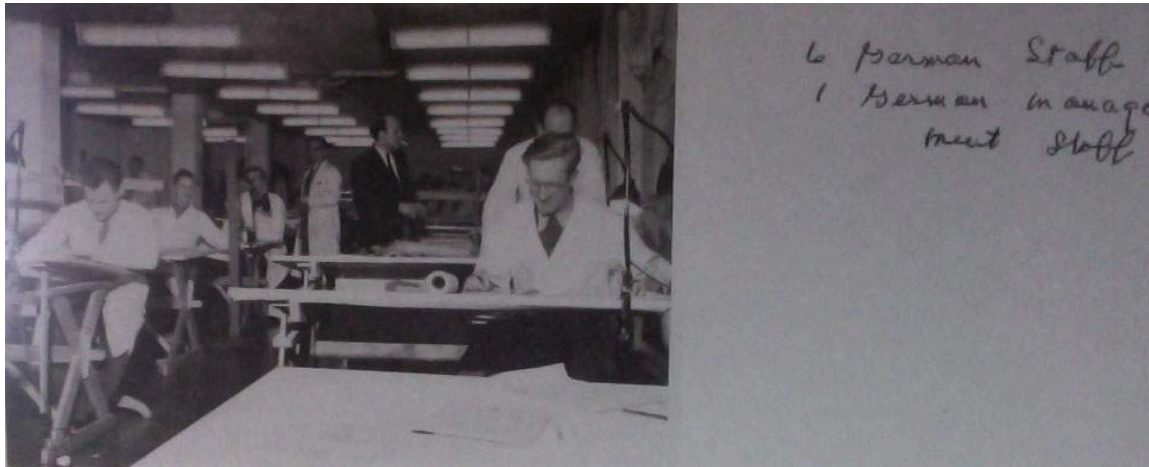
SOM's international commissions, although smaller in scope than many of its domestic projects, were central to its growth as a business in the 1950s. The German consular commissions were a brief but vital chapter in the development of SOM's identity within the context of the firm's expansion, and in the development of American Modern architecture as a tool for cultural change in post-war Europe. The projects were commissioned under Foreign Building Office (FBO) head Leland King, an architect trained at Georgia Institute of Technology and Armour Institute, who is credited with initiating the practice of casting State Department Buildings abroad in a Modernist idiom.<sup>377</sup> King, who had been at the FBO since 1938, took over from Frederick Larkin in 1952, just as the Consular and America House building program had been enacted. With Truman signing of the international peace treaty in September, 1951, US agencies stationed in formerly occupied nations were compelled to give up the buildings they had requisitioned. The deadline for vacating those buildings was set for October of 1953 and the FBO was tasked with providing new facilities. In West Germany alone, the scope of construction was extensive, initially intended

to include seven consulates, seven houses for the chiefs of missions, six America House cultural centers and 275 housing units. Despite the fact that many fewer projects were realized, the program more than realized its potential to evangelize American post-war architectural developments in Modern architecture's putative country of origin.

According to the notice in the August 15, 1953 issue of *SOM News*, the internal publication used to disseminate information among the firm's numerous offices in places as diverse as Nouasseur, Morocco; Istanbul; and Tokyo, SOM's Bonn office had opened in the winter of 1951.<sup>378</sup> Above the small notice mentioning the office is a rendering of the American Consulate in Bremen, then nearing completion. The text cites Gordon Bunshaft as Partner-In-Charge in New York and David Hughes as on-site Project Manager, stationed in Germany since the office had opened. No mention is made of the German architect who, in later publications, would share the credit for the four SOM Consulates: Otto Apel.

The byline "Bonn" was a geographic simplification: the office was actually located in Bad Godesberg, a town in the greater Bonn-Cologne region where the US High Command also had its offices. Period photographs show the drafting room as a long, fluorescent-lit space with a line of concrete columns in the middle and what seem to be curtained windows on only one side. Rows of very simply-built tilt-top drafting tables, three abreast, line the room; to judge from the photograph, some thirty to forty architects and draftsmen worked there, making it one of the largest architectural offices in Germany at that time. The office hierarchy was obvious at a glance. "Germans who worked on drafting tables all wore white coats to keep clothing clean," as Natalie DeBlois, Bunshaft's protégé and a design architect for the consulates, recalled in 2010.<sup>379</sup> The white coats drew while the suit jackets – the Americans – supervised.





Photos taken by Natalie DeBlois in the Bad Godesberg offices. *Provided by Ms. DeBlois*

The office and project administration structure was somewhat more complex than the small *SOM News* article chose to describe. According to DeBlois, the projects were overseen from the US through the New York office; Leland King was the company's advocate in Washington, D.C., although Gordon Bunshaft often accompanied him at presentations. Bunshaft also went to Germany, as noted in the *SOM News* article, but no more than two or three times a year. DeBlois, who spent nearly a year in the German office between 1952-1953 after completing a Fulbright Grant in Paris, recalled that the New York team was rarely involved in the projects after the design phase. No one on the SOM team spoke German, she noted, but "we communicated

well...We did not discuss Modern architecture or the International Style,” she explained. “It was not extraordinary. One said ‘Good Morning’ every day.”<sup>380</sup>

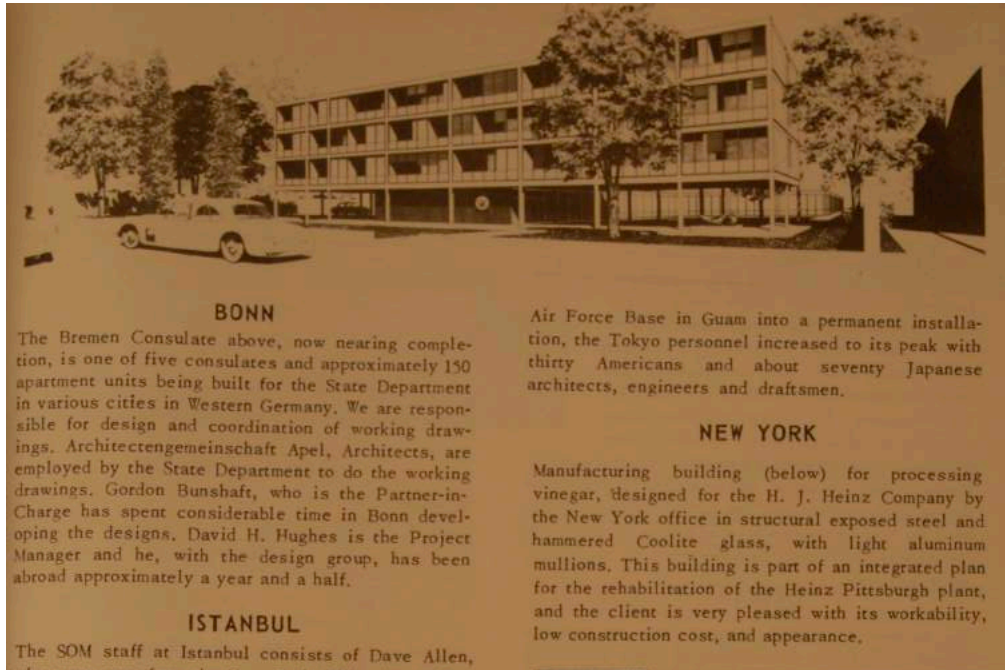
She remembered the name of her German collaborator nearly fifty years later: Mr. Becker. Although she did not contribute directly to detailing or construction documents, DeBlois was certain that the SOM office in Bad Godesberg worked exclusively with German manufacturing and construction firms on details, based on the data provided through the German co-workers rather than importing products from the US. This practice would have been consistent with the use of foreign credit vouchers for construction costs. Even in the early 1950s, she recalled, “Germany had a sophisticated building industry. No American products were used in the German projects.”<sup>381</sup> The project designs, especially facades, reveal, however, that American construction methods and detailing preferences were the model for the consular projects.

### **Architektengemeinschaft Apel**

Beyond DeBlois’ anecdotal information, the relationship between the German employees of SOM in Bonn, the American architects sent to run the office and the German architect who was signatory on the consular projects is difficult to reconstruct precisely from narrative accounts. Instead, any additional insights have to be extracted from the construction documents. The drawings from which the consulates were built bear both SOM and Appel’s title blocks. They are labeled in German and, the names of the draftsmen whose names are listed on them indicate they were German, confirming De Blois’ recollections. No project correspondence or job book has yet been located, however, to describe the working relationship between New York and Bad Godesberg. Otto Apel’s office archives also seem to have vanished.

Documents in the Gordon Bunshaft collection<sup>382</sup> indicate that the authorship for the projects was attributed very equitably. Photographic prints documenting the earliest German projects, housing for consular employees in Bremen, is labeled with the sticker on the back that includes the words “Associated with Otto Apel.” The most thorough German publication of the projects go beyond equitable: an April, 1956 article in the architecture monthly *Bauen + Wohnen* attributed all four consulates in Bremen, Düsseldorf, Stuttgart and Frankfurt to Apel and his project architect Franz Mocken. Below these names, the magazine included the note “in collaboration with Skidmore, Owings & Merrill, Architects and Engineers, New York.”<sup>383</sup> On the cover of the same magazine issue, no mention at all is made of SOM, whose German offices had by then been closed. Based on this publication, it seems that by 1956, it was completely plausible in Germany to maintain sole German authorship for buildings which, when first built, would have distinguished themselves from almost everything around them. A comprehensive discussion of these buildings and their construction idiom follows in the subsequent chapter.

## **The End of the Era**



Skidmore Owings and Merrill Newsletter August 15, 1953 item on the Bremen Consulate making reference to *Architektengemeinschaft Apel. D&A Bunshaft, Avery Library*

In the fall of 1954, SOM's German office had been reduced in size and relocated to Frankfurt;

two New York employees "on loan" to the German projects, Sherwood Smith and Carl Bitter, had returned to the home office.<sup>384</sup> By Summer 1955,<sup>385</sup> with the completion of the Frankfurt and

Stuttgart embassies, and with the embarrassing loss of the Munich project, SOM's German office was finally closed. The managing architect, Eduard Petrazio, returned to the Chicago office.

Perhaps by the time of the 1956, SOM's interest in German work had been eclipsed by its other, larger possibilities elsewhere in the world. The immediate largess of the embassy projects

belonged to Otto Apel, who was able to leverage his work for the HICOG towards the

establishment of his own large office serving corporate clients. The consular projects' material

and construction legacy would also be passed on – literally, in the form of three complete sets of working drawings – to Sep Ruf.

## Chapter 6

### Sep Ruf's American Consulate in Munich, 1955-57

#### Building in Germany, Building in Steel

Critiques of West Germany's new streetscapes, and the idiom in which they had been built, were becoming increasingly strident just as Skidmore, Owings and Merrill closed out its Frankfurt office in the summer of 1955. The gridded infill façade, a staple for the first wave of post-war West German rebuilding, was quickly becoming – at least in part, quite fairly – the scapegoat for architects' and planners' failure to realize the promise offered by the chance to build entirely new cities from the ruins. "Rasteritis"<sup>386</sup> was the term critics used. It had first been applied by the editor of the architecture periodical *Bauen und Wohnen* Walther Schmidt in 1947<sup>387</sup> to describe the growing tendency to base a building's façade explicitly on its underlying structural grid. By the mid 1950s, the debate around the gridded facade had heightened and the 'Rasteritis' epidemic seemed rampant.

The essence of this critique was summarized by Hubert Hoffmann, a Bauhaus graduate<sup>388</sup> in his introduction to the survey volume *Neue Deutsche Architektur*: the repetitive infill facades that had quickly become typical of post-war urban construction, in Hoffmann's analysis, "so fittingly symbolized the anonymity of their society in their dull monotony."<sup>389</sup> Aesthetic pedantry, according to Hoffmann, mirrored the impoverished social milieu of post-war Germany. The broader critique of the relentlessly gridded façade came from many quarters in the architectural press. Some decried the tedium it brought to city streets.<sup>390</sup> Others saw it as the outcome of an overly hectic attempt to rebuild, whether for social or economic benefit.<sup>391</sup> In their attempt to uphold Modernist principles in both architecture and planning, the authors of these critiques sought counterexamples to the gridded façade, which had somehow gone wrong. The self-supporting steel façade – an idiom, which referenced a building's structural logic but also provided the architect with appropriate formal discretion – seemed to be a perfect antidote.

The desire for a façade system that offered other formal opportunities besides the so-called *Rasterfassade* (grid façade) would have resounded with building product manufacturers as well. For façade element manufacturers, the gridded infill system limited the potentials of prefabrication, since the spans between the structural columns, which determined the façade grid dimensions varied from building to building, or even slightly from bay to bay. In addition, the

majority of construction methods, including everything built in concrete or masonry with an infill façade, was still dependent on skilled on-site labor and ‘wet’ construction methods, which resulted in greater variability in dimension and extended construction periods. In addition, the need to wait for on-site as built measurements after rough construction was complete meant that such benefits derived from prefabricating a building envelope system as speed and economies of scale were much diminished. For construction companies concerned with productivity, infill facades were time consuming because of the tight tolerances they required. As German steel again became domestically available for the building industry following the end of the Korean War in the late summer of 1953, its application to façade construction gained traction. The building industry was eager to showcase the potentials of a self-structuring façade system, one that could be largely independent from the structural members behind it for production and installation. For architects, the self-structuring façade system, or curtain wall, offered new possibilities for expression, liberated from the dictates of the structural grid.

Thus, the pressure in Germany of the mid 1950s to find a new façade paradigm came equally from the areas of industry and architectural design. To its good fortune, SOM had arrived in Germany a few years earlier already well versed in the commercial environment that fostered transfer of steel and its technologies from military to building industry applications. By applying its know-how to its German projects, SOM created precedents for façade detailing which came to be seen as a way out of the *Rasteritis* endgame. To understand the appeal and radicality of SOM’s consulates in the German architectural scene of the mid 1950s, it is useful to rehearse the polemic around and the construction techniques associated with the gridded façade. This is because critical reception and professional uptake of the curtain wall paradigm responded directly to the limitations of the *Rasterfassade*. It is equally important to recall the cultural ambivalence with which German architects initially encountered an evolved Modern architecture, recognizable as the heir to their own *Neues Bauen* but now reimported from outside their borders.

### **Grids as Facades**

The infill façade, because it directly registers the bearing structure on the building’s surface, would seem to ideal vehicle for realizing the dictates of Modernist orthodoxy: there is no clear way to blur the ‘truth’ of construction in an elevation whose rhythm is set by the projecting the building’s vertical and horizontal bearing members directly onto the façade. As with any detailing

proposition, the actual construction facts are quite a bit more complex. In the grid façade, the columns at the edge of the floor slab doubled as the vertical boundaries of each façade unit; the edge of the floor slab defined the horizontal. Bearing structure is categorized as rough construction, which has much greater tolerances than finish construction, which includes not only surface materials and cabinetry but also the façade. To make the transition from a member intended for rough construction to a finished façade element required calibration of finish surface thicknesses, tolerances and material interfaces. If only for reasons of detailing, the gridded façade – which seemed to express the architect’s yearnings for prefabrication, in Schmidt’s account<sup>392</sup> – belied its thorough dependence upon a skillfully pieced assembly of component parts. Its fabrication was neither crude nor mechanistic, despite critics’ characterizations.

Multistory construction in the first half of the 1950s typically used concrete beams and columns as bearing structure, stiffened with cast in place concrete slab floors.<sup>393</sup> The most economical intercolumniation, based upon efficient structural use of reinforced concrete, was wider than a corresponding subdivision based upon functional program requirements would have dictated, especially for office and commercial buildings. The dimensions required by program most often determined intercolumniation. Window or subdivided glazing followed entirely different dimensional dictates in turn, based on manufacturer standards and installation technique. This interplay of planning grids is effectively represented in one particularly well-documented example of the *Rasterfassade*, the Bayer building (1951-1952, Geber und Risse) in Berlin. Constructed in reinforced concrete, the building’s structure was calculated by Hellmuth Bickenbach, one of the most prominent and prolific structural engineers working in Berlin in the post-war period.<sup>394</sup> The building’s ground floor plan registers its structural grid, which includes a more narrow bay in the grid to accommodate the double-loaded corridor which accesses the offices on the street and courtyard sides. Along its length, the structural bays are an even 4.80 meters<sup>395</sup> on center, to which the even subdivision into eight column bays at the building’s base conforms; perpendicular to the street front, the bays are a structurally optimized 5.50 meters. Above the level of the base, the *Rasterfassade*, picks up half the dimension of the actual structural bay along the street façade, sacrificing material efficiency to façade expression. On the courtyard side, the building’s façade foregoes any expression of either grid or façade subdivision, deferring instead to the irregular interior subdivisions that include a fire stair, bathrooms, and an elevator’s mechanical chase. On both street and courtyard facades, the structural column is coplanar with the finished façade.

The courtyard façade exemplifies what may well have been standard construction in West Germany at the start of the 1950s: salvaged brick was used for the solid infill between columns, after which both concrete columns and masonry were concealed behind stucco.<sup>396</sup> Salvaged brick, particularly fragmented masonry that could not be used in a structural application, was ideal to close the gap between bearing members. Irregularities in the rubble infill could be concealed by the finish render. Until around 1955,<sup>397</sup> rubble was still considered a readily available building material. As Fritz Leonhardt, the West German engineer who revolutionized housing construction in the late 1940s with his development of “Schüttbauweise,” in which pulverized rubble was used as aggregate in light weight concrete,<sup>398</sup> observed in a 1947 article: “Slowly, there has been recognition of the fact that the rubble in our cities is a valuable raw material and therefore should not be removed but instead, made use of. Reuse of rubble is already profitable in some cities... Reuse of rubble and reconstruction must go hand in hand...”<sup>399</sup>

The well-known contributions of the *Trümmerfrauen* to salvage bricks used in Germany’s rebuilding are evidence in support of Leonhardt’s assertions: much of the initial rebuilding could never have been accomplished without huge amounts of salvaged masonry. The architectural implications of building with rubble were often, if not always, concealed beneath stucco, although there are notable exceptions. One of the best known is Hans Döllgast’s 1946-1957 reconstruction of Leo von Klenze’s Alte Pinakothek in Munich (1825-1848), rebuilt with the rubble of a contemporaneous barracks whose bricks were the same dimension as those used in Von Klenze’s museum. Beneath its expressive masonry, however, Döllgast’s building is actually only one of the many concrete frame buildings realized shortly after the war. The rebuilt salvage brick walls are supported not by the original solid masonry construction but by an entirely new concrete skeleton, threaded through the existing building and kept largely invisible, except in the underside of the floor slabs. The salvaged bricks, slightly different in color than those of the remaining original walls, are recognizable in the façade, but are knit seamlessly into the older walls’ running bond. The care and skill needed to give architectural expression to the salvaged material was as far from the mere expedience leveraged by Leonhardt as from the exigencies of rebuilding in an everyday context. It contrasts with the way salvaged masonry was used as infill in the Bayer House courtyard façade, requiring that the masonry be stabilized laterally, against the concrete columns and floors.

The simple, expedient courtyard façade contrasts sharply with the infill street façade, however.



The depth of the structural grid was translated on the street face into layers of low and high relief, using profiled stone cladding to emphasize each individual bay without interrupting the larger-scale reading of the structural grid as a whole. Set back behind the plane of the limestone-clad structure, steel casement windows with gold anodized aluminum glass stops fill completely each rectangular bay, suppressing any additional elements needed to negotiate tolerances between metal and stone. The continuous plane formed at the juncture between vertical and horizontal stone veneer had to be negotiated using metal anchors, adapted from those developed for masonry construction<sup>400</sup> which had little capacity for adjustment in the horizontal plane. Devoid of surface decoration to underplay or conceal any inaccuracies, the alignment of the continuous stone-clad skeleton and its inverted corners required total precision. Because the structural columns formed the basis for the finish façade, with only a small margin of error for adjustment, even rough concrete work would have had to conform to very tight tolerances. The gradation of tolerances from rough to finish construction must have been kept to a very small degree of difference: traditionally, bearing structure which will disappear once construction is completed need only be exact to the centimeter, whereas finish surfaces have a tolerance measured in millimeters. The *Rasterfassade* as realized in the *Bayer-Haus*, one of its early exemplars, would have demanded millimeter precision of all trades, a rare accomplishment even for the most exacting of craftsmen.



Bayer-Haus, contemporary photo. [https://www.berlin.de/ba-charlottenburg-wilmersdorf/ueber-den-bezirk/gebaeude-und-anlagen/geschaeftshaeuser/mdb-110207herrath\\_008.jpg](https://www.berlin.de/ba-charlottenburg-wilmersdorf/ueber-den-bezirk/gebaeude-und-anlagen/geschaeftshaeuser/mdb-110207herrath_008.jpg)

The parity of bearing structure and architectural expression is typical for virtually all permutations of the gridded façade, whether as elaborately detailed at the Bayer House or more simply realized. Despite clear differences in proportion, surface finish and expression among gridded facades clad in metals and those using stone or precast concrete, there is little or no correlation between the cladding materials chosen and the decision to realize the building structure in either concrete or steel. More so than the skeleton's material composition, it is the location of the columns which lends the gridded façade its most salient characteristics. Placed directly at the building's perimeter, their sculptural expression to building's exterior trumped any variation in floor plan subdivision or structure.

### ***Rasteritis***

Walther Schmidt, whose 1947 article is credited with coining the term *Rasteritis*, had his sights set on a larger phenomenon than that of the façade *per se*. His deeper concern was the encroachment of normed dimension onto the architect's capacity for design finesse, particularly when those normed dimension had yet to be tested for their appropriateness. The determination of norms, Schmidt argued, was nothing short of an event that would

“cast shadows on the future. It is a fact: consistent building norms, and the ordering of building dimensions, is a great event. It also seems to us to be one of the most important, responsible and urgent tasks that the hour demands of us. The most important, because the rationalization our building construction process that alone can help us depends upon it; the most responsible because [norms] can no longer be changed once production facilities have been calibrated to them; and the most urgent, because they must and can be introduced now, before the reconstruction of our building material and building industries.”<sup>401</sup>

For Schmidt, the planning grid in architectural design could only be meaningful to the extent that its dimensions were integrated with the dictates of building construction. In fact, he concluded, “as long as there are no normed building components which could correspond to the grid...this method [of design by grid] cannot make sense.”<sup>402</sup> The grid, he claimed, functioned with the force of a mechanism, driving inevitably towards the realization of the function for which it was invented and subverting subjective decision-making. If its function were in fact one of rationalization in construction, presumably developed in dialogue with the concerns of architects and planners for its capacity to accommodate all other demands, then the benefit to be derived

from the mechanism would legitimately outweigh the loss of individual discretion. At the same time, Schmidt made clear his conviction that over-systemization was a particularly dangerous in Germany: rather than the social anonymity which Hoffmann's 1956 editorial saw mirrored in the *Rasterfassade*, Schmidt foresaw a more ominous danger in "Rasteritis":

"If its use grows out of control, then the grid can come to symbolize lack of freedom, of condescension and recurrent impediment...In the open landscape, one can wander freely but in a system of perpendicular crossing streets, one can only march or perhaps sneak along. We have had our experience with how 'marching' tends to go and with those as well, who have chosen to sneak along...particularly in light of the fatal tendency among Germans towards systematization....Human freedom operates only in a narrow space between necessities. It is a human and an artistic duty not to limit or distort this narrow space with pseudo-necessity...but rather – literally – to *test its measure freely*. This duty will become increasingly important as the true necessities and their difficult demands come closer to us."<sup>403</sup>

Schmidt had worked as an architect in Munich alongside Robert Vorhoelzer in the 1920s to build for the postal service in the style of the *Neues Bauen*.<sup>404</sup> From there, he acceded to the position of undersecretary for building in the Reich Postal Service during the National Socialist regime, during which he oversaw the construction of large projects in the Modernist style favored during the Nazi regime for buildings intended to represent technology and progress. As a "follower of the *Neues Bauen*"<sup>405</sup> who had found politically expedient channels to continue his work – perhaps one of those who, in his own words, had figured out how to "sneak along" – his warnings about the grid and its totalitarian political implications are at the very least obliquely autobiographical.

Without referencing his own experience directly as an architect working in a Modern idiom during the National Socialist regime, Schmidt used his position as editor of *Bauen und Wohnen*, one of the architecture publications newly founded after the war, to argue for exploiting the small margin of artistic freedom left to them by circumstance before it closed down again. His emphasis on building products and the demands that manufactured construction elements would place on architecture is double-edged: he implies that the dictates of a desirable and necessarily economical, expedient construction industry would be the only true justification for following the dictates of a planning grid. At the same time, he urges architects to exploit the current moment, prior to the rebuilding of the construction industry, to set aside the planning grid in favor of greater individual design discretion.

For those who chose to adopt and use Schmidt's term *Rasteritis* at mid-decade,<sup>406</sup> however, the

downfall of the façade grid was not, as Schmidt had anticipated, simply its uninflected registration of construction exigencies. Instead, as Gustav Lampmann claimed in *Baumeister*, the *Rasterfassade*, which “seemed enormously ‘construction-based’” had turned out to have been “only intended decoratively.”<sup>407</sup> Lampmann never explained the basis for his assertion. Because the grid façade by definition corresponds to the construction members of the building it clads, it would have been very difficult for his readers to imagine how it could be ‘decorative’ in any but the most narrow definition. It also seems at odds with another common critique, that the gridded façade revealed a “persistent pedantry,” as Franz Hart wrote in 1956 book on skeleton construction buildings.<sup>408</sup> Amidst these conflicting critiques – either false structural expressionism or mindless structural orthodoxy – the grid façade was stripped by the press of any virtues at all. Indeed, in the Berlin architecture weekly *Bauwelt*, one letter to the editor questioned both the magazine’s editorial position that there was in fact a “good grid,”<sup>409</sup> and its implication that the architect’s choice of a ‘good’ grid would guarantee a good result. The letter writer argued further that a city of gridded facades would be no less impoverished than a city made up only of self-referential tour-de-forces. The *Bauwelt* editors, despite their decision to print the critical letter, offered no further clarification of what constituted the ‘good’ grid.

The vague terms exchanged in the press around what constituted a good or bad *Rasterfassade* reflected a larger uncertainty or ambivalence about what kind of Modern architecture to champion, or even what story to tell about it. Could it be that the gridded façade was, as Schmidt had feared, no more than mindless ‘marching’ when put in the hands of German architects? Was it an enervated relic of Germany’s earlier dominance in the field of Modern architecture, now exported to other countries? Was it pedantic or was it an open invitation to superfluous decoration? The 1956 book *Neue deutsche Architektur* and its stand on the gridded façade reveal this ambivalence as it pervaded both the writing of recent architectural history and the designation of which architecture would best be suited to represent it.

### ***Neue deutsche Architektur?***

In 1955-1956, the editors of *Neue deutsche Architektur*, Hubert Hoffmann, Karl Kaspar and the typesetter-turned-art-publisher Gerd Hatje, took it upon themselves to describe the state of German architecture as it manifested itself at the moment of publication. Their introduction reframed the book’s title as a question – “German architecture?” – and sets out to give a definition of both the noun “architecture” and the way in which the adjective “German” inflects it.

They began by asserting that response to the desperate need in bomb-scarred cities for new buildings did not constitute an architectural agenda. This position marked a clear departure from the position taken only five years earlier in the Darmstadt *Gespräche*, which asserted “homelessness” as the spatial exigency of the era.<sup>410</sup> In this regard, the text marks a watershed between the first wave of postwar architectural discourse and the articulated desire for a new set of cultural ambitions. Much had been built in the decade or so since the end of the war, but the editors warned their readers against being impressed “by the quantity of building...400,000 new apartments each year are not necessarily a cultural achievement by any means! Architecture cannot be captured in materialist, additive thinking; its evaluation requires intellectual standards.”<sup>411</sup> The fact that the editors, as their text and project selection reveals, were proponents of the *Neues Bauen* heritage seems to have made the definition of those “intellectual standards,” and the designation of what in particular could make architecture German no easier: although they insisted that the history of modern architecture began in Germany first in industrial building and then as a more universal architectural idiom, they describe post-war German architecture as a follower of developments achieved elsewhere. They offered the reader a series of buildings selected to demonstrate that new architecture of quality has been realized in Germany since the war but failed to explain why the buildings chosen for their book were better than the banality, relentlessness and serial quality of the *Neues Bauen* as “comfortable recipe”<sup>412</sup> which they critiqued.

Nonetheless, the editors claimed that the buildings in their book are all “the clear expression of building for our time” and “characteristic of the *Neues Bauen*.”<sup>413</sup> They cite the first instances of these two qualities in buildings realized in Germany between the end of the First World War, when a balance was found between the attraction of industrial architecture and the *Jugendstil*'s counterattraction to “all vital and spontaneous emotions.”<sup>414</sup> From then until 1933, when “the development breaks off,”<sup>415</sup> the heartland of Modern architecture remained Germany, they claimed. Thereafter,

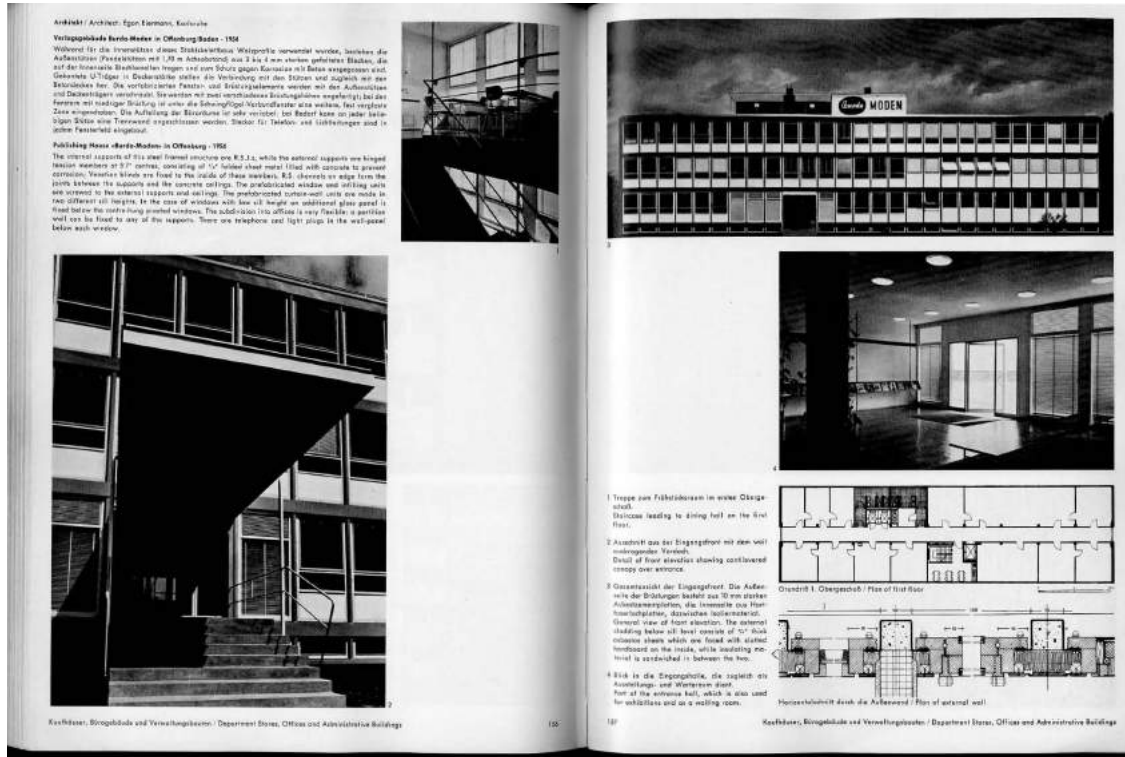
“*Neues Bauen* was ostracized, its protagonists had to emigrate or were condemned to inactivity. Other European nations, in contrast, used the opportunity to exploit the insights of the *Neues Bauen* and developed it further. So it is today that the roles of giver and taker are reversed, and what was once the center is now most often the receiving party.... Without a doubt, German architects after 1945 picked up many of the ideas that other nations had evolved during the period of our spiritual isolation. Today, we still remain in a stage of absorbing and reworking....The quality of intellectual production can also be measured by its

success in developing further a borrowed idea and transforming it.”<sup>416</sup>

That the book’s editors chose to demote Germany’s role in the *Neues Bauen* from innovator to imitator is in itself an ambivalent position nonetheless typical of that moment. The gridded façade represented the epitome of the mindless imitation they descried. Whereas, the editors stated, “functional construction requires as a fundamental rule that a building be developed from the basics of its landscape, climate and culture,”<sup>417</sup> creating a regionally relevant architecture as a matter of course, the gridded façade was cast as an “embarrassing” heir to the “pseudo-Renaissance” façade. Even worse than the pseudo-Renaissance, the *Rasterfassade* “because of its monotony has done much to put cheap arguments in the hands of the adversaries of Modern architecture to claim its purported lack of expressive means.”<sup>418</sup> As if it were not enough to represent the worst of its social context – an evaluation, which ironically aligns with the very definition of functional construction as “developed from the basics of its...culture” – the gridded façade was held responsible for undermining the legitimacy of all buildings realized in a Modernist idiom.

Nonetheless, the demonized gridded façade makes countless appearances in the projects which the editors selected for the pages that follow. Several multifamily houses, including the only project by Sep Ruf included, a collaboration with Apel Lechota Rohrer Hardt for the US HICOG in Bad Goedesberg in 1953, and nearly all of the office and administrative buildings depicted, feature gridded facades of some type. The brief project texts noted only the material used for the structural system, and the type of structural system deployed, but made no reference to why these were “good grids.” Only in one case, Egon Eiermann’s 1954 building for the Burda-Moden publishing company in Offenburg, is a construction drawing included: as if to frustrate any attempt to make sense of what distinguishes a ‘good’ grid from a ‘bad’ based upon truth in construction, that drawing shows Eiermann’s façade to be a thoroughgoing hybrid of materials rather than the clear expression of a single material and its constructional logic, as the *Neues Bauen* tradition would have had it. Bent sheet metal façade columns prove to be no more than formwork for cast concrete infill, backed by a layer of insulation to the building interior and finished on the interior with fiber cement board. Only every other alternate façade column, identical to those free-standing, abuts an interior partition wall. The façade does not express this rhythm of interior spaces at all. The framing and stops that hold exterior infill panels are also fiber cement, profiled and conjoined as if they were made of wood, in analogy to millwork.

Construction and structural 'truth' is further obscured by the fact that the façade structure works in tension, suspended from the top of the building, while the rest of the building structure resists gravitational load. Neither the text nor the accompanying drawings and photographs did anything to explain the relationship between building skeleton and the gridded façade that wraps it, let alone explain why this particular grid is, from an editorial perspective, 'good'.



Eiermann's Burda-Moden publishing house building, *Neue deutsche Architektur*, p. 156-7

Egon Eiermann received more coverage than any other architect in *Neue deutsche Architektur*, which also included such significant figures as Hans Schwippert, Bernhard Pfau, Otto Bartning, Rudolf Schwarz, Hermann Mäckler or Paul Baumgarten among nearly 150 other architects. The Eiermann buildings selected for inclusion seemed to advocate for material expression that might be keyed to building genre: solid construction in such heavy materials as concrete, glass block or brick for churches, framed construction with thinner, planar materials for the facades in the case of office or industrial buildings. Regardless of material or genre, however, all of the Eiermann projects share the use of repetitive elements in composing the buildings' exterior expression. In the case of the projects in which the structural frames were allowed to contribute to the building's expression, moreover, this strategy translated into a number of gridded infill façade variants. In Eiermann's 1953 Church of St. Mathew in Pforzheim, often cited as a predecessor to his *Gedächtniskirche* on Breitscheidplatz in Berlin, the tripartite basilical concrete

frame was infilled using small, square hollow concrete bricks into which glass lenses were set. Although the primary structure itself did not define a gridded matrix, the infill bays nine concrete bricks abreast dominate the church's expression – a gridded surface of transparent rectangles set within a matrix of concrete frames. It is not difficult to argue that a structural grid determined the architectural expression in all the Eiermann projects included in the book. Without stating explicitly what made for a 'good' gridded façade, the editors' clear preference for Eiermann's work seemed to indicate that their introductory comments were aimed at promoting something very specific, albeit unnamed. If indeed they did see some virtue in the repetitive, gridded façade, what were the provisos?

### **Absorbing and Reworking**

Although they left their German architectural audience with little else to do besides “developing further a borrowed idea and transforming it,”<sup>419</sup> Hatje, Hoffmann and Kaspar do offer at least one specific recommendation:

“...the observably high quality of the occupying force buildings, consulates and America Houses by the American architecture office Skidmore Owings and Merrill has not remained without influence on the latest developments in Germany. By collaborating on these building, a large number of German architects have come in immediate contact with American planning methods. Inspiration from the controversial UN building, Lever House, and from department stores and office building has also been absorbed to greater or lesser degrees.”<sup>420</sup>

It is not hard to extrapolate from the projects selected that the editors had one particular architect in mind from among the “large number of German architects” who had worked with SOM: Otto Apel, whose work as both sole author and within a collaborative office was included. Although Apel had in 1956 yet to realize the commissions for German Lufthansa and other corporate clients that would solidify his position as head of one of the first large corporate practices in West Germany, the book included six of his projects, of which only one was realized in collaboration with SOM; the others were mostly small projects, with the exception of an unrealized competition for an airport hotel, a project indicative of the genre and scale his office would come to be known for.<sup>421</sup> In addition to Apel's inclusion in *Neue Deutsche Architektur*, all four American consulates had been published in April of 1956 under Apel's name rather than SOM's in the periodical *Bauen und Wohnen*.

Apel's critical reception and career are difficult to reconstruct, although the firm he founded lasted I into the 21<sup>st</sup> century. Apel had studied in Berlin in the late 1920s and 1930s under



Heinrich Tessenow, where he had been part of the circle around Tessenow's assistant Albert Speer. That circle included several others who would make the transition from key members of Speer's planning staff to powerful positions in the post-war period, among them Rudolf Wolters and Friedrich Tams.<sup>422</sup> After 1945, he, like Wolters and Tams, proved well-connected and informed enough to be considered invaluable to reconstruction efforts, and was able to secure a position with the *Frankfurter Aufbau AG*, the successor to the *Aktienbaugesellschaft für kleine Wohnungen* (Construction Holding Company for Small Apartments), founded in the late 19<sup>th</sup> century to help develop and provide housing for Frankfurt's working class.<sup>423</sup> At the *Frankfurter Aufbau*, where he remained from 1945-1949, Apel was responsible for residential building projects, the core of the holding company's historic mission. His position offered him direct contact with the US High Command in Germany, headquartered in Frankfurt as of 1949, and Apel soon began to find success with his entries to HICOG-run competitions. It was certainly this string of successes, as well as his political connections, which led to his selection as SOM's contact architect. His close association with the US and its architectural scene continued, with documented visits made by his office, ABB, to the US throughout the 1950s.<sup>424</sup> Despite his commercial success from the late 1940s onwards, however, Apel is underrepresented as a leading figure in most accounts of West German post-war architecture.<sup>425</sup> Despite the disproportionately small amount of attention allocated to him retrospectively, it is certain that his collaboration with the HICOG and SOM guided the working method and mode of his practice thereafter.<sup>426</sup>

### **The Other Grid**

Defining the 'good' grid was a longer-term challenge. The March 12, 1956 issue of the Berlin weekly *Bauwelt* – the same issue that provoked the letter to the editor quoted above – is one notable attempt to address that challenge. Its cover image, which had so irritated the letter writer, bore the title "Grid? Then, please, as well-done as it is here."<sup>427</sup> That citation references a text in the issue that contrasts the new buildings at Berlin's Breitscheidplatz near the zoo by the office of Paul Schwebes and his partner Hans Schloszberger to the "good" grid:

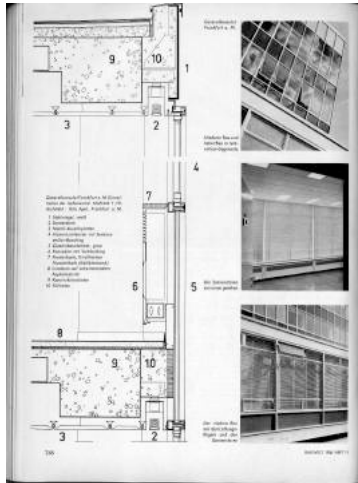
"Inasmuch as an architect knows how to use a grid...he has no need – as a new pair of architects intend for their buildings bordering the Berlin Zoo – to 'blur' function as it determines form. Wouldn't these two colleagues prefer first to head to the Acropolis equipped with diagonal struts and St. Andrew's crosses, or to Rome or Paestum, and cover up the interminable monotony of Classical verticals in the columnar orders there?! Others may wish to use the grid

but please, done as well as here.”<sup>428</sup>

The author behind the byline “Z.” who cast Schwebes and Schloszberger as Philistines, capable of misunderstanding even the ‘good’ grid of Classical architecture, also offered a counterexample, one that, he claimed, looked neither to past nor present but met exactly the aesthetic demands of the present: the American consular buildings in Germany. The buildings had been published in *Bauwelt* some two months prior to their appearance in *Bauen und Wohnen*; in both instances, they were attributed to “Otto Apel, Frankfurt am Main, in Collaboration with Skidmore, Owings and Merrill, New York, USA.”<sup>429</sup> In his description, the author’s tone is eulogistic:

“Standing before these impressive consular buildings has raised the question whether ‘this is the architecture of the future.’ No – it is the architecture of the present! We know little of what will come, hardly more than the High Gothic knew about the then-unimagined Renaissance. We recognize in these creations made from steel and glass, reinforced concrete and glass, the best architecture of our time, and see no motivation to seek refuge from the present. The building pictured here is by no means a plaid box, as it haunts the heads of the new enemies of the grid. It is differentiated in its heights, the set-backs from the perimeter glazed wall at ground level, its small and large scale rhythms. But even a sleek parallelepiped can have form and appearance – as is the case, for example, in Bremen... – inasmuch as the architect knows how to use a grid.”<sup>430</sup>

The author’s praise for the building’s plasticity and differentiated massing extends to the facades, and the seamless application of same or similar materials – he mentions in particular the granite facing along the street façade of the Frankfurt façade that continues into the entry hall – on interior and exterior. Just as, in the author’s description, views through the buildings’ component volumes into internal courtyards and interior spaces, enrich the “sleek parallelepiped,” so, too, do the different layers of the facades’ relief define the ‘good’ grid. Whereas most of the gridded office or industrial buildings depicted in *Neue Deutsche Architektur* were photographed so as to emphasize the repetition of uniform elements – windows, columns, façade subdivisions – the photographs that accompany the *Bauwelt* article without exception play up the ways in which the façade elements can be varied. Large hopper windows are shown open, roller shades are set at different heights, and the degree of transparency or reflection along the surface of the otherwise absolutely repetitive facades varies. The photographs chosen to illustrate the polemic *Bauwelt* publication were much more animated than the ones used in the drier, more technical *Bauen und Wohnen* article that appeared two months later, underscoring the different agendas in the two publications.



Frankfurt Consulate. Note the more dynamic angle and variation in the way *Bauwelt* depicts the curtain wall façade. Left: *Bauwelt* 1956, No. 11; Right: *Bauen und Wohnen* 1956, vol. 10, No. 4

The same two sectional façade drawings of the Frankfurt and Bremen consulates – the last and the first of the projects SOM realized with Apel – were included in both the *Bauwelt* and *Bauen und Wohnen* articles. The Frankfurt façade foregoes the relief typically found in infill grid buildings by projecting the façade past the surface of the building structure, exposed at the fascia of the roof plane and first storey floor plate. A continuous aluminum frame, connected to the back-up structure by steel clips, runs past the third and second storey floor plates, making this a true ‘curtain’ wall, supported from above and pinned punctually to the structure behind it. The operable glass windows, the slim dimension of their moveable frames making them invisible when viewed from below, and the alternating grey-enameled spandrel panels behind which the floor plates are concealed, are in low relief. Although the façade section ends at the building’s top floor, it is juxtaposed with an image showing the more robust window frames at the building’s base. The earlier Bremen façade, by contrast, offers much higher relief: it resembles technically and in appearance the more common infill grid façade typical of West Germany in the early 1950s: the floor plate and primary structure – both rendered on the exterior as welded construction, although the former is actually only formwork for a concrete structure behind it – are painted steel, just slightly behind the plane of the aluminum frame that holds the travertine and glass infill panels in place. Both sections show integrated mechanical blinds, convection air tempering units and acoustic suspended ceilings, all of which were standard construction for American office buildings.

Compared to the construction drawings both journals typically published of contemporaneous

buildings, the consulate façade sections are quite abstract. The scale, showing a full floor with no detail call-outs, permits only a very rudimentary description of the buildings' components. These are not 'how-to' drawings but instead only depict the basic principles of these façade's construction, and the enormous variety of materials, products and intersections required to achieve them. Despite the author's urging to use the grid as well as in these examples, neither Apel nor SOM seemed eager to give away any secrets. The specificity of components and array of specialty products and materials would have been nearly impossible to replicate in the West Germany of the early 1950s even for those tempted to try.

Perhaps, in retrospect, there is irony to the fact that *Bauen und Wohnen*, the same journal whose editor had first expressed concerns with *Rasteritis*, would be among the first to endorse so enthusiastically the curtain wall idiom, which would, in turn, become the subject of the same criticism leveled at the *Rasterfassade*. In 1956, however, the curtain wall was seen as an ideal alternative to the gridded infill façade. It seemed to address the problems of both variability and constructional truth simultaneously, remaining 'true' to the strict tenets of a Modernist ethos while providing a way out from the repetition compulsion that had undermined the infill grid façade. Structurally independent of the back-up columns and floor slabs behind it, the curtain wall's 'truth' was of its own making. Variability and truth, it seemed, were no longer mutually exclusive.

### **Dry Construction – Steel and Glass**

Early use of bearing metal frame technology developed in Germany's urban centers during the course of the 19<sup>th</sup> century,<sup>431</sup> when frame construction was paired with masonry facades to accommodate new building typologies that required greater interior spans. Despite the fact that Germany's *Neues Bauen* is associated with steel construction, steel bearing frames were most common within the context of long-span industrial building,<sup>432</sup> a practice that continued apace during the Third Reich. With some few exceptions, steel bearing structure, while faster to erect than concrete, is always requires other 'wet' materials, such as concrete or masonry fireproofing for intermediary floors and roofs. This mitigates the advantages of steel in terms of construction speed. For these reasons, one-story factory buildings, for which the longer structural spans provided by steel trusses were particularly advantageous, were the most frequent and functionally appropriate use of 'dry' building technology. In the postwar period, as tall building construction became more economically viable and less controversial, the advantages of steel construction for other building types gained credence. In the US, which had seen dramatic

increases in steel production during the war,<sup>433</sup> the use of steel as a structural material for new highrise and long-span construction offered an easy avenue for the industry's transition to a civilian economy. The situation was different in West Germany, where masonry was the dominant construction trade.

It is important to keep in mind that a 'steel building' is always realized as a composite between the steel bearing structure and other materials which form floors or enclosures. Any assertions about 'truth' in construction under these circumstances should always be subject to scrutiny. When used to support a curtain wall, however, the steel bearing structure maintains its primacy: perhaps the most effective building material when used in tension, the steel verticals from which a curtain wall façade 'hangs' can be proportionally thin and delicate without compromising performance. The mullions, which subdivide the curtain wall into smaller units, dimensioned to account for manufacturing limitations to the size of planar infill materials, dominate its expression, to the extent that the architect's detailing desires that effect. Thus, the 'truth' of curtain wall steel buildings can be more logically asserted than in the case of hybrid construction types.

The development of steel façade construction in a West German post-war context<sup>434</sup> frequently evolved from the know-how that older companies had developed as bridge and structural steel fabricators. The retooled steel production and metal working industry, for domestic use was, however, not available initially for the domestic market because of increased demands for export steel and coal during the Korean War. Early measures enacted under the Morgenthau Plan to divide larger German industries into much smaller units also limited production. Fear of the large legacy companies, which had fed German logistics during the war, was ultimately superseded by the need for expedience.<sup>435</sup> In fact, the industries of the Ruhr valley were significant enough to Germany's recovery to warrant specific mention in Harry Truman's December, 1947, 'Program for U.S. aid for European Recovery.'<sup>436</sup> A strong contributor to the *Wirtschaftswunder*, steel production rates in the five years from the start of the Korean War in 1950 through 1955 increased by 177% and the rate of steel construction in Germany increased by 163%, outpacing food production and consumer goods.<sup>437</sup>

Availability of steel for construction did not translate immediately into a highly differentiated façade industry. Rolled steel production did not resume at profitable levels until 1950.<sup>438</sup> Even

among companies with historic ties to precision steel machining for construction purposes, steel was still marketed for long-span structures such as bridges or industrial buildings; aluminum alloys, which had been available for building product applications as early as 1948,<sup>439</sup> were instead the material of choice for building enclosure products. Aluminum, which is softer and easier to extrude into profiled linear elements than steel, was seen as an ideal substitute for traditional wood windows, since wood was, and remained for some time, a limited resource.<sup>440</sup> For smaller enclosure elements, such as windows or shop fronts, aluminum was self-supporting, although for larger façade spans, steel subconstruction was needed, a fact that suited companies whose product lines included both steel bearing structures and aluminum window elements.

### **Façade Manufacture at Josef Gartner GmbH**

One such company was Josef Gartner GmbH, which went on to become internationally recognized for its innovative high performance curtain wall systems in the latter half of the 20<sup>th</sup> century through the present. By 1954, only three years after producing its first commercial line of aluminum vitrines, windows and glazed partition walls, Gartner had delivered a fully patented operable façade system for the *Kaufhof* department store corporate headquarters in Cologne.<sup>441</sup> The seven-story concrete structure, designed by Hermann Wunderlich and Reinhold Klüser,<sup>442</sup> was dimensioned to correspond to every third façade element. Above the enameled glass at the spandrel and clear glass at each story, the aluminum mullions define a tartan, remaining equally dimensioned whether in vertical and horizontal, at operable and non-operable panels, or at the shorter spandrel and longer window spans. This innovative facade system earned the project a two-page spread in the ‘Construction’ section of the August, 1955 issue of *Bauen und Wohnen*, and two pages in *Neue Deutsche Architektur*.

*Bauen und Wohnen* described the new *Kaufhof* ensemble, which included an office tower, warehouse space, underground garage and delivery area, a cafeteria and showrooms, primarily in technical terms. Its size alone was impressive: 22,000 square meters, 12 months construction time, a 25 meter free span at the entry to the service courtyard, a “modern” reinforced concrete structural system.<sup>443</sup> In contrast to infill façade systems, the structural columns were set back from the façade, along the interior edge of the floor plate, still visible behind the glass façade in the photographs published with the article. The façade construction received more than a quarter of the text dedicated to the building’s technical description, indicating the author’s excitement:

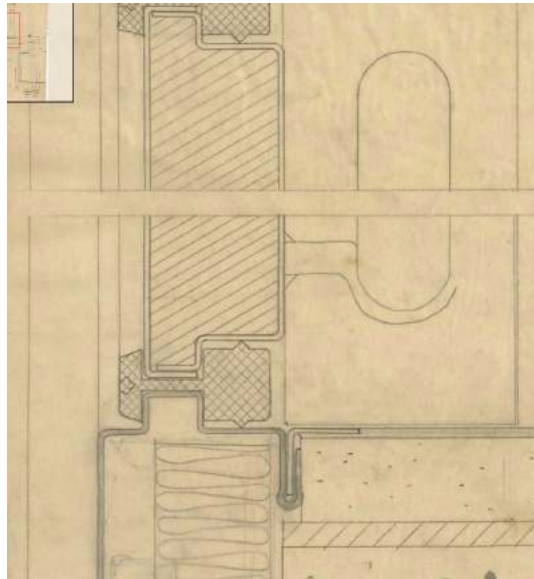
“...the façade was hung freely in front of the structure as an exterior skin and installed as components (*Montagebauweise*). The vertical and horizontal mullions in the façade are executed in aluminum, technically anodized. Spandrel and parapet are dark green wire glass and the integrated tilt-and-turn windows are mirror glazed.”<sup>444</sup>

Further technical advancement was swift, as building heights increased and new materials were introduced. Among these was Thiokol rubber, already used in the US in the 1930s and widely used by SOM as of the late 1940s<sup>445</sup> but still new to German construction. Two years after the *Kaufhof* buildings, Gartner realized its first prominent steel and aluminum façade system for the Mannesmann tower in Düsseldorf by Paul Schneider-Esleben (1957-8).<sup>446</sup> The building’s design was well-publicized even before construction as part of Friedrich Tamms’s plans for a “new city” in Düsseldorf<sup>447</sup> but its significance for façade construction is reflected in a feature on curtain wall detailing published in *Bauwelt* and written on the occasion of the Mannesmann tower’s enclosure process.<sup>448</sup> The April 21, 1958 *Bauwelt* ’s cover showed an image of façade installation at the Mannesmann tower construction site; a close-up of the same installation process, depicting the hoisting of a window element against the background of the gridded intermediary structure which would fasten the windows to the back-up structure, initiated the article. A more general overview on curtain wall definitions and techniques introduced spreads by other authors describing how the primary curtain wall materials aluminum, synthetics and steel were to be used.

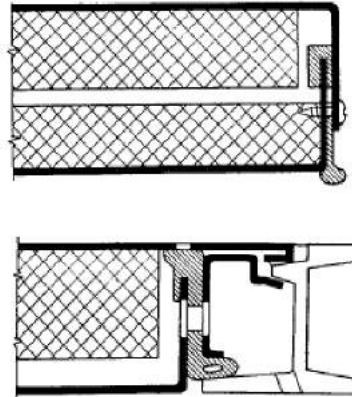
Unlike earlier periodical coverage of curtain wall construction, primarily individual projects and bespoke examples, this *Bauwelt* feature focused on best practices for curtain wall product specification, including the advice to appeal to fabricators, who “have the best knowledge in this area. In general, the installation of curtain walls is realized by the fabricators or their direct contractors. Incorrect treatment during transportation or installation is thus avoided.”<sup>449</sup> The article also advocated synthetic gaskets and caulks “now available on the market,”<sup>450</sup> an indication of the fact that the technology transfer that had facilitated curtain wall system development in the US was now integral to German construction practice.

Schneider-Esleben’s 1955 Mannesmann façade detail drawings might well have served as the model for the diagrammatic details referenced in *Bauwelt*: metal sheeting-encased insulation held in place by extruded gaskets that provided panel-to-panel connection and water proofing. Just as the *Bauwelt* article specified, the Mannesmann façade was affixed “not directly to the steel or concrete bearing structure. It is much more common to use a special structure that is

connected ... to the cantilevered floor slab.”<sup>451</sup> In 1955, as its details were being developed, the Mannesmann building was cutting edge for both its architects and their façade contractor. By the time the building was completed, its detailing served as a template for general best practice.



Unten: Schnitt durch eine Mauerplatte aus Stahlblech. Das Außenblech ist durch eine zusätzliche Platte versteift, während am Innenblech die Isolierung befestigt wurde  
 Ganz unten: Schnitt durch eine Mauerplatte aus emailliertem Stahlblech. Die Innenwand des äußeren Blechs wird mit Außenluft be- und entlüftet



Left: Detail of the Mannesmann Tower façade, dated 1955. *TUM Sig. schnee-45-132* ; Right: Abstract representation of an aluminum curtain wall element, *Bauwelt* April 24, 1958, p. 367

### From Elements to Systems

The speed with which Gartner developed its façade building capacity between the 1955 *Kaufhof* and 1957 *Mannesmann* buildings was not unique. The immense transformations within the West German façade industry in terms of both aesthetic and marketing strategy are reflected in print advertisements in architectural magazines from those years. Gartner was by no means the only company to shift from the production of single elements to the delivery of full façade systems; it was also not the only company to readjust its aesthetics over the course of the 50s. The early postwar period witnessed much more ambivalence about architectural appearance within the building industry than among architects who may have been much more conscious of how styles would be interpreted. Even as late as 1952, Gartner aligned itself as willingly with the heavy monumentality of the 1930s as with the Modern glazed facades of the 50s.

Two images used the firm’s 1952 promotional calendar depict that stylistic ambivalence, perhaps in part because the value placed on technical performance by industry influenced the company to gloss over the issue of architectural form. Both images argued persuasively for Gartner’s high



level of technical capacity, whether in designing and machining the custom hinge hardware that supported Paul Schmitthenner's mammoth solid wood garage doors, or in fabricating and installing a greenhouse system for the 1950 German Federal Garden Show (Bundesgartenschau) in Düsseldorf which, as the firm reported in a special newspaper briefing, was so well-liked that visitors spoke about it as a 'Gartner-Schau' ('Gartner Show') rather than a 'Gartenschau' ('Garden Show').<sup>452</sup> Whatever Gartner's intentions, however, the audience for building product manufacturers consisted of architects for whom a Modernist language symbolized the distance from a dubious stylistic past, in which many of those same architects may have happily participated. Industry was quick to respond to this audience's preferences by switching out the images it used to represent itself over the course of a few years.



Josef Gartner, 1952 promotional calendar, June and May. *Collection of Gartner GmbH, Gundelfingen*

*Bauen und Wohnen*, a magazine particularly committed to communicating new construction techniques and architectural details, included numerous quarter, half and full page advertisements by a spectrum of manufacturers whose products ranged from raw building materials such as brick or glass to water heaters, furniture or home textiles. Between those two spectrum represented by building materials on the one hand and consumer goods on the other were the manufacturers of 'semiproducts' such as windows, doors, stairs, etc., which arrived at

the job site as elements but relied on more than one trade to be built into place. As late as 1954, the ads by these manufacturers still reflected a more narrow and traditional definition of their market share. By 1956, however, their advertisements shifted towards purveying complete building systems rather than only components; by 1957, these kinds of systems had become proprietary.



Advertisement from *Bauen und Wohnen*, January, 1954

The January 1954 issue of *Bauen und Wohnen* included an advertisement by Jucho, the same window manufacturer who had delivered the steel window frames for Sep Ruf's *Akademie der Künste* in Nuremberg in 1953-1954 (see Chapter 3). Like Gartner, Jucho had begun as a steel bridge building company in the late 19<sup>th</sup> century<sup>453</sup> and in the 1930s and early 40s, had been a major manufacturer of steel and steel-copper windows for commercial, industrial and residential buildings.<sup>454</sup> The 1954 advertisement, which also ran in *Der Architekt BDA*<sup>455</sup> was dominated by an image of the Trinkaus Bank building in Düsseldorf, completed in 1951 after a design by Helmut Hentrich and Hans Heuer. A project never published editorially in *Bauen und Wohnen*, it had elicited a positive response from the architects' former mentor Albert Speer, who saw it first in 1955 in a book he had been permitted to borrow from the Berlin *Gedenkbibliothek*: "The Bankhaus Trinkaus, designed by Hentrich, who once belonged among my architects; with the rectangular double columns, infilled with glass planes, the building recalls the OKW [Wehrmacht]

façade planned for Berlin.”<sup>456</sup> The association with Speer was, however, not foremost in Jucho’s image selection. Understanding the reasons for the selection offers insight into the transition from the technically challenging and architecturally limiting *Rasterfassade* to the curtain wall façade, which was both easier to produce and install, and more amenable to aesthetic manipulation.

The building was already three years old by the time Jucho’s advertisement appeared, but it was without doubt a model of window manufacturing precision. The *Trinkaus* Bank is a *Rasterbau* of sorts<sup>457</sup> with a heavy trabeated, limestone façade grid, infilled with black and bronze glazed elements. The bronze frames on the window units, set three abreast between the solid limestone exterior pillars, subdivide each window into three parts: a high transom, a vertical transparent panel and a lower black enameled panel into which a brass stud is set. The windows’ large size, bimetallic composition and precision juncture to the limestone-clad columns all required enormous skill, a selling point for Jucho; but the façade’s effect owes more, in the best case, to reduced Neo-Classicism than to the building’s contemporary architectural context. In the worst case, it is easy to understand why Speer would have felt comforted by the work of his former acolyte. Although the facade evidenced skill and ingenuity in accessing and working the materials used, the choice of image indicates a tone-deafness to the prevailing orientation towards a Modernist idiom among the magazine’s readership, and among West German architects in general.



Advertisement from *Bauen und Wohnen*, April, 1954

An advertisement placed in the April 1954, issue of *Bauen und Wohnen* by the consortium *Vereinigte Deutsche Metallwerke AG* (United German Metalworks) deferred the problem of architectural style by choosing a line drawing to suggest the product being promoted. The drawing depicted a nine-story building with a shallow sloped roof, made less prominent by cropping at the top of the page. Shown as a network of lines with no indication of depth, the façade could be read in turn as a traditional style elevation with three over three windows and open parapets; a gridded infill façade; or a curtain wall. This ambiguity does not simply indicate clever marketing. Instead, the suggestive drawing might have been the best way to sell the advertiser's 'product': not a specific building system but instead, the potentials of know-how in combination with a specific set of materials. The many applications of architectural metalwork offered – from anodized sheet metal surfaces to rolled or extruded profiles for facades and furniture to roofing products – were apparently limited only by the architect's imagination. As the text at the bottom of the page promised, these building elements "in contemporary construction-based design applications (*Formgebung*) make it possible to use the beautiful, useful material

aluminum not only decoratively but also for construction purposes....Request our technical advice with no obligation.”<sup>458</sup> This sentence suggests a very different relationship between architect and building industry than would evolve as project-specific construction elements and systems evolved into off-the-shelf products. As late as 1954, the West German façade building industry was still eager to offer architects the opportunity to collaborate on creating the façade, roofing and cladding systems of their choice. This circumstance makes more believable the claim that façade systems as complex and varied as those used in SOM’s four American consulates could indeed have been fabricated in Germany, not imported either as parts or complete systems from the States. It implies that each building was a bespoke construction, unique and craft dependent rather than a collation of mass-produced industrial parts.



Advertisement from *Bauen und Wohnen*, April, 1956

By 1956, Jucho had clearly understood prevalent stylistic tendencies. The image that dominates this full-page advertisement featured a building identified only as an office building in Baden-Oos whose continuous gridded envelope was described simply as a “metal façade.”<sup>459</sup> It is difficult, however, to match the products implied by the image to the text at the bottom of the advertisement, which listed Jucho’s products as steel windows for residential and industrial applications, thermopane steel windows, aluminum windows and acoustic interior aluminum

partition walls – but not façade systems. The photograph's primary feature was the building's continuous exterior skin, but this was not *per se* what was being sold. Perhaps, on closer inspection, the reader would have realized that the many windows left ajar in the photographed building were meant to draw attention to Jucho products? It is more likely that Jucho's use of this image was intended to associate the company with state-of-the-art curtain wall façade construction and to imply that Jucho was the right partner for architects interested in achieving a similar effect. Rather than choosing a photograph to depict its skill and high quality product, as the company had done in 1954 with little or no regard to the image's connotations, Jucho's 1956 advertisement operated by promising a product to which the manufacturer might have aspired but could not entirely, based upon the products listed, deliver. The strategy implies that the company had understood what architects desired, and in the coming years, it would ramp up its ability to produce the object of that desire.



Advertisement from *Bauen und Wohnen*, March, 1956

In the two years between April 1954 and March 1956, much had changed in the way the West German metal industry represented its products to architects as well. Part of the same semi-nationalized industrial system as Union Metal Works, which had sponsored the 1954 print advertisement already described, the *Vereinigte Leichtmetall-Werke* (Union Lightweight Metals Works) produced extruded profiles for the larger aluminum producer *Vereinigte Aluminium Werke*.<sup>460</sup> In its 1956 advertisement, a tonal rendering shows a building which might well have been inspired by SOM's Stuttgart consulate from 1954-1955: its upper stories are enclosed by a

curtain wall system which changes bay width and articulation below the exposed floor plate of the lower story. The illustration is immediately associated with the largest text on the page, printed in bold face and punctuated with an exclamation point: “In just 8 weeks!” Speed, the text argues, was the hallmark of contemporary technology; and only the special aluminum profiles referred to here could optimize construction speed. A smaller caption next to the illustration used the words “modern and appealing” to describe the appearance of an aluminum curtain wall façade “as if the whole beautifully designed building were constructed from a number of shining aluminum bars.”<sup>461</sup>

In four square inserts at the bottom of the page are a series of small details, the most complex depicting extruded aluminum façade profiles used to keep an operable window and a thin spandrel panel aligned. The others show a curtain wall anchorage, a section through fixed glazing and an awning window in use. The capacity to design and produce such highly differentiated profile elements, each engineered to optimize performance criteria associate with production, installation and in-place stability, bespeaks a sophisticated and well-developed façade industry, quite different from the simple list of potential applications – none of them curtain wall – offered in the 1954 ad. Nonetheless, like 1954 advertisement for Union Metals Works, this ad’s text ends by offering technical consultation “gladly made available for planning and development.” Industry-architect collaboration remained central, it seems, to standard practice; the details depicted were not intended as systems for specification but rather, as demonstrations of possibilities.



Advertisement, *Bauen und Wohnen* January 1957

By 1957, however, this collaborative spirit had definitively begun to give way to proprietary systems designed, patented, produced, sold and under warranty by a manufacturer. A photo of Skidmore Owings and Merrill's Manufacturers Hanover Trust building, completed in 1954 but not published in Germany until January 1956, dominates a quarter page advertisement from the January 1957 issue of *Bauen und Wohnen*. "New York's most modern building" – although by then three years old – was used to sell "the most modern lighting in the world," for which the advertiser was apparently the exclusive German agent. Offered as a complete package that included a "very practical" suspension system all under patent protection, the MARLUX ceiling was detailed in the catalogue which readers were urged to order. There were no offers in this ad, however, of technical assistance for planning and development; the know-how was inherently part of the proprietary system for sale.

Simultaneous with these changes in building product manufacturers' tactics, interest in SOM's German buildings grew. The West German architectural press paid increasing attention to SOM over the course of the mid 50s, culminating in a full issue of *Bauen und Wohnen* dedicated to SOM in April, 1957; with it, the perception of the firm's architectural and managerial style as aspirational was affirmed. The practice of "absorbing and reworking" foreseen by Herbert Hoffmann<sup>462</sup> in the case of this new Modernist idiom reimported from the United States seemed increasingly appropriate. Architects who wished to work in this new idiom could facilitate their efforts simply by using the same products and systems that their paragons had. The appeal of



project-specific systems with replicable economies of scale was obvious to building product manufacturers; it also fundamentally transformed the way architects detailed. For the more demanding designer, the proliferation of construction systems meant a broader palette; for the harried practitioner, it meant less liability and faster turn-around. The switches were set for a very different German Modern architecture than that which had been advocated in the earnest, soul-searching moments immediately after the war, and epitomized by the 1951 *Darmstädter Gespräche*.

### **Out of Area: SOM in Germany 1952-55**

The opening of SOM's office in West Germany in 1951 predated even its earliest mention by West German architecture press in June of 1952.<sup>463</sup> That 1952 article appeared in a themed issue of *Bauen und Wohnen* on "large structures;"<sup>464</sup> it was the only article in that issue to profile an architectural office, rather than its work. The author, Ernst Zietzschmann, who would become the president of the North Rhine-Westphalia chapter of the German *Werkbund* from 1959-1965 and later, a professor at Hanover's *Werkkunstschule*,<sup>465</sup> borrowed much from the catalogue documenting the 1950 Museum of Modern Art New York exhibition on SOM. The projects he included, the photographs used and his descriptive texts all match the MoMA publication. Zietzschmann remarked briefly on the firm's history, then pursued the familiar narrative: that SOM could prevail as a new model of architectural practice only by virtue of its partners' consensus around Modern architecture as an idiom and American business organization as a delivery method. "In that sense," he wrote, "a fact that we find quite remarkable is tested: the possibility of frictionless collaboration among very many individuals...The individual designers who work within such an organization, have no concerns about letting go of their personalities."<sup>466</sup> None of SOM's large projects, he continued, could have been completed by a single practitioner in a traditional office organization. Zietzschmann's recapitulation of this narrative likely had little resonance at the time of its publication: the challenge of the day was not necessarily large-scale building per se but rather, the enormous demand for many buildings of varying sizes and programs. The press was quiet around SOM for the next couple of years, as the firm went about delivering its projects to the HICOG.

None of SOM's West German buildings could be considered "large structures." During its five years of operation in West Germany, in the context of the Consular and America House building

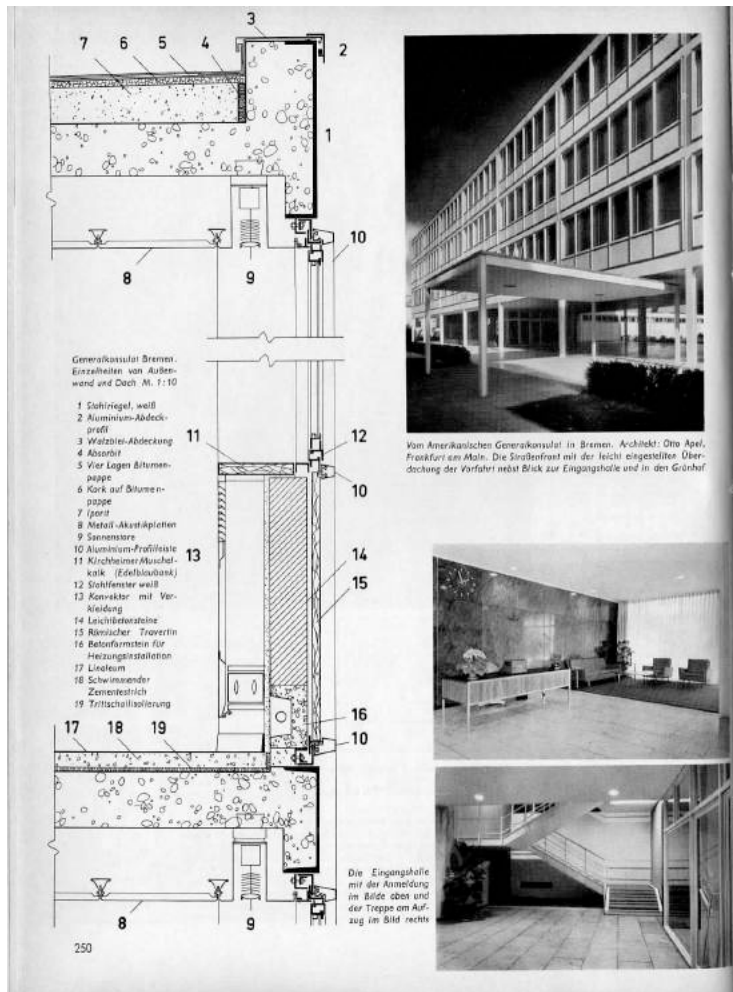
program administered by the US Department of State and the US High Command in Germany, SOM completed four consulates, each well under 5,000 square meters in area: Bremen (1952-1953), Düsseldorf (1953), Frankfurt (1954-1955) and Stuttgart (1954-1955). A fifth consulate project had been planned in Munich, but after conflict with the city's building administration, which judged SOM "arrogant,"<sup>467</sup> the HICOG retracted the commission. The difficulties in Munich marked the end of SOM's post-war work in Germany. In the summer of 1954, SOM moved its German staff to a smaller space in Frankfurt am Main and closed the office altogether after the completion of the Stuttgart consulate in spring, 1955<sup>468</sup>. By then, SOM's legacy in Germany had been passed along directly to those who had worked in its offices there, and indirectly through publications such as those already discussed.

The June, 1952 article in *Bauen und Wohnen* affirms that SOM's portrayal in the West German architectural press corresponded to the corporate image SOM cultivated internationally. Although the projects were small compared to such contemporary commissions as Lever House (1950-1952) or Connecticut General Life (1954-1957), SOM nonetheless treated the German projects as prestigious: run through the New York office, the projects were led by its most storied designer team. Bunshaft and De Blois were responsible for such seminal SOM buildings as Lever House (1952), Pepsicola World Headquarters (1960) and the Union Carbide Corporation Headquarters (1960); they have come to be treated in contemporary architectural literature as auteurs, even within SOM's purportedly anonymous system. Although dwarfed by SOM's US operations, the Bad Goedesberg office reflected the SOM corporate philosophy and, as the 1952 *Bauen und Wohnen* article added bluntly, its status as "the largest commercial business in the field of architecture."<sup>469</sup>

In their architectural expression and materialization, the German projects conform to the idiom typical of SOM's projects at that time: facades in controlled relief, using offset planes of structure, infill wall or spandrel, window frame, glazing and, in some cases, an additional exterior frame which emphatically re-delineates the underlying grid. The materials used – aluminum windows, grey spandrel glass and shell limestone in Frankfurt and Stuttgart, white painted steel windows, Roman travertine and exterior aluminum frames in Bremen – and the sleek glazing details were luxurious by German standards, representative of American wealth and gravitas. The specificity of the component pieces, and the way in which the façade systems function are quite unlike the contemporary grid facades, or even the curtain wall facades that would become popular in

Germany only a few years later. The fact that all elements were sourced in Germany reveals much more about the German industry's capacity for bespoke manufacture than it does about the construction typical in West Germany during the first half of the 1950s: by comparison to the state of building technology evidenced in industry advertisements, the consulates' façade construction required highly specific, systematically conceived components. While such systems may have been emergent in the US building industry in the early 1950s, they were worlds away from the pieced steel angles which Ruf had used to assemble window frames and façade glazing for his Nuremberg Art Academy, or from the rather unsystematic products offered in magazine ads.

### The American Consulate in Bremen, 1952.



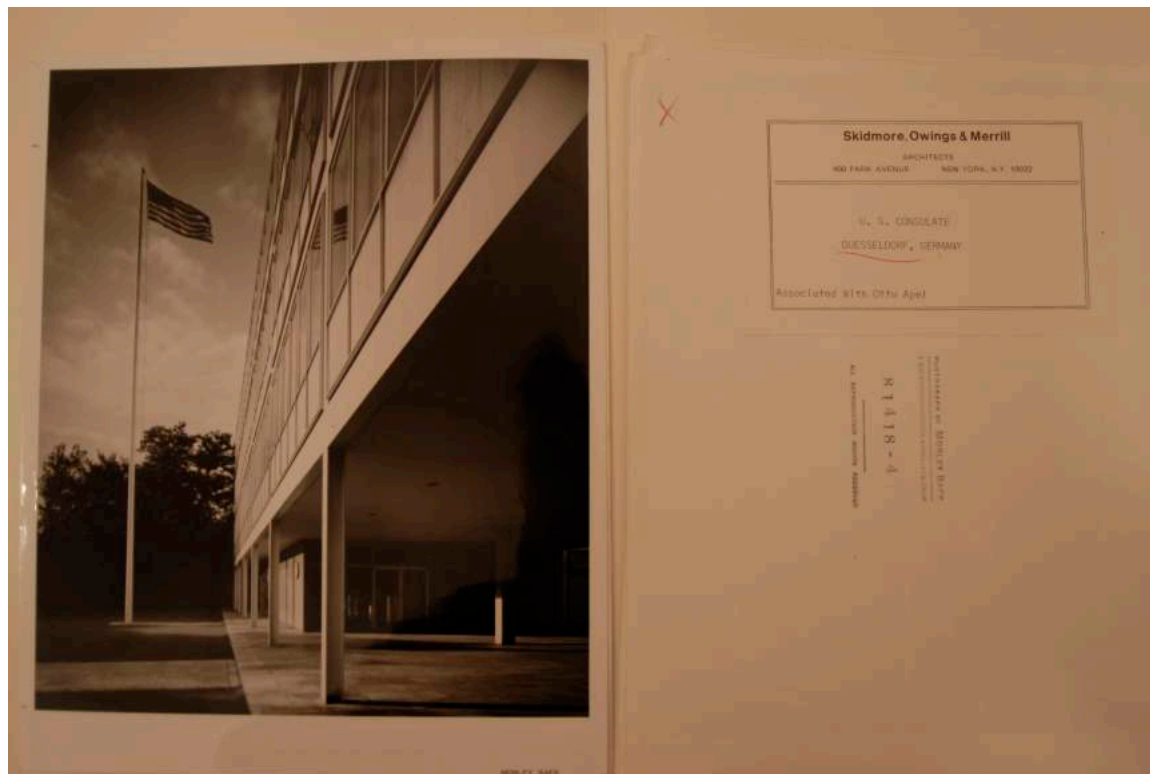
Wall section and photos of the Bremen consulate. *Bauwelt* v. 47, no. 11, March 12, 1956, p. 250

The façade details for the Bremen consulate, drafted in Bad Goedesberg in July of 1952 just as Ruf's office was detailing the *Akademie der Künste* in Nuremberg, are predicated on radically different assumptions about materials and construction technologies than was Ruf's building.<sup>470</sup> SOM's details deploy highly specific storefront glazing systems and components. The bays of six windows above six identically dimensioned travertine spandrel panels are set 40 mm proud of the exterior frame, comprising white-painted I-section columns filled in place with aerated concrete. The storefront glazing system is detailed as stick construction, pieced together on site to absorb only minimal tolerances in the structural concrete frame. In the horizontal, slotted tabs welded to the steel façade fascia are bolted through to hold to an L-angled on the interior and an unequal leg C-channel on the exterior to which a threaded nut has been welded. A highly specific steel angle shape for the fixed frame was bolted into place on the C channel and the operable frame, another function-specific shape with a smaller u-shaped thin-gage steel glass stop, then installed. In the vertical, a welded L-section was used to anchor the frames to the concrete structure, and, on its interior side, to receive the leading edge of an insulated panel, which abuts the acoustic dropped ceiling. A thinner gauge steel V-shaped exterior trim, affixed with a setscrew, was then clipped over the bolts, which connect the fixed frame to the interior back-up structure. The Bremen documents thus indicate the capacity to produce sophisticated, function-specific façade elements in Germany. The drawings also specify large quantities of sheet aluminum, among one of the more rare commodities on the post-war construction market. Unlike Ruf's Nuremberg building, the façade drawn for the Bremen consulate is conceived as a system. Each piece serves a legible function: back-up structure, anchorage, fixed frame, operable frame, weather protection and drip. As a system, the elements all could, however, easily be reassembled slightly differently to produce a similar, but different façade. There is an implicit economy of scales in the Bremen façade.

The advantages of a systematic, products-based approach were definitely not lost on fabricators, to whom its economies of scale would have been clear. The path to success in the building product industry seems to have pointed towards product-based rather than trade-based specialization: the trend towards systemized products is evident in the way manufacturers appealed to architects. As evidenced in print ads, Jucho, which had furnished unglazed steel window frames to Ruf's *Akademie der Künste* in 1951, still offered a full series of steel and aluminum windows by early 1954 but by 1956, had its sights set on full façade systems.<sup>471</sup> Although this business tendency existed independent of SOM's presence in the German building

market, SOM's buildings offered a direct precedent for architects and fabricators to develop whole storefront façades. Furthermore, the more didactic expression of each element within SOM's facade system – in the Bremen consulate, for example, the offset and reveals between embedded structural steel, mounting tab, structural back-up, fixed frame and exterior trim – was markedly different from the emerging West German curtain wall idiom, which favored the lowest possible relief in the relationship between frame and infill panel.

### The American Consulate in Düsseldorf, 1953-1954



American Consulate in Düsseldorf. *D&A Bunshaft, Avery Library, Columbia University*

The record set of construction drawings for the Düsseldorf consulate indicates that its design and planning overlapped with the completion of work in Bremen. Jack Gensemer, on behalf of the HICOG, approved all but the final plot plan on October 19, 1953, at which point everything from the structural system to the species of street trees and landscape plants had been specified. The final drawings were approved in December 1953.<sup>472</sup> The drawing set is the shortest of all the consulate projects', comprising only nine drawings, two of which are window details. Another sheet includes only drawings of suspended ceiling details with integrated

fluorescent lighting, a clear indication that the kinds of dropped ceiling systems already patented in the US as early as 1950<sup>473</sup> were still not available in Germany. The microfilm files of the drawings are extremely poor quality, indicating perhaps that the originals were drawn quickly in pencil on coarser paper than had been used for the Bremen project. Many annotations are made in handwriting rather than using a lettering template, as was used in all three other drawing sets. All of these factors indicate that the drawing set was put together as quickly as possible.

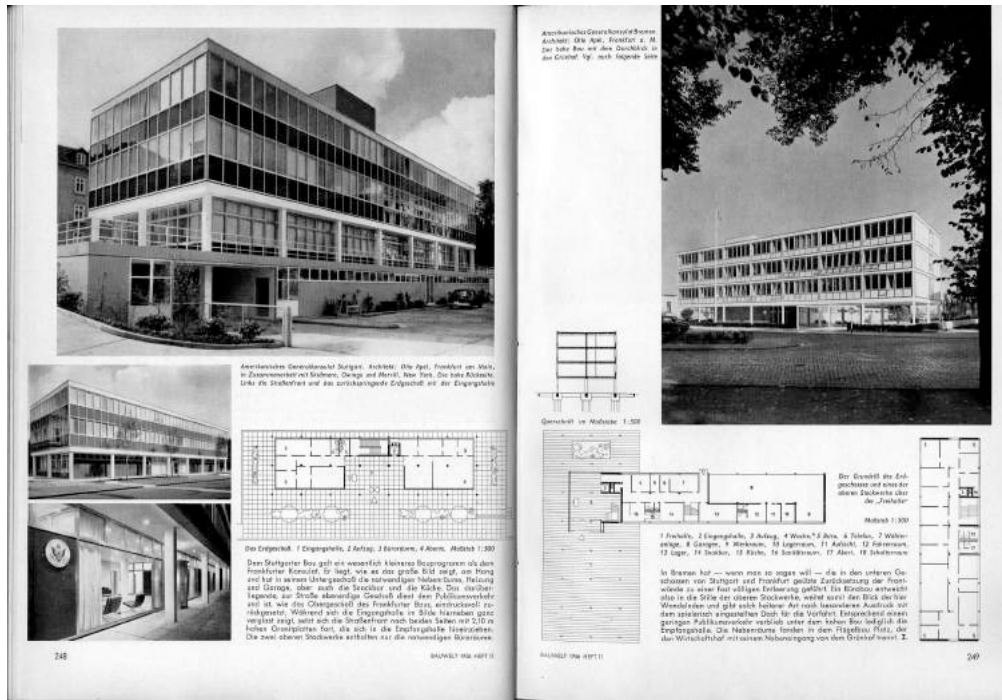
The project's apparent urgency may also explain its many constructional similarities with the Bremen consulate: both buildings are supported by steel I-sections used as columns and beams. At the façade, steel U-channels were used as beams to create an exterior horizontal steel surface flush with the flanges of the I-beam columns. All interior steel structure was subsequently embedded in concrete for fireproofing; the finished buildings' only exposed steel is in the facades and in the exterior columns. In the columns to which exterior gates at ground level were hinged, the assembly process was even more complex: plate steel was used as a cladding around the concrete-embedded column. The steel cladding was welded to corner angles set into the concrete column encasing. In other words, although both consulates could be considered steel buildings, the steel frame only provided a scaffold for concrete structure in the early construction process and, upon the building's completion, a finish exterior surface. There are, however, significance differences in the two building's structural characteristics. Whereas the floors in Bremen consulate were cast as flat plates, the Stuttgart consulate had a waffle slab configuration, which allowed for longer spans with less material weight. Although not significant spatially in the Düsseldorf consulate, this adjustment would prove important for the two later consulates, in which structure contributed more importantly to the spatial conception.

The Düsseldorf building's façade is also quite similar to that in Bremen. It protrudes slightly from the plane established by the white painted exposed steel frame. Here, as in Bremen, perhaps one of the most impressive moments is the transition from the exposed I-section that supports the free-spanning portion of the ground floor to the façade above, in which the steel flange forms a continuous line from ground to cornice. There are subtle differences in the detailing, however, perhaps based upon on-site experience or on the façade contractors' advice. Although exactly the same steel window angles were used in both buildings – single pane glazing, no indication of weather stripping or gaskets – the depth of the V-shaped steel counter-flashing is slightly less than in Bremen.

Any superficial similarities between the Bremen and Düsseldorf buildings and the typical *Rasterfassade* are quickly contradicted by the construction details. Unlike a *Rasterfassade*, the façade grid here does not comprise 'rough' vertical and horizontal structural elements dressed in a cladding material that can withstand exterior elements and, more importantly, pass as a finish surface. Because the flanges of the steel I-beam columns are exposed on the exterior, perfectly in plane with the U-channels into which the floor slabs sit, the structural grid that otherwise would be subject to the laxer tolerances of 'rough' construction is itself surface finish, subject to the highest demands for construction accuracy although it was the first part of the building superstructure to rise. In order of construction, the consulate facades invert the relationship between dry and wet building typical of its contemporaries in West Germany: rather than saving dry construction for infill and finish materials, both buildings were first built using welded and bolted steel, a 'dry' method, then stabilized with cast concrete. And unlike the usual *Rasterfassade*, the exterior façade elements are set in front of, rather than in plane with or inset into, the façade grid. This tactic allowed the prefabrication of the six window frames abreast chosen for both Bremen and Düsseldorf consulates. Adjustments could be made using slotted connections to the welded angles, which attached the window elements to the wall. The finesse, which made Jucho proud enough to represent its product with the stylistically dubious Trinkaus Bank, was detailed out of being by SOM's façade construction method.

### **The American Consulates in Stuttgart and Frankfurt, 1954-1955**

Although the approval dates stamped on the drawings above Gensemer's signature are separated by only months, the differences between the Düsseldorf consulate and the two consulates in Stuttgart and Frankfurt are enormous. Although the two earlier consulates featured techniques and ideas already markedly different from their West German context, the elevations and plans still maintained recognizable characteristics. The last two consulates introduced two new architectural strategies that would leave behind any semblance of the *Rasterfassade* and its interior spatial configurations: both involved separating the building envelope much more thoroughly from its back structure.



Stuttgart and Bremen consulates, *Bauwelt* v. 47, no. 11, March 12, 1956, p. 248-9

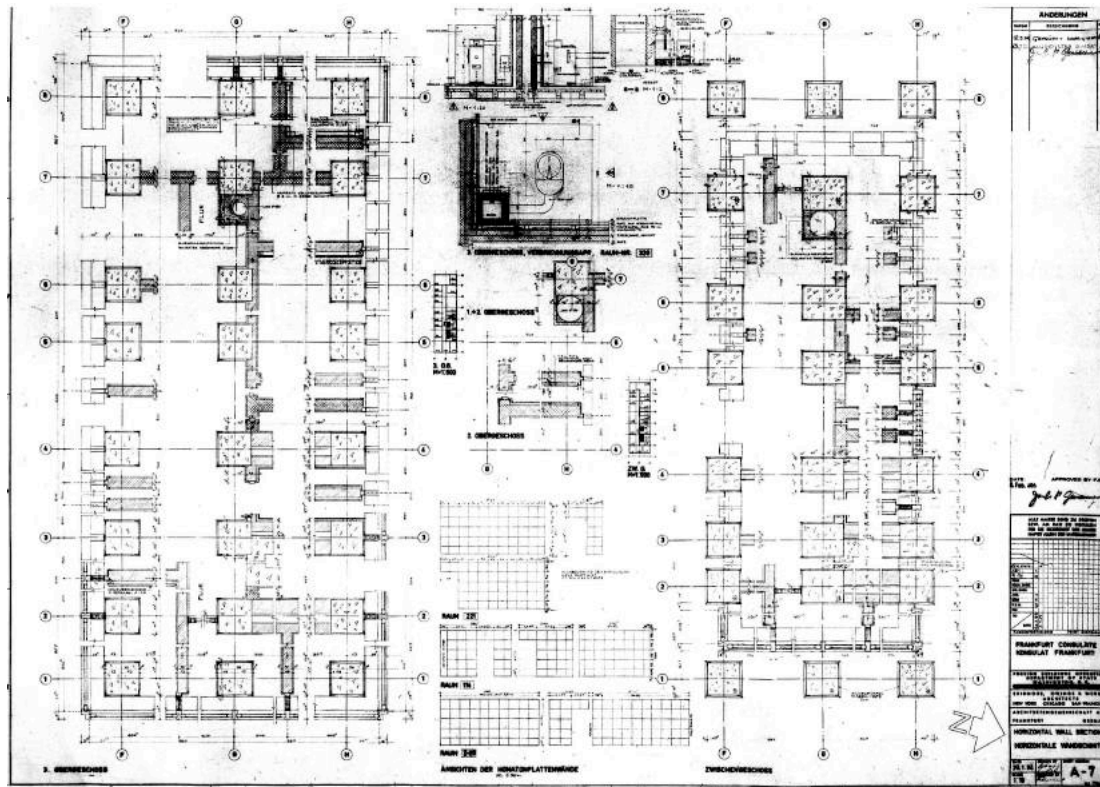
The first two consulates were carried on three rows of parallel columns, stabilized against wracking by stairs, bathroom cores and floor slab. A double loaded corridor ran to one side of the interior column row, defining deeper rooms on one side of the corridor than on the other. The columns in the corridor were offset from the longitudinal partition wall, and detailed – as the several sheets of drawings dedicated to difficult junctures of wall, columns and corners attest – with great care to avoid awkward intersections. Both exterior rows of columns were in plane with the building envelope, facilitating the expression to the building’s exterior of its steel framing members. In the Stuttgart and Frankfurt consulates, the columns stand free and their grid is independent from, although calibrated to, the plane of the building envelope. In both buildings, this strategy permits much more complex circulation in which larger spaces and smaller spaces are contiguous, and corridors are treated not as the building’s planning backbone but instead, as convenient connectors to be located in plan as was opportune but omitted otherwise.

The offset of column and envelope also impacted the façade strategy. As a rule, a curtain wall is most effective when offset from the bearing structure: the façade’s weight positively stresses the back span of beams from which the last portion of the floor slab cantilevers to improve structural performance. The floor area between column and exterior plane is then used for convection



heating and cooling systems, boxed out behind the spandrel elements; very literally, the building envelope thus becomes an active participant in the interior climate. SOM's New York office had only recently used this strategy in its headquarters for Manufacturers Hannover Trust (1954). Unlike Lever House where, except along the front that faces Park Avenue to the east, the columns lie in plane with the building's continuous glass and aluminum façade, the bank's columns are well offset from the façade and the building's perimeter is lined with planters. In the absence of any preserved or archived correspondence between the New York and Bad Goedesberg offices, there is no way to determine whether the New York project motivated the design change in the consulate. As a definitive counterpoint to the *Rasterfassade*, however, the separation between column and enclosure in the two latter consulates must have spoken volumes to a German architectural audience.

The two latter consulates were also, as noted in the April 15, 1954 report in *SOM News*, the "first concrete frame office buildings to be built under the SOM program for the State Department."<sup>474</sup> Square columns, finished in plaster with protective metal profiles on the corners to ensure sharp, 90 degree angles, are set 24.5 centimeters from the façade.<sup>475</sup> Drawing sets from both the Stuttgart and Frankfurt consulates include sheets dedicated only to the juncture of interior partition walls, columns and mullions at the buildings' perimeter, demonstrating the complexity of an elegant solution to expressing freestanding columns throughout the buildings.



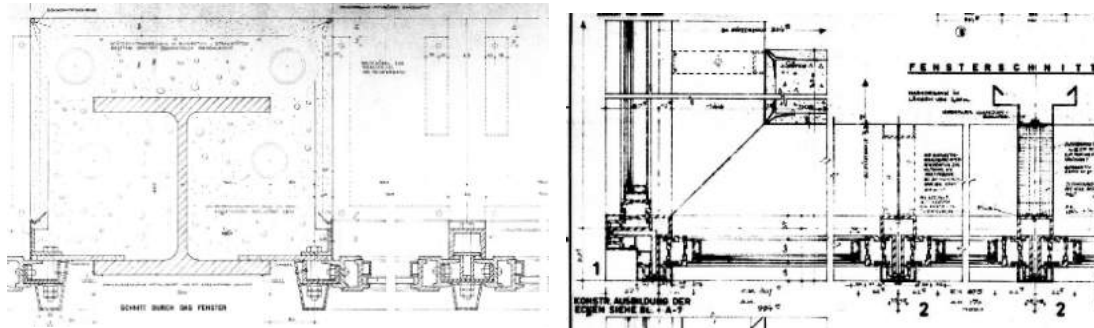
Drawing A007 from the Frankfurt Consulate set showing a series of details for the juncture of walls and columns at perimeter and building interior. 1954. *Collection of SOM, New York*

Despite SOM's own claim that the buildings were reinforced concrete frame structures, the working drawings reveal that both consulates were built in a hybrid of cast-in-place columns, which in some cases used lightweight precast *Ytong* concrete elements as lost formwork,<sup>476</sup> steel I-beams and precast lightweight concrete floor elements. The precast elements, manufactured by West German subsidiaries of a Swedish company and sold as *Ytong*, were a product not available in the US but a staple of post-war West German reconstruction. Even GFR president Ludwig Erhard – for whom Sep Ruf would later build a villa just down the street from his own home in Gmund, Bavaria – had spoken in the *Bundestag* on behalf of the company in March 1952, praising the product's usefulness for quick, energy efficient housing construction.<sup>477</sup> The material had been used for non-bearing walls in SOM's Bremen consular housing<sup>478</sup> as well, but played only a minor role in the Bremen and Düsseldorf consulates. Its more extensive use here may well reflect the influence of German employees and contractors in SOM's office, whose freedom to detail the rough construction may have increased following the successes of, and lessons learned from, the first two buildings.

On the other hand, the hybrid concrete column/steel beams itself was extremely unusual for such relatively short span structures. Advantages in construction speed gained by using largely dry methods – steel and *Ytong* – for the horizontal bearing structure would have been undermined by the interplay of trades on site, as steel workers and concrete workers tag teamed to complete the rough construction. Despite the structural redundancies of the concrete-filled steel skeletons in the first two consulates, the two trades would have worked sequentially rather than in tandem, preserving at least some of the construction efficiencies. It is therefore not unreasonable to believe that this mash-up of construction methods reflects a shift in the way responsibility was divided between American and German architects in the SOM office. The column placement, wall-to-column junctures and curtain wall detailing represented the cutting edge of SOM's US work; the expanded use of *Ytong* and the shift to greater use of concrete rather than steel evidence the integration of typical West German construction know-how.

The two buildings' façades are nearly identical, as borne out by the fact that exactly the same sheet of curtain wall details is included in both sets, and was approved by Gensemer for both buildings on exactly the same day, July 13 1954.<sup>479</sup> In both cases, the two upper storeys are continuously clad in an operable steel window system, which integrates an opaque spandrel panel to conceal the distance from floor slab to sill. The profiles are in much lower relief than in the facades of the two earlier consulates, with the distance between the leading edge of the mullion and the glass or spandrel panel less than 25 mm, as compared to a distance of 30 mm in the Bremen and Düsseldorf buildings. The use of a concrete bearing structure required a different approach to façade anchorage as well. Instead of welded connections to structural steel made prior to concrete work, as had been done for Bremen and Düsseldorf, slots were cut into the concrete floor at the end of the construction process. Steel fins were mortared into place in the concrete and the fixed frames of the window or spandrel elements bolted into place. A rectangular steel cap covered the assembly; unlike the earlier embassies, the cap was not tapered to appear more slender, and was bolted frontally rather than attached using a set screw to conceal the connection. Its visible dimension was increased from 25 mm to 55 mm, or 70 mm at the base of the curtain wall. The effect was a much more robust frame. Combined with the much flatter relief of the façade cladding, the curtain wall in the Frankfurt and Stuttgart consulates represented a very different aesthetic than the two earlier consulates had. If the construction practices which built these two final SOM projects were decidedly closer to West German standard practice, then the façade aesthetic they represented was distinctly different

from the more highly profiled, filigree appearance which Ruf or Schwippert had pursued in their buildings only a few years earlier.



left: detail, Bremen Consulate, SOM, horizontal façade section sheet A.08; right: detail, Frankfurt Consulate, SOM, horizontal façade section sheet A.08. *Collection of SOM, New York*

### The American Consulate in Munich

In the case of the Munich consulate, however, the transmission of SOM's influence occurred along different lines, neither through direct collaboration with the American office nor indirectly, through publications. A note in the April 15, 1954 *SOM News* told employees that “two additional consulates (Munich and Stuttgart) have reached the stage of working drawings”<sup>480</sup> but on the ground, the facts were different. In February of 1954, Munich's building commission had put an end to SOM's hopes to realize an American consulate there on the edge of the English Garden.<sup>481</sup> While the building was under design in Bad Goedesberg, contact with local officials had been neglected, especially since the choice of site was so contentious.<sup>482</sup> Miffed, the Munich building department refused to approve SOM's proposal. Ruf, who at that time was involved in several projects for the HICOG in Bonn<sup>483</sup> was able to persuade the High Commission in Germany that he could salvage the project. On the basis of his good relations with both Munich bureaucracy and American administration, he received the commission directly in October of 1954. In April of 1955, the HICOG's agent sent him a set of the SOM drawings for the Munich project and the construction set for the Frankfurt consulate.<sup>484</sup> Although it is not unlikely that Ruf, who had collaborated with Otto Apel, would have visited the office in Bad Goedesberg, Ruf's involvement with the Munich consulate marks his first serious documented encounter with American construction: there is no record to indicate that he subscribed to any American architecture periodicals and he was not, until much later, in correspondence with German émigré architects in the United States.<sup>485</sup>

Ruf had sent an initial project with at least three variations to Jack Gensemer, who had also been his contact at HICOG, in March of 1954, almost immediately after SOM had been removed from the project. The building proposed by SOM had considered sites on Briennerstrasse, the formal boulevard laid out by Leo von Klenze, and on the edge of the large English Garden, a public park in the city center. Ruf developed schemes for both sites, but pursued the latter site, turning the building's massing to allow greater transparency from the park, a strategic move to allay the city building commission objections. The building was ultimately built at that location. By November, 1954, Ruf had engaged the services of a real estate lawyer to investigate the project's fate; the report back was favorable and in January, he received a lengthy letter from Gensemer, including sketches and amendments to the plans, which indicated HICOG design approval.<sup>486</sup>

As of April, 1955, after he had received the SOM drawing sets for both the Munich and Frankfurt consulate, then almost complete, directly from the HICOG's agent and visited the Bremen consulate at the HICOG's behest,<sup>487</sup> Ruf was privy to a body of knowledge which at the time was accessible only to those German architects who had worked for or collaborated with SOM. Ruf's highly developed sense for construction intricacies and his deep investment in the architectural expression of the detail would have been well-served by this knowledge. It put him at the forefront of the growing shift towards curtain wall detailing and a much more robust architectural idiom realized in a wide variety of materials – quite different from the idiom of the early 1950s. It also would have empowered him in dealing with fabricators and building product industry players by allowing him to leverage their eagerness to develop more highly specialized product systems after the American model by drawing upon his know-how. Extending well beyond an idiom adopted specifically for the HICOG buildings, required to match a style already established by SOM, Ruf's work from this point onward departed from the idiom he had championed in the Nuremberg Art Academy and its contemporaneous buildings. Given the team SOM had assembled for the consulates, Ruf could not have wished for a construction precedent to offer greater architectural ambition or savvy.

Ruf received FBO (Foreign Building Office) approval to proceed at the end of August, 1955, when Gensemer encouraged him to begin working drawings. The city of Munich approved Ruf's

project in early October, 1955, and construction commenced soon thereafter. By any standards, except perhaps those set by Schwippert's *Bundeshaus* construction, this was a breakneck pace.

The project's history indicates the strong hand that the FBO and HICOG had in the building's design; the very quick turn-around from approval to construction implies the need to streamline detailing and to rely on existing construction techniques and elements that had proved effective in the earlier consulates. Certainly the building's appearance is radically different from that of Ruf's other contemporaneous buildings. In contrast to the tapered, cantilevering roof planes and the transparent, filigree glazing typical of his work around 1954, the consulate is stolidly prismatic, its windows part of a aluminum-gridded plane set in very low relief against the stone-clad structural skeleton. It might well be considered a hybrid between the exposed skeleton facades of the Bremen and Düsseldorf consulates, and the continuous, multistory curtain wall construction deployed in Frankfurt and Stuttgart.

### **Picking and Choosing**

Upon assuming the project, Ruf seems, however, to have had some discretion about what aspects of the precedent buildings he would choose to carry forward. Presumably because of US Department of State security requirements, his office archives retains no construction documents from this project, and the job book contains only preliminary correspondence with suppliers of building products and contractors. Extensive preserved correspondence dealing with project administration from its early moments does affirm the freedom exercised in Ruf's design considerations, although these letters are not accompanied by sketches or images. Any drawings kept by the US occupying forces were lost after German reunification,<sup>488</sup> by which time all consulates except for the one in Munich were no longer owned or occupied by the US government. Only a few drawings survive from the Munich consulate's design phase survive, including a plan of the ground floor from which some information about the façade and structural ideas can be interpolated. Period photographs and the building's contemporary condition, which includes minimal alterations to the original design, are the only other sources of first-hand information on the building. From this evidence, it is clear that Ruf had grasped quickly the aspects of the SOM consulate style he wished to test in his own design idiom.

Ruf's architecture prior to his US consulate is far removed from the *Rasterfassade* genre. His commitment to facade transparency, articulated verbally in his statements at the *Darmstädter*

*Gesprach*,<sup>489</sup> motivated the use of continuous glazing with the most narrow possible sight lines and overhanging roof planes that kept the glazing in shadow to decrease its reflectivity and ensure its transparency. The Munich consulate plan continues the offset of column and envelope, a technique shared by Ruf's early 1950s idiom as well as in the two SOM consulates still under construction when he assumed the Munich commission. Its columns are 12 cm from the glass façade on the set back ground floor, and significantly more on the upper storeys. In the *Akademie der Künste*, Ruf had used the offset column to form a columnar edge to primary spaces that was distinct from the edge formed by the continuous steel-framed window walls, to which the rows of cylindrical, white-painted columns run parallel. In his consulate, however, the columns form not a linear element juxtaposed to walls but instead, a space-defining grid on the ground plane, just as they had in the SOM Frankfurt and Stuttgart projects.

At the ground plane, the round columns on which the main office tract sits, elevated one storey up to permit a clear view to a continuous band of greenery along the edge of the English Garden, are doubled up to form much heavier, 45 cm deep ellipse-shaped piers. They retain the same surface finish and geometry as they move from interior to exterior, distinguished from the building's smaller gridded square columns by their depth. The special geometric treatment of these piers is unique in Ruf's oeuvre of the period. Likewise, the use of columns as a grid rather than a line of structure has no direct precedent in his work prior to the consulate.<sup>490</sup> It does recur, however, in his planning for the roughly contemporaneous Theodor Heuss pavilion at the German National Museum in Nuremberg (1955-1958) and in projects developed thereafter.

On the ground floor, the two perpendicular glazed walls meet at negative corners that repeat the details SOM had developed for its two German curtain wall buildings, in which the two perpendicular facades met at a concave steel angle to create a shadow line between the two surfaces. The façade is thin on this lower floor, with an overall thickness of 8 cm. On the upper stories, Ruf developed a façade system that covers all three floors continuously, alternating between operable hopper windows and stone spandrel panels infilled with a local limestone typical in Munich, *Kirchheimer Blaubank*.<sup>491</sup> The building's cornice, lowest floor plate and the location of its structural columns are marked in the façade by solid elements clad in a lighter limestone from the Jura mountains. The effect combines the infill façade used in Düsseldorf and Bremen, albeit without those buildings' horizontal framing elements, with the continuous low-relief facades developed for the Frankfurt and Stuttgart consulates. Although the width of Ruf's

elements is slightly greater, creating a different proportion than SOM's designers preferred, the dimensions of the façade mullions and the window frame design most closely resemble SOM's two later consulates: flat cover channels without visible fasteners, doubling as fixed frames around the operable windows, which tilt into the building to open. Ruf's choice of material for the spandrel panels, on the other hand, follows the precedents set in Bremen and Düsseldorf. His – dubious, in retrospect – choice of a gold anodized finish on the metal indicates, however, that his window mullions were made in aluminum rather than steel, which cannot be anodized. This adaptation would have made the façade system simpler to fabricate, since most contemporaneous German façade systems were aluminum. These material adjustments mark another instance of Ruf's capacity to assimilate only those elements of SOM's architecture which he preferred to a German construction standard.

### **Moving Ahead**

Even without a full set of working drawings to study, it is obvious that the robustness of the Munich consulate's façade detailing is at odds with the idiom developed by Ruf in his other slightly earlier or contemporaneous buildings. As a fulcrum between the style of his immediate postwar work and the projects that would elevate his practice to an international scale,<sup>492</sup> the Consulate marks his transition to a different set of architectural interests, material choices and expressive idiom. From the architecture of minimal means and full transparency, Ruf turned from this moment towards an architecture perhaps more appropriate to the growing wealth of building materials and sophistication of building products increasingly available in Germany. The outcome of his encounter with SOM and American construction types would register elsewhere as at least one of many motivating factors for the kind of architecture he would produce from this point on.



**‘Die Welt des kleinen Mannes’: Hans Schwippert and the Agenda for the West German Pavilion at the Brussels World’s Fair of 1958**

**‘Notes on German Participation’: Brussels, 1958**

Just as the 1951 *Darmstädter Gespräche* and the 1953 *Bauhausdebatte* contain the kernel of architectural thinking which formed the undercurrent of practice in West Germany in the early 1950s, the documents through which the 1958 West German pavilion at the Brussels World’s Fair was conceived and executed register the concerns characteristic of architectural thinking in the much more affluent and international mid-to-late 1950s. A watershed, located somewhere in the years between 1953 and 1955 – the *Wirtschaftswunder* years – separates the earlier concerns about the meaning, validity and claim to Modern architecture from the confidence in 1955 that new means to reassert German design and architecture on an international stage were at hand. This confidence coincided with the reestablishment of the West German consumer product and building industries and, as epitomized by Ruf’s case, the encounter with American-style International Modernism. The World’s Fair offered an ideal opportunity to reflect on these new West German design realities, their deeper meaning and the material culture they produced.

**“A Dark Shadow has Fallen on this Unbridled Enthusiasm”<sup>493</sup>**

The 1958 Brussels World’s Fair set markedly different goals for itself than had its predecessors. Accordingly, its organizers worded their invitation to participating nations carefully:

“We want an accounting of human achievement in all areas of the Modern World: so that the people of the world are brought to the realization clearly and dynamically that they are responsible to return the humane to this world....We wish that every nation is able to explain to the others its way of life, its philosophical and religious conceptions as well as its economic and social programs. If governance means the attempt to increase the happiness of a people, then all are invited to convey to the others what ideal it has of this happiness, and in what way it believes that it can ensure the material and moral prerequisites for it.”<sup>494</sup>

The desire to “humanize” rather than only to showcase progress and technology, couched in a language typical in the post-war European cultural response to the war experience,<sup>495</sup> resonated with Schwippert. The challenge to represent his country through its way of life aligned well with his own philosophical position, articulated as early as 1951 in the *Darmstädter Gespräche* by his original term *Wohnwollen* (will to inhabit); it was also a way to counter the “dark shadow”<sup>496</sup> that,

as Schwippert observed,<sup>497</sup> had fallen upon the kinds of technology and progress which had driven Germany's manifestations at earlier World's Fairs. He was quick to emphasize that "this World's Fair, for the first time, I believe, is subordinated to an idea and is not to be a public arena for business and mercantile prowess, not longer a market for progress in the old style."<sup>498</sup> Germany, as instigator of the War and, in that context, as prime example of technological prowess gone wrong, would be, in Schwippert's words, "the object of particular attention. If it misinterprets the topic, ignores the spiritual and political meaning of its demonstration...then the damage would be heavy."<sup>499</sup> The Federal Republic of Germany carried forward the burden of its predecessor nations' culpability, especially in this particular cultural forum.

As an early advocate for West German participation in the Fair, Schwippert intended from the start to take advantage of the fact that the 1958 World's Fair offered the first large-scale opportunity to introduce the new West German lifeworld to an international lay audience. He was well aware that this opportunity was overshadowed by Germany's two previous World's Fair manifestations, both those gladly invoked and those preferably forgotten: on the one hand was the German Pavilion at the 1929 International Exposition in Barcelona by Mies van der Rohe; and on the other, Speer's 1937 pavilion through which the Third Reich represented itself in Paris. Schwippert described the quandary thoroughly in a typescript he composed after the event, in which he reflected retrospectively on his experience with the Brussels Pavilion. His reflections on these two precedents come in close succession in his text, both equally present in his mind:

"The German participation in the movement towards a new openness and lightness (German Pavilion Barcelona, Mies van der Rohe) has already made history *and achieved world recognition. How do things now stand...with us?...*

The German contribution [in Brussels]: rich in expression but quiet and noble in its strength. You ask for a power that is strong enough to resist a repeat of the debacle following 1933 in the future. I am an architect, not a prophet. My answer: At this time and place, the power was enough to compete with the shameful representation of that debacle in Paris 1937, if not to erase it. Nothing less was required!"<sup>500</sup>

Schwippert's words make clear the degree to which Mies' Modernism remained a reference point for asserting Germany's contributions to a Modern architecture allied to the political meanings of "openness and lightness" – the same words Schwippert had used to describe the aspirations of his own *Bundeshaus*<sup>501</sup> – despite the emigration of its better-known protagonists. His words also make clear the extent to which Schwippert remained completely convinced of architecture's

political potentials. In that regard, he saw the 1958 pavilion as a writing, if not a rewriting, of German political history. Not satisfied merely to “compete with” Speer’s pavilion and by extension the regime it embodied, Schwippert contended that the German representation in Brussels had actually “erased” it. By extension, the “noble” and “quiet” power the 1958 pavilion embodied could be read as adequate to resisting “a repeat of the debacle” of the post-1933 years well into the future. If his earlier benchmark had been the *Wohnwollen* he had described in the *Darmstädter Gespräche*,<sup>502</sup> then by 1958, Schwippert seems to imply, the appropriate architectural expression he had sought through which to embody the ‘will to inhabit’ seven years earlier had been realized.

In contrast to the evident luxury of the two earlier German pavilions, however, circumspection was required in communicating West Germany’s political and economic advancement since the war. Hermann Wenhold, the General Commissioner appointed by West German President Ludwig Erhard to oversee the pavilion’s development, echoed this tenet in a statement made in March of 1956, stating that “the Federal Republic will avoid everything in its exhibition that might be perceived as arrogant.”<sup>503</sup> The care taken to find an appropriate means to demonstrate West Germany’s new spirit was apparent in the surprising official decision to pursue Schwippert’s unorthodox proposal, representing the country’s progress almost exclusively through the everyday.

Two concepts were presented to Wenhold, Schwippert’s and that of Herbert Engst, director of the Northwest German Exhibition Association (NOWEA). Engst proposed a more conventional approach to the World’s Fair agenda of ‘products, progress, Nationalism’, focusing entirely on a broad history of technical progress and the German contribution to it, from Gutenberg to the present. This was in stark contrast to Schwippert’s proposal of October, 1955, offered on behalf of the German *Werkbund* and the *Rat für Formgebung*,<sup>504</sup> to depict the everyday life of West Germany’s new petty bourgeoisie and to allow the design of its environment and objects of use to describe the country’s new identity. There was relatively little political jockeying about the pavilion’s content, proof of both the appeal of Schwippert’s unorthodox approach and his political access. The decision was made within a few weeks. With President Erhard’s support, Schwippert held sway.<sup>505</sup>

### ***The World of the Little Man***

By virtue of his design advocacy, his political involvement and his central role in aligning the goals of industry and design, Schwippert was thus perfectly positioned to determine what West Germany's lifeworld looked like. He described it alternately in shorthand as the "habitual world of the little man" and the "life of [West Germany's] so-called masses."<sup>506</sup> Schwippert's loose use of "the masses" is curious, given increasingly conflicted relations between the two Germanys. With the modifier "so-called," he insinuates a distinction but as becomes apparent in his description of the lives led by his "little men," there is no overtone of political solidarity with the textbook term in his usage. The beneficiaries (and consumers) of Schwippert's *Wohnwollen* were private individuals. It was the benefits of Modern design in the qualities of work and domestic space to provide happiness, which held them together, not class struggle or political consciousness. Well-being and good design, in Schwippert's account, formed the communal experience of the new diligent, happy, modest and decidedly not bellicose West German State.

Schwippert, *Werkbund* president since 1950, had given copious thought to these terms and descriptions. Neither "ignorance nor frivolity nor arrogance"<sup>507</sup> would be permitted to interfere with the image West Germany offered to the world; the country's failure to find the right tone within such a major international forum would, he said, result in "deep damage."<sup>508</sup> Even after he had been selected to guide the pavilion's curation, his machinations to ensure the appropriate calibration of architecture and artifacts are apparent in the texts through which he asserted his vision both publicly and behind the scenes. They register a decisive cultural shift from the impulse towards an urgently philosophical, if not transcendental, characterization of a Modern idiom shared among design thinkers in the early 1950s, to one, which, especially as received by the international press in Brussels, would place West German industrial design and architecture within the canon of postwar International Modernism by the latter 1950s.

The architecture of the Brussels World's Fair West German Pavilion – which, via Schwippert's influence in securing the commission for them, was authored by Ruf and fellow *Werkbundler* Egon Eiermann in Fall, 1956<sup>509</sup> – as much as its content was intended to register a fine balance between design excellence as economic driver and civic modesty as new German virtue. Neither a replica of Bauhaus sobriety, already subsumed into a larger design history no longer identifiably German, nor a full-throated celebration of West Germany's new material and technical prowess, the work curated by Schwippert and the World's Fair committee sought in a tangible and practical way to resolve the conflicts which had emerged much earlier in the

*Darmstädter Gespräche* of 1951 and the Bauhaus Debate of 1953: how was design to retain its relevance in Germany after the experience of the war? What was its existential value and power? What were its means and how did they affect its expression? Who could lay claim to the Modernist idiom and what, really, was its lineage? Schwippert's texts from 1955 onwards in which he attempted to conceptualize how West Germany should represent itself and those, which simply protocol his advocacy for the Federal Republic's participation in the World's Fair, describe by extension how his answers to such central questions had evolved.

Schwippert addressed his first formal proposal to the political appointees to West German's World's Fair committee on October 14, 1955. It included three primary areas of focus, each a potential platform to convey the new West German esprit by means of consumer goods and the environments in which they were to be used. Keeping conventional expectations in mind, he suggested that these themes "follow the broad lines of international interest and at the same time permit the appropriate consideration of German economic interests."<sup>510</sup> As he elaborated them more fully, it became clear that each area would showcase a solidly middle class world in which the assets of the home and the place of work "are becoming beautiful. The sad counterpoint: here, filthy, lowly world of work, there trusted home – here drudgery, there freedom, here factory, there idyll – begins to disappear. The apparati of the working world and the world of the home increasingly resemble one another."<sup>511</sup> The successful partnership of industrial production and good design was that set against the backdrop of implicitly equitable distribution of wealth, which allowed all citizens access to an aesthetically inspired environment, even in a factory. The image of a society in which industrial labor was no longer "drudgery," was meant to undergird West Germany's reformed international brand: the joyful, new world of the "little man."

### **More Beautiful, Better, Lighter and Freer**<sup>512</sup>

Schwippert's three-page October 1955, initial proposal already frames the ideas and phrases, if ostensibly only as "sketched examples,"<sup>513</sup> to which he would hold even in his expanded post-1958 texts. The first of the terms he coined was *Wohnwelt*, the world of inhabitation, by which he meant a domestic environment which was nothing short of a microcosm of a larger world view. In practical terms, a focus on the domestic interior was an opportunity to lionize the efforts of the *Werkbund* and to reassert the benefits to industry of design collaboration. Schwippert wrote,

“Thanks to the consciousness of the exemplarily progressive sectors of German industry and the efforts of the German *Werkbund* and its affiliated organizations, few countries have at present such excellent objects to fulfill the needs of life and living as does Germany....herein lies a German achievement which, only now achieved, can make an extraordinary impression when represented clearly and unambiguously.”<sup>514</sup>

While lauding the role of industry, he was swift to explain that a “presentation as imagined by industry lobbies and market specialists, such as labor saving through rationalization or other problems, is still not enough”<sup>515</sup> to form the basis of an appropriate World’s Fair exhibit. It was imperative that the “humanitarian-cultural and formal values as well as the capacity for comprehensive optical and spatial representation”<sup>516</sup> set the tone. Schwippert’s contention that ethical values were implicit in the optical and spatial representations offered by products of architecture and design was not new; their utopian potential had been constitutive of much early Modern architectural rhetoric in Germany. In the context of an economy increasingly driven by consumer goods within a society in which the private sphere had come to be understood as the antidote to the horrific excesses of Fascist public appearance, however, Schwippert’s attribution of reformatory or ethical potential to design objects and architecture no longer equated to a desire for utopian social change. Domestic design could serve to propagate good values one individual at a time. Consumer culture was a kind of Trojan horse, introducing moral education to its participants which simultaneously buoying the economic stability on which a democratic West Germany could build. Schwippert’s eagerness to partner with industry to produce non-durables was more complex than the typical ‘soft sell’ which his historic context – the use of domestic consumer goods as proxies for ideological positions in the post war period – otherwise implied.<sup>517</sup>

Schwippert’s second theme evoked the “glass and happiness”<sup>518</sup> trope associated in the interwar period with Paul Scheerbarth and Bruno Taut. Here, too, this trop was not represented as a future utopia but cited as evidence that everyday life had achieved a new joyous quality in spite of the (unnamed by Schwippert) political realities of Cold War West Germany. As early as 1951, in his comments at the *Darmstädter Gespräche*, Schwippert had floated the idea that the architecture of openness would make no concessions to the threats in the world around it: “it seems to me that there is something quite peculiar here. In a time characterized by unrest, fear and threat...we sense around the world a directive of building which is anything but a bastion of refuge....[it is] the brightness and lightness of our spatial desire.”<sup>519</sup> In his 1955 document, Schwippert expanded upon his parable, which juxtaposed a dark worldview with the alternative

offered by the environment created through Modern architecture and design to assert it as an international, rather than only West German, circumstance. Considered as part of a larger architectural tradition of openness, the World's Fair pavilion could thus also assert Germany's past contributions to this desired condition, principally "Mies van der Rohe, Pavillon Barcelona!"<sup>520</sup> At the same time, this assertion would also indicate West Germany's present commitment to a larger international movement towards the "joy of life."<sup>521</sup>

"...there is in the world a movement against the deadly serious, the political situation, the dehumanization of the mechanized, the threats of the new, ghostly threats of destruction and of 'progress', against the constant danger of human catastrophe, regardless of the situation, which, in the most wonderful way, desires and asserts a new levity, a new tenderness, a new grace.

The glass walls of the new architecture, the new lightness of the office, workshop, factory, the delicacy of the new furnishings, the friendliness of living amidst greenery, the transformation of clothing, the decorative arts – these are all within a great effort of human resistance to threat, darkness and imminent chaos."<sup>522</sup>

In characterizing his thinking about the political role of design, it is important to observe that Schwippert located architecture and design not on the side of larger, top-down forces, among them the political and economic interests, which had in the past conspired to create an atmosphere of "darkness and imminent chaos." Instead, design was cast as a means for a loose community of individuals to pursue joy at the scale of their own daily lives; these aggregated individuals, strengthened by their immediate environments, he contended, could ultimately form the "great effort of human resistance." The irony of a national pavilion dedicated to demonstrating aggregated bottom-up resistance to politics may seem obvious, no less so than the contradiction of casting consumer goods and architecture, produced only via the application of large capital and industrial inputs, as the tools of individuals. Despite Schwippert's best hopes, consumer markets were as always politically agnostic. Inherent in Schwippert's idealism was plenty of room for less idealistic interests to be realized. The liberative connotations, which he wished to imbue in them did them no harm.

This faith in the ability of architecture and design to generate joy in daily life extended to Schwippert's third theme, which celebrated the beautification of the workplace. His attention to the workplace included not only its architecture but also its accouterments: "appliances, tools, machines, even vehicles!"<sup>523</sup> These had long, of course, been subject to design intervention in Germany; but it is significant that, in 1955, these particular categories of durable goods

accounted for 40% of West Germany's total exports by monetary unit.<sup>524</sup> German exports had tripled between 1950 and 1955,<sup>525</sup> during which time there had been a clear shift away from the exportation of raw materials that had dominated the early postwar economy. The need to assure a place at Brussels for the West German durable consumer goods industry was a political and economic imperative.

There is less obvious motivation for Schwippert's contention that "the equipment of the working and domestic worlds is becoming the same,"<sup>526</sup> an assertion he integrated into this third and final thematic area. The elision of places of work and domesticity, according to Schwippert, evidenced the larger drive towards joy that he had already heroized:

"The sad opposition...begins to disappear....There are the same norms, the same materials, the associated color schemes, it is the same formal spirit of an honest life [made] from the possibilities of its time, which transform and unify both....To show that this positive unification has captured the whole of daily life, and not only the hours outside of work, the vacation, would be yet another documentation of the side of progress which seeks to humanize."<sup>527</sup>

The ubiquity of an honest, humanizing life was, for Schwippert, proven by the ubiquity of good design sensibility even where individual aesthetic preference had little role to play – at the sites historically associated with the "little man's" oppression. As he had stated from the outset, the humanization of the entire *Wohnwelt* could be credited in West Germany to the collaboration of enlightened German industry and the *Werkbund* and its affiliates. To understand what this design sensibility was and how the *Werkbund* allowed Schwippert to define his role as curator and advocate, a brief account of one particular episode involving the appliance manufacturer Braun AG is instructive.

### **Today Your Love, Tomorrow the World<sup>528</sup>**

Schwippert's three proposed thematic areas were no more purely theoretical than was his focus on consumer appeal cynical economic opportunism. By late 1955, as Schwippert launched his program for the West German pavilion, the material privations of the early postwar period had largely vanished for consumer and industry alike. Material largess had changed utterly the context in which architectural and design was commissioned and received: the new material potentials had also transformed the scope of expression that architects and designers could pursue.



Schwippert, in his capacity as head of the German *Werkbund* and member of the Federal Design Council (*Rat für Formgebung*, abbreviated *RfF*) within the GFR Ministry of Economics, was by no means naïve about the way in which design and industry were increasingly intertwined in West German economic strategy. The RfF had been founded in 1950 specifically with the mission of being an “informal liaison between industry and consumer.”<sup>529</sup> It was backed by Theodor Heuss and Ludwig Erhard, the President of the Federal Republic who, as an economist, espoused the conviction that economic growth in West Germany would occur largely through the medium of consumer goods. Even more important to Erhard was the idea that consumer satisfaction was foundational to economic stability, an idea born of lessons learned from the consumer stability delivered early in the Nazi regime.<sup>530</sup> By the late 1950s, West Germany’s participation in international design fairs was seen as a political tool to stimulate export markets. In Schwippert’s words, “the work on these kinds of [international design] exhibitions has the character of applied sales advice.”<sup>531</sup>

Schwippert’s exchange of that same year with Max Braun, founder of Braun AG, indicates the degree to which this economic logic was part of the *Werkbund*’s day-to-day. In this series of letters, Braun requested and received Schwippert’s advice on how to deal with conflict that had arisen at a joint meeting of the Swiss and Baden-Wuertenburg *Werkbund* chapters held at the Ulm *Hochschule für Gestaltung* on October 20 and 21, 1956.<sup>532</sup> Werner Aebli, a Swiss architect, had used the occasion to criticize heavily Braun radios, first marketed in August 1955. The radios’ design, developed in partnership with the Ulm *HfG*, had been well-received and was considered a harbinger of the new type of West German consumer product to which the *Werkbund* and *RfF* aspired. Braun sent two letters to Schwippert for revision and advice, one directed towards Aebli’s attack on the radios’ technical quality and the other, to *Werkbund* members who had criticized the radios’ form. With Schwippert’s help, both letters were turned into marketing opportunities rather than vitriol. As Braun wrote, “Please accept my heartfelt thanks for the enormous effort you invested in our letters to the *Werkbund* members. Your advice was particularly valuable because it showed us that we had not yet found the right tone.”<sup>533</sup>

Braun’s open letter to Aebli, intended for publication, cleverly redirected the attack feigning an assumption that Aebli “was motivated to these harsh words by personal experience” and had at some point “had complaints with one of our products, since we – as do all manufacturers – have

an unavoidable, small percentage of complaints.”<sup>534</sup> The letter ended by offering Aebli contact with Braun’s customer service to correct any problems he, as consumer, might have had, and by challenging him to find another middle European producer with a comparable product that was superior – in exchange for a DM 10,000 reward. By turning the critic into a disgruntled consumer who could be placated by company largess, Braun’s response served as an opportunity to emphasize Braun’s commitment to its users.

The letter to the *Werkbund* members focused on each participant’s public critique of the radios’ design. This, as Braun wrote, was “new for us, when friends of the ‘Good Form’ also appropriate arguments which otherwise only come from the opposing camp.”<sup>535</sup> As a counter-argument, Braun proposed that “in the circle of people who deal directly with questions of design, we would prefer to show directly what things are new with us. We are therefore sending you today our new radio catalogue. Our newest model SK 4 is published in it for the first time.”<sup>536</sup> The SK4, a combination radio and record player, was one of the first designs by the team of Hans Gugelot and Dieter Rams to go into production, and thus represented Braun’s new design philosophy.<sup>537</sup> The countermove was twofold: first, it allowed Braun to convey his commitment to working with independent, academic designers; second, it, too, transformed the critic of his productions into a potential consumer of them. Braun AG and its products were only one particularly compelling piece of evidence that West German design was gaining credence, first on the domestic market, then on the international. By 1958, several Braun products, including the SK4, had been acquired by the Museum of Modern Art in New York.<sup>538</sup>

As the epicenter of consumer goods design, the *Hochschule für Gestaltung* in Ulm, was at least indirectly party to Schwippert’s machinations around the Brussels pavilion. In letter dated October 19, 1956 to Ulm professor Otto Haupt, Schwippert requested Haupt’s support in communicating to his academic colleagues the “importance of the ‘practical’ case of Brussels.”<sup>539</sup> A week later, on October 27, Schwippert wrote again to let Haupt know that “after a struggle of more than a year, my ‘story’ was made the ‘script’ for Brussels. That means: content by themes, groups, scale and sequence were determined, synchronized with the building (which was the first victorious battle of the summer), organized, decided and now decreed as no longer changeable.”<sup>540</sup>

To the same degree as in consumer goods manufacturing, the rapidly developing West German construction industry bespoke the dramatic pace at which the country had regained state-of-the-art. This, too, was shown to advantage in Brussels. The positive impression it made was reflected in reports in the US press. As one journalist wrote in the *Washington Post and Times Herald*,

“Western Germany, risen from the thrashing in World War II to a dominant position in European production and financial well-being, has produced probably the most successful all-around exhibit in the fair. The German display is a model of efficiency and simplicity, with eight airy, attractive box-like structures of wood and glass, prefabricated and erected in eighteen days.”<sup>541</sup>

The pavilion’s overwhelmingly positive reception in the European and American press verified that Schwippert, Ruf, Eiermann and the committee had succeeded in calibrating evident national achievement and design understatement, an accomplishment that the American press contrasted to its own country’s poorly planned, “impetuous”<sup>542</sup> gold-domed American pavilion. One journalist contrasted West Germany’s discretion to the way the US pavilion told some “uncomfortable truths we need not have paraded in public.”<sup>543</sup> Where the ambivalence about appropriate architecture and design expression was seen to characterize the two superpowers’ manifestations, Germany’s re-entry onto the international design scene dovetailed perfectly with the country’s desired political profile.

### **Mies...**

Throughout the history of its reception,<sup>544</sup> from its earliest design inception to the most recent descriptions, the idiom of the 1958 pavilion has been compared to Mies’. In each of his multiply iterated texts on the pavilion, Schwippert referenced only one architect: Mies, to whom he attributed the role of leading the “German contribution to this movement towards a new openness and lightness.”<sup>545</sup> His text, which accurately reflected the stance Schwippert assumed in his many roles, characterized Mies’ architecture as aspirational for the West German pavilion. Alfons Leidl, whose had edited the *Werkbund* periodical *Raumkunst und Wohnform* for a decade, referenced Mies as the most appropriate comparison for the pavilion in the text he produced for the catalogue accompanying the exhibition. How literally was the comparison to Mies meant, and what was intended by it?

Of all those involved in the pavilion’s genesis, Eiermann evinced the clearest and most current personal affiliations with Mies. In 1950, a few years after his appointment to a professorship at

the *Technische Hochschule* in Karlsruhe, Eiermann successfully advocated for the conferral of an honorary doctorate upon Mies, presented to him by Konrad Wachsmann during a visit to Chicago.<sup>546</sup> In the summer of 1953, as the Bauhaus Debate still echoed, Mies visited Eiermann in Karlsruhe, touring both the university and Eiermann's office. These events proved to be one-offs, however: there is no correspondence between the two men that evidences an exchange of architectural ideas, either in conceptual or practical terms.<sup>547</sup> Ruf did not meet Mies until the early 1960s, on a trip to the US. Thus, despite Schwippert and Leitzl's deference, there are no grounds for asserting that the affiliation of the pavilion with Mies reflects personal mentorship or direct exchange.

The work for which Mies was known by 1958 exceeded the means of Schwippert's "little man" by far. By extension, any facile comparison to Mies underplays the efforts to which Eiermann, Ruf, Schwippert and their collaborators would have been compelled in calibrating a 'Miesian' idiom to the "world of the little man." How did they go about translating the elegant architecture, which Mies was producing for American corporate clients to a West German architecture described by journalists during the World's Fair as at best "airy"<sup>548</sup> and at worst "a bit heavy handed and dull?"<sup>549</sup> If the comparison to Mies was appropriate by virtue of the way construction was treated as architectural dictate,<sup>550</sup> for example, why has the significant material effort involved in producing the pavilion, in contrast to its political and architectural expression, received little or no attention? Why, for that matter, was its construction, emblematic of Germany's postwar recovery, so underplayed in all accounts from the start?

These questions point to issues which the position developed by Schwippert's texts, with their emphasis on topics already suggested at the *Darmstädter Gespräche* of 1951, belie. By 1958, the challenge to West German Modernist architects was no longer, as it had been in the early 1950s, the need to overcome dearth of material potentials in order to express a transcendent 'lightness'. The struggle over the validity or ownership of the Modernist idiom, as encapsulated in the quarrel between Gropius and Schwarz, had been superseded. The challenge had instead become one of calibrating the evident material wealth and quality of German industrial production to a political and societal demand for an appropriately modest expression – a Trojan horse for quality and elegance. 'Miesian' was the short-hand for the solution.

### ...to Miesian

By the mid-1950s, as the pavilion's program and design were being developed, Mies was no longer merely one among "Le Corbusier, Gropius...Oud and the rest,"<sup>551</sup> he had become one of the three "generally accepted masters...among those interested in Modern architecture."<sup>552</sup>

Henry-Russell Hitchcock, the *de facto* arbiter of the International Style, had helped to sponsor Mies' elevation from one among fifteen architects he had credited in 1932 with authoring the International Style, to one of the three masters – Wright, Le Corbusier, Mies – which he denoted, as if they were rockstars, only by a single name. Even among these three, Hitchcock saw in Mies a more disciplined figure than the other two, claiming that "romanticism is evidently a continuing force in both Wright and Le Corbusier's work, if hardly Mies; with them at times it even gets out of hand."<sup>553</sup> In the same article addressed to students of architecture, Hitchcock also claimed that Mies' early work had been more strongly influenced by the Classical proportioning systems of Schinkel than by the industrial architecture, which, according to the conventional narratives, had so strongly influenced all early Modern architecture.

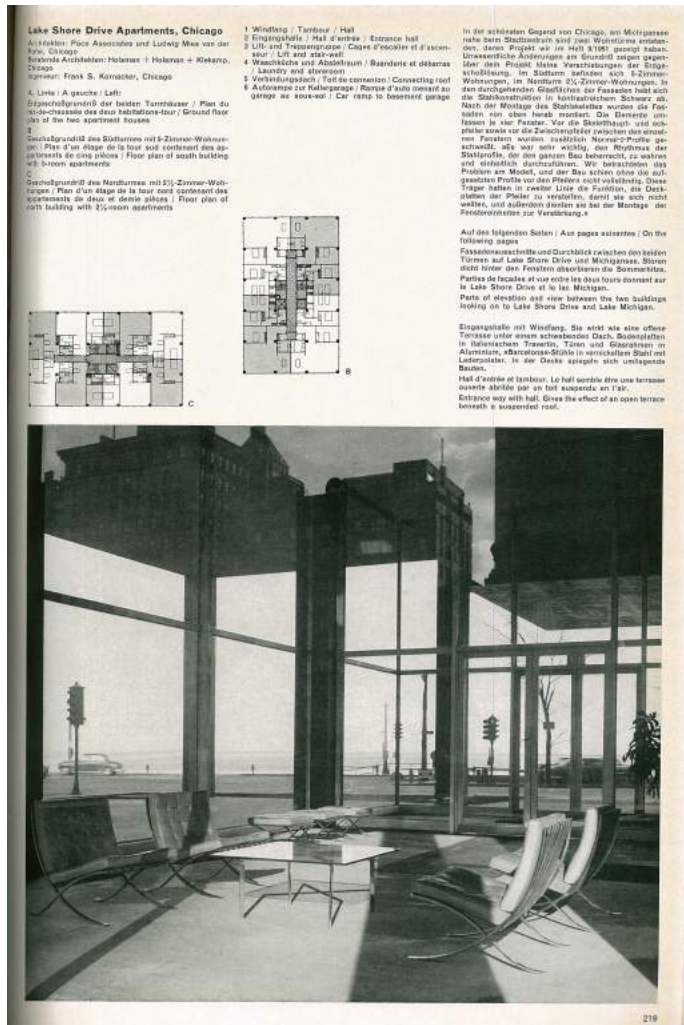
The assertion that Mies represented an apotheosis of discipline and clarity was dominant in his American reception in the first half of the 1950s. This was central to the way in which his other major American proponent, Philip Johnson, described the Lake Shore Drive apartments in a press release that accompanied the exhibition of a huge model showing the Chicago project, on view at the Museum of Modern Art in New York from March to May of 1950:

"Unlike the jagged and curved plan shapes of [Mies'] earlier projects, the new apartment towers are perfectly rectangular in plan, an undisguised expression of their regular steel frame....These glass towers are monuments to order. Their simplicity is deceptive for, as in all great works of art, it is the result of a painstaking process of reduction until all that is left is the essential statement: a pure and unadorned crystal. When Mies came to the United States, he said: 'The long path...to creative work has only a single goal: to create order.' When that goal is attained, as it is being attained here, modern architecture will have reached another milestone along its 'long path' toward perfection."<sup>554</sup>

Johnson's characterization<sup>555</sup> makes no concessions to the building's residential use, although the press release's title, 'Museum to Show Model of First All Glass and Steel Apartment House, used its program as a way to claim the project as the "first" of its genre in all steel and glass. Certainly Johnson's word choice – "order" and "perfection" – seem far from Schwippert's call for an architecture "against the deadly serious."<sup>556</sup> While Johnson's text may best be read as the words of a major museum curator straining to couch a speculative apartment building in the

terms of an art object, the description proved to be typical of the way Mies' work, and the 'Miesian' idiom extracted from it, was characterized.

In the German-speaking world, this characterization was proselytized by such figures the American-based German-Swiss Werner Blaser and Sigfried Giedion, both of whom contributed longer essays to the 1956 issue of *Bauen und Wohnen* commemorating Mies' 70<sup>th</sup> birthday.<sup>557</sup> Here, too, the emphasis was on an architecture expressive of "fundamental principles"<sup>558</sup> intended to "make order in the desperate chaos of our era."<sup>559</sup> The accompanying images of projects, among which Lake Shore Drive was the first to appear, juxtapose a chaotic and heterogeneous outside world with Miesian order. Photos of the Lake Shore Drive façade depict regularly draped curtains across the windows of multiple apartments, underplaying the tenants' likely diverse personal design decisions. A photograph of the lobby, in which reflections of a traditional Chicago streetfront and skyline are ghosted in a foreground reflection, contrasts the interior space to the hodge-podge of traffic lights, curbs and cars on Lake Shore Drive, seen beyond the building's entry portico. The lobby is dominated by a carefully staged tableau: rarified Mies-designed seating, a glass coffee table, the steel bearing structure and the steel façade mullions. As Blaser had written only a few pages earlier, "the creation of space, beginning with the structure, is architecture's true charge,"<sup>560</sup> not, it seemed, the interplay with objects of everyday life to which the German Pavilion would aspire.<sup>561</sup> From the book-matched Roman travertine pavers to the specially formulated black paint produced for the building by Detroit Graphite on the steel,<sup>562</sup> this photograph of the building also made obvious that the bespoke production of this 'Miesian' space came at a high material and construction cost.



Mies van der Rohe, Lakeshore Drive Apartments. Blaser, *Bauen + Wohnen*, 10:7, p. 219

Even as contemporaneous authors and thinkers chose to apply the adjective ‘Miesian’ to the Brussels pavilion, that term both included and transcended the specifics of any one of Mies’ projects. It had become synonymous with a specific kind of Modern architecture, ordered and “perfect” but also broadly applicable to different programs and locations. For German architectural circles, association with this idiom offered two advantages: it insisted upon the fundamentally German origins of this kind of architecture, and it positioned German postwar Modernism within a canon that had undisputed international status. This latter association reverberates in more recent literature, both as a claim to the project’s quality and as grounds to critique it.<sup>563</sup>

**Zu protzige Fassade<sup>564</sup>**

The West German pavilion, in contrast to the Lake Shore Drive Apartments, was built on what Schwippert discretely referred to as “limited Federal means.”<sup>565</sup> Its components were entirely prefabricated for installation in only a few months, between February and April 1957, after which they were transported to Brussels for mounting, a full year prior to the Fair’s opening.<sup>566</sup> Its lifespan on site was less than half the amount of time it had taken to produce and install. As Imko Boyken, author of the only monograph on the building, remarked laconically on the verso of his book’s final page, the building was “dismantled and scrapped” after its six-month occupancy during the World’s Fair.<sup>567</sup> Little notice was taken in contemporary accounts of the pavilion’s physical production, or of the frivolity of its destruction after six months in place. Historical literature has done little to address this oversight.

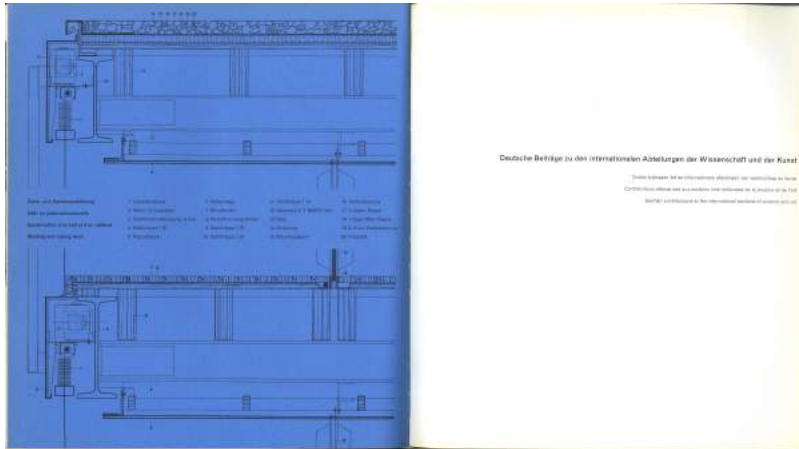
Likewise, unlike the precedents delivered either by Mies’ 1929 German pavilion or by his contemporaneous work, the Brussels pavilion was anything but an abstract, spatial expression of national identity or lifestyle. In every historical photograph, whether professional images in stark black and white contrast or fuzzy amateur snapshots made by visitors, the spaces are full of people and heterogeneous objects. This holds true, too, for the photographs published in the official guidebook produced by the West German General Commissioner for the Fair.<sup>568</sup> The architecture was even designed to ensure the visibility of everything contained inside: deep overhangs created in front of the glazed facades by walkways intended for installation and cleaning guaranteed that the glass would be largely in shade and transparent to the interior space and its various content, which otherwise would have been obscured by surface reflection.

The presence of these artifacts in the architectural setting was integral to the pavilion’s design, not only as a conceptual and physical vitrine for the exhibition design. Each object exhibited was a contributing design element in its own right, even the least rarified of objects. A case in point is the collapsible canoe, furnished by the Bavarian manufacturer Klepper in Rosenheim.<sup>569</sup> As early as the 1956 architectural study and presentation model, the canoe was represented on the central pond.<sup>570</sup> The boat, like every artifact shown, had a connotation that went beyond an aesthetic preference. On the one hand, it represented access to leisure activities, equipped with nifty accouterments produced by a German firm, which, employed some 1500 workers. On the other, it brought to life the way in which Germany’s domestic consumer artifact production was poised to restore the country to international presence as a civil society. Two years earlier, a German physician had crossed the Atlantic Ocean in a similar model, a feat that garnered him



coverage in *Life* magazine – a distinction, which only he and West German Chancellor Adenauer had achieved since the war.<sup>571</sup> The boat's presence in the architectural model indicates Eiermann and Ruf's recognition of the need to showcase evidence of democratically accessible design in everyday life and to make that evidence visible from both within and without. Their glass pavilions were anything but an autonomous, ordered "creation of space."

The construction site, which would ultimately become the 1958 Brussels Worlds Fair was dominated by the enormous steel trusses of cranes lifting prefabricated steel elements into place. With the notable exception of Le Corbusier and Xenakis' Philips Pavilion and the less notable British pavilion, the fair's architecture consisted primarily of long-span structures supported by steel columns and enclosed in steel and glass facades representing the "dazzling Modernity of...the nuclear age."<sup>572</sup> Eiermann and Ruf's on site handling of the steel elements can be only superficially reconstructed from the few construction documents published: the two details and the building section included in the official catalogue from 1958 are all that has been made public, republished over and over up to the present.<sup>573</sup> The steel I-beams that carry the roof and floor plates are embedded and invisible. I-40 at the floors and I-34 in the roof, the steel is encased within a shell of sheet steel exterior surfaces and gypsum board or wood interior cladding, all affixed to more easily scribed and fastened wood members, which in turn remain invisible in the finished construction. The actual compressive members, large box columns measuring some 50 cm square, were offset from the building's perimeter by 2.5 meters. At the buildings' edge, much more slender elements stiffened with flanges running perpendicular to the glazing and tapered at ceiling and floor were used to stiffen the building against uplift, and to give the impression that the building was suspended from above. The published detail drawings do not represent those heavier columns, depicting instead the lighter, finned mullions, which hold the glass enclosure. By concealing the actual bearing structure beneath wood-clad ceilings and boxed columns, Schwippert and Eiermann downplayed the tectonics of the long-span shed structure, heroized in other countries' buildings.



Schwippert and Eiermann, Detailed wall section of the German Pavilion. *Fischer, 'Weltausstellung Brüssel 1958: Deutschland'*

The impression that the pavilions were floating, created through edge cantilevers that began above the brick base and continued to the floors and roof, protruding beyond the plane of enclosure, was central to the architecture. Thinner white-painted steel elements at the edge of floor and roof plates, attached at the uppermost and lowermost floor plates by rectilinear stand-offs, reinforced this connotation. These, too, are not noted in the published detail, although they appear in sharp contrast in the black and white photography most often used to depict the building. Covered walkways, also carried on staple-shaped steel arches, used a similar stand-off, a detail which Ruf had developed in his 1950-4 Nuremberg Arts Academy and which he would repeat in later projects. Tongue-and-groove red pine floorboards, into which the glazed façade disappeared, were used throughout the interior and extended out onto the exterior walkways. Even the edge of the walkway was clad in red pine, for which a small piece of floorboard was connected to the edge grain of the last horizontal floorboard using mortise and tenon carpentry. The use of this less expensive wood, more prone to movement over time than the more traditional oak or maple floorboards more commonly used, is the only concession apparent in the construction details to the pavilion's short life.



Interior stair. Fischer, 'Weltausstellung Brüssel 1958: Deutschland'

On the interior, stairs were free-floating, in milled solid wood beams rather than steel, themselves heavy elements realized in a material selected to match the red pine floor planes. The architecture juxtaposed heavy bearing members, expressed in the black-clad floor slabs and interior columns, with the impossibly light periphery members, including the barely offset, clad edges of the planes layered up to make floor and ceiling. The effect was simultaneously one of gravitas and levity, of tectonically repressed structure and highly articulated enclosure. It was philosophically aligned but visually unlike its presumptive Miesian precedent.

### **Die Haltung der Zurückhaltung<sup>574</sup>**

“How much *elan* do you think is needed today to achieve the ordinary? Today especially! Here was *elan*, but, you understand, of the kind that puts value on the way that the traces of labor and sweat are, as is common among civilized peoples for the past few centuries, removed in time. Thus it was, on the whole a report on possibilities and powers that are available but – unfortunately – are too seldom used.

And it was, as a demand on today, much more than one is by and large willing to fulfill and realize in our German everyday life. Nothing less than the reconfiguration of the future. Vision, however, in the sense of its demands on the highest, foresighted humane engagement with art, it was not.

Vision of such a kind is, by the way, one man’s concern. I am thinking of Mies van der Rohe: Pavillon 1929 in Barcelona. It is beside the point whether it was one man or not, whether there was the necessary trust in him to realize what was consistently daring; equally irrelevant, whether this daring was legitimated and, thereafter, accepted by us at home.

We were compelled, as a logical and realistic consequence of the program and guiding idea, to choose a group, a team, this time. And what teamwork was created here, this is at least new, is something rare among us Germans; even more so, it is today, it is more modern than other extravaganzas elsewhere, it is a proper and superior result of this moment and hour. The fact that it was achieved with such decisive unity and closure is a first.

Team and Vision – say it isn't so... Here was not one head, there were 50, 60, 70 heads, designers, business people, organizers, salespeople, collaborators from culture, training, administration, education. The unity of their collaboration was the astonishing fact of a common effort.<sup>575</sup>

In Schwippert's recollection, the spirit in which the pavilion came into being was imprinted on its expression: the elan of the ordinary, in which "traces of labor and sweat are ... removed" just as civilized cultures would wish it, the product of many hands and not a single leading "head." Here, too, was the difference to a Miesian precedent, despite the parallels Schwippert sought elsewhere. Self-effacement and not heroism, collaboration and not singular authorship, was a new German virtue evidenced in Brussels. This new restraint and modesty was not to be understood as effortless; but the effort was not an "extravaganza." The values of transparency and elegance carried forward from Mies, the only American expatriate German architect consistently referred to by Schwippert and his circle as though he had never left their fold, were to be tempered by this new modesty – a modesty of completely different character than the costly procedures by which Mies' American project concealed the strain of their production.<sup>576</sup>

The role to be played by architecture and consumer design objects in constructing and reinforcing the image of a workmanly, modest, universally accessible West German culture reverberates in Schwippert's agenda for the Worlds Fair pavilion, and the laboriously pasted-up and reworked text in which he sought to evaluate it after 1958. As a litmus test for the transformation undergone by architecture culture in German from the deep philosophical doubt of the early post-war years and the struggle for its appropriate role in the genesis of an international Modern Architecture, Schwippert's World's Fair pavilion texts offer a clear theoretical context the meaning and material of the architectural idiom on which West German architects seem to have found consensus by the latter half of the 1950s.

**Sep Ruf's Hochschule für Verwaltungswissenschaft, 1956-59**

**Building for a Democratic Bureaucracy: Architecture of Greater Means**

As manifest in both written and architectural forms, Schwippert and Ruf's collaboration on the West German pavilion at the Brussels 1958 World's Fair bespoke the continuing depth of their personal affinity and common cultural values. It was an affinity that had remained intact throughout the changes in their respective professional situations since the early 1950s. Over the course of that decade, both men had acceded to academic appointments. Ruf's professional practice had grown enormously, completing more than fifteen projects in 1955 alone, while Schwippert's sphere of influence within his work as Head of the German *Werkbund* had given him access to the upper levels of West German politics and influence. Nothing in their Brussels collaboration can, however, account for the significant differences in their architectural predilections. The obvious stylistic differences were embodied in the way they each dealt with the realization of an architectural idea through its construction detailing.

In two projects begun by Schwippert and Ruf individually even while their work together on the West German Pavilion for the Brussels World's Fair moved ahead so successfully and synergistically. The two architects' idioms and referents had taken very different turns from the initial affinity for architectural ideas, expression and construction modality evident in Schwippert's *Bundeshaus* and Ruf's *Akademie der Künste* exhibited during the 1951 *Darmstädter Gespräche*. For any number of reasons, among them their dissimilarity, the two projects of the later 1950s may not, at first consideration, be obvious choices for comparison. This is a comparison, however, that provides an apt counterpoint to the more similar buildings exhibited in 1951. Both later projects are public buildings and both epitomize their architects' respective later styles. Their comparative study provides an architectural coda that both affirms and questions the recalibration of design so successfully realized in Ruf and Schwippert's World's Fair collaboration.

Schwippert's St. Hedwig's Cathedral in East Berlin (1956-1963) addressed the lifeworld of a very different 'little man' than the one lionized in the West German pavilion: the Socialist parishioner. The building shares with Schwippert's *Bundeshaus* project not only its symbolic space of gathering, but also its enormously challenging political and construction context. The

commission to restore the Catholic Cathedral of St. Hedwig, beyond the Iron Curtain in East Berlin, was also the occasion to work through issues of distributed authorship. material appropriateness and innovation in the space of a highly committed community. Ruf's College for Public Administration (*Hochschule für Verwaltungswissenschaften*) in Speyer (1956-1960) addressed the quintessential 'little man' of the new German Republic: the public administrator. The building also represents a reconsideration of the courtyard typology for an academic campus, as articulated a few years earlier by Ruf in Nuremberg. Most importantly, the building's diverse façade constructions, material choices and spatial reference bespeak Ruf's mastery of the International Modernist idiom he had cultivated during the work for the HICOG.

The two projects' contexts, on either side of the new German-German border, exacerbated their differences, so that their comparison also articulates the way economies of largess and scarcity are evidenced in architecture and building culture. Furthermore, the *Hochschule für Verwaltungswissenschaften*, the first post-war West German educational institution dedicated specifically to the training of a new German civil servant, and Schwippert's St. Hedwig's Cathedral, realized through an attenuated, cross-border negotiation between West and East Berlin, demonstrate clearly the effects wrought by architectural cultures of both greater and lesser means in the forum of political expression.

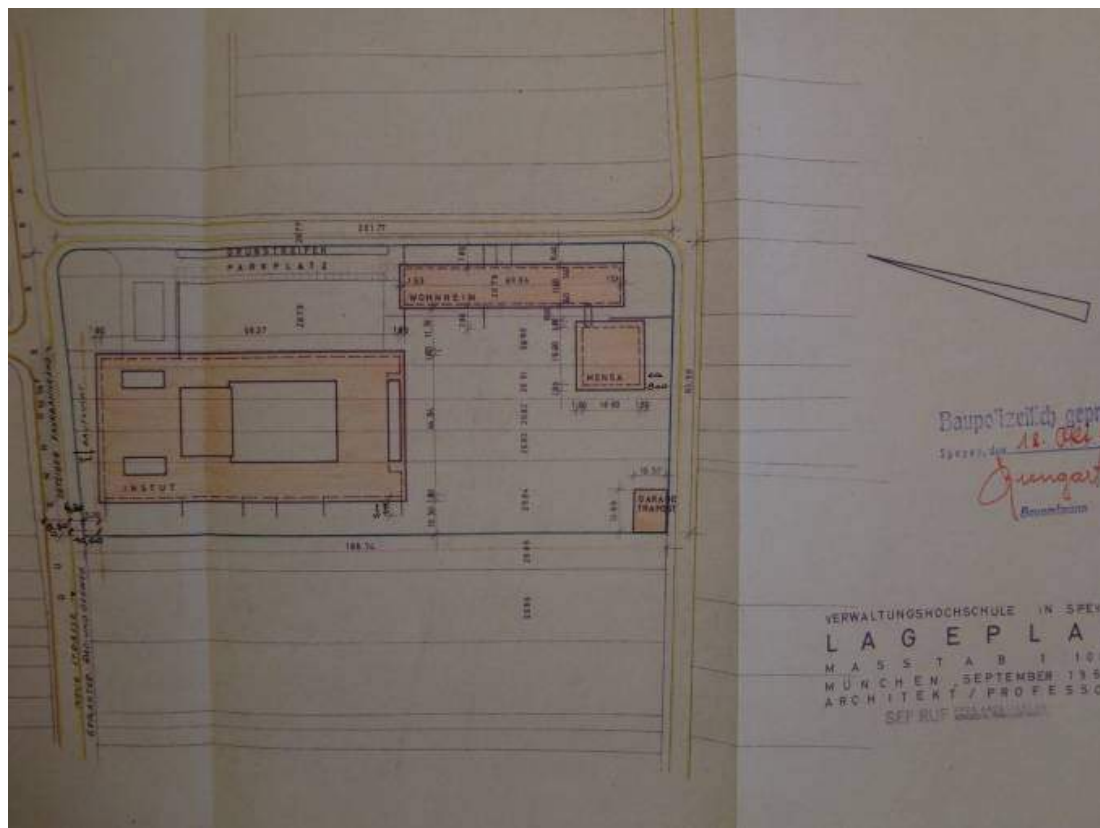
### **The Bureaucrats of the Future**

"This hour represents an important intervention in the life of the *Hochschule für Verwaltungswirtschaften* Speyer. May the building that will rise on this site become a happy home for the College. And may it allow a civil service to grow up which, by its selfless service to the state community, contributes to the solidification and completion of a democratic social constitutional state in Germany."<sup>577</sup>

Christian-Friedrich Menger, Dean of the Speyer College of Public Administration, kept his speech at the cornerstone ceremony for the new building brief: November 4, 1958 was a cold, unpleasant day and no one wanted to spend much time outside, even to celebrate a construction start that represented a significant solidification of a school whose existence had appeared tenuous from the start. The construction planning process had been set in motion on February 28, 1957, with the competition jury's unanimous recommendation in favor of Sep Ruf's entry for the new college campus in Speyer. Menger's wish for a "happy home" was understandable, even

if its realization was still a long way off. The project's development had been no less fraught than that of the college it was to house.

Even before the competition jury had met, the decision to realize a new building for the college, which had since its establishment under French administration in 1947 been housed in a former high school, met with adversity. The sites first offered by the city of Speyer were so unacceptable that public outcry ensued. The school was ready to move to a smaller city some 26 km away, but for the intervention of the regional government in Mainz. A site was finally gifted by Speyer, but even then, it was considered far too small for a school, which at that point had 250 students, most of whom were to live on campus.<sup>578</sup> A local architect, Gilgenberg, complained about his exclusion from the list of invitees and had to be placated by inclusion in the jury.<sup>579</sup> The drama was not yet over. Judging of the competition was delayed, as four of the five architects invited, including Ruf and his fellow *Darmstädter Gespräche* attendee Theo Pabst, refused to submit their work until the *Bund Deutscher Architekten* had negotiated the architect's fee.<sup>580</sup>



Ruf's site plan, Speyer Building Department document 351/58. *Fisch (2010), p. 33.*

In the end, Ruf's compact site planning, achieved by organizing the primary administrative and classroom functions around an internal courtyard with only a small cafeteria and a housing block configured as freestanding buildings, appealed to the jury because of the way it dealt with the site constraints while allowing potential room for future growth.<sup>581</sup> The project's tumultuous beginnings were thus, initially, Ruf's advantage; nonetheless, Ruf only submitted his first bill on January 2, 1958, nearly a year after receiving the commission.<sup>582</sup> By summer 1959, as the topping out ceremony was being planned, relations between Ruf and the school's client representation appeared strained. The terse language in which Ruf's invitation to the topping out was framed reflects the tension around escalating costs, due primarily to inflation in the construction industry. The letter began by noting that although "the timing is not entirely appropriate to the status of work on site...on the other hand, with regard to the increasingly reduced labor force on site, this event can no longer be postponed,"<sup>583</sup> a not-so-covert complaint about the slow speed of construction. The invitation was also offered on short notice, arriving less than three weeks prior to the event. It informed Ruf that the date could "not be shifted since the college can offer no other possibilities...we close in the expectation that you would like to make arrangements for, and be present on, this date."<sup>584</sup>

Conflict between Ruf and his clients in Speyer, both from the college and from the building department, continued until the campus's opening on September 14, 1960. Much of the conflict stemmed from construction costs. In the initial competition entry, which included a calculation of construction costs, Ruf's building had appeared to be the least expensive, largely because of its compactness and massing including multistory volumes.<sup>585</sup> The length of the primary building was shortened, the cafeteria reduced by a third and the library reconfigured while construction was already in process, playing havoc with the planning grids Ruf had developed.<sup>586</sup> In spring of 1958, there was discussion about simplifying the dormitories by excluding special areas for female professors and students, a decision that was prevented only after intervention by the Speyer Department of Health.<sup>587</sup> The low point was likely July 31, 1959, when the formwork supporting a partially poured concrete roof slab collapsed, seriously injuring two construction workers.<sup>588</sup> The construction site was immediately closed, only weeks after the topping out ceremony.

Despite the mishaps, the building was finished by September, in time for the new school year to begin with an incoming class of future public servants. The new campus ensured stability for the



college, to which full funding had only been made unanimous in 1957 when the Saarland agreed to contribute. With Federal support for the school confirmed, its status as a central location for the training of all West German civil servants was secured.<sup>589</sup> Upon the completion of the new campus, the College was also granted the right to offer a *habilitation* within its curriculum, a right which expanded its mission beyond its original, much more practically-focused academic purposes to research work in policy and administration.<sup>590</sup>

### **Prussian, French, *Bundesrepublikanisch***

In contrast to the Academy of Fine Arts in Nuremberg, the *Hochschule für Verwaltungswissenschaft* in Speyer had no deeper history, rooted in storied German tradition to which its curriculum – and architecture – could make reference in an attempt to connect the Federal Republic with a tradition that predated the Third Reich. The contrary was the case. The school had been established as a departure from Germany's historic approach to civil service training, and to replace it with a new tradition, considered by its curriculum designers to be more appropriate to a democratic republic. It was to be modeled on the French tradition, as interpreted by the French occupying government in the Rheinland and Pfalz areas.

The resolve to found the school was handed down from Paris in the summer of 1946 in Paris, as part of the “deprussianization” of Germany to which a policy paper authored in July 20, 1945 by the Interministerial Committee for Occupation Policy had committed all the Allies.<sup>591</sup> In opposition to the German civil service tradition, which demanded prior training in the law, the French concept based admission upon an entrance exam, which could be taken by students with completed degrees in any field. Admission and continuing education would also be offered to higher-ranking civil servants already in government. Finally, the plan foresaw guaranteeing a governmental position within the French sector for all graduates who successfully completed the exit examination. The *Administrateur General* Emile Laffon signed the school into existence with order number 194 on January 11, 1947. Housed in an existing high school building in Speyer's historic center, the college administered its first entrance exam on May 15, 1947 and courses began for 49 students, from the 190 applicants, several days thereafter. Three of those students were women.<sup>592</sup>

The college's French founding and orientation were not conducive to its political and financial stability, however, since it was perceived as an unwanted incursion and burden. In its early days,

funding was so limited that students were asked to bring a pound of potatoes for each day on which they were housed at the school. The annual budget was shared initially between the French government and the State of *Rheinland-Pfalz*, while the two other French-occupied states refused to contribute. At one point, German authorities agitated to dissolve the school and incorporate its course of study into the much older University of Mainz. The efforts of a French administrator, Irène Giron, who represented the college as a prestige project, are credited with keeping the college in Speyer.<sup>593</sup>

The spring of 1949 marked the first tangible step in the college's transformation from a French re-education project to a German institution. In May, 1949, coincident with the founding of the Federal Republic of Germany, all of the French occupied areas agreed to fund the school; Bavaria, which had no comparable course of study and was already sending prospective civil servants to Speyer for training, also agreed to contribute. The school was reorganized and re-chartered in August, 1950 under a new, charismatic dean, who understood the political impossibility of asking the German states to 'adopt' the French-chartered institution. With the new charter, Lower Saxony and Schleswig-Holstein agreed to join the consortium of funders, which by then included the federal government as well. This commitment came, however, at the price of a greatly reduced operating budget, to which the dean capitulated. Over the course of the next seven years, all of the German states agreed to contribute to the school's support, with West Berlin joining in 1961. The college's existence was thus guaranteed, in terms of both funding and political buy-in.

Throughout its history, the curriculum drew upon a broad humanities basis of philosophy, sociology, history and language, in addition to civil and federal law, theoretical and practical administration, finance and economics. Its role in research and offerings in graduate and post-graduate studies, all established by the mid-1950s, came to be seen as evidence of its role in the "old and meaningful German promotion of administrative sciences."<sup>594</sup> The increasing importance of research, in addition to the practical training for which the French had originally intended the college, was evident in the competition brief, which Ruf would have received in July, 1956: included within the program for the library were 350m<sup>2</sup> subdivided into 20 rooms for professors, researchers, assistants and their secretaries.<sup>595</sup> Ruf's design was called upon to solidify the existing college operations as well as to plan for its expansion in the area of research and science. There was nothing in the competition brief to indicate how this new, specifically

West German administrative cadre was to represent itself, however. That was left Ruf's discretion.<sup>596</sup>

### ***Die Haltung der Zurückhaltung for Civil Servants***

Coinciding with financial, administrative and curricular change at the *Hochschule für Verwaltungswissenschaften*, Ruf's contribution to the school's new status was to define the image of a new German administrative class. The independence with which he operated was in marked contrast to the multiple collaborations through which the design for the West German Pavilion in Brussels had evolved. Certain material and construction affinities between the Pavilion and the school building, which briefly coexisted in Ruf's office, imply that Ruf drew upon the earlier project to define an appropriate vocabulary. Other aspects of the project, both its design and realization, point to other sources and precedents.

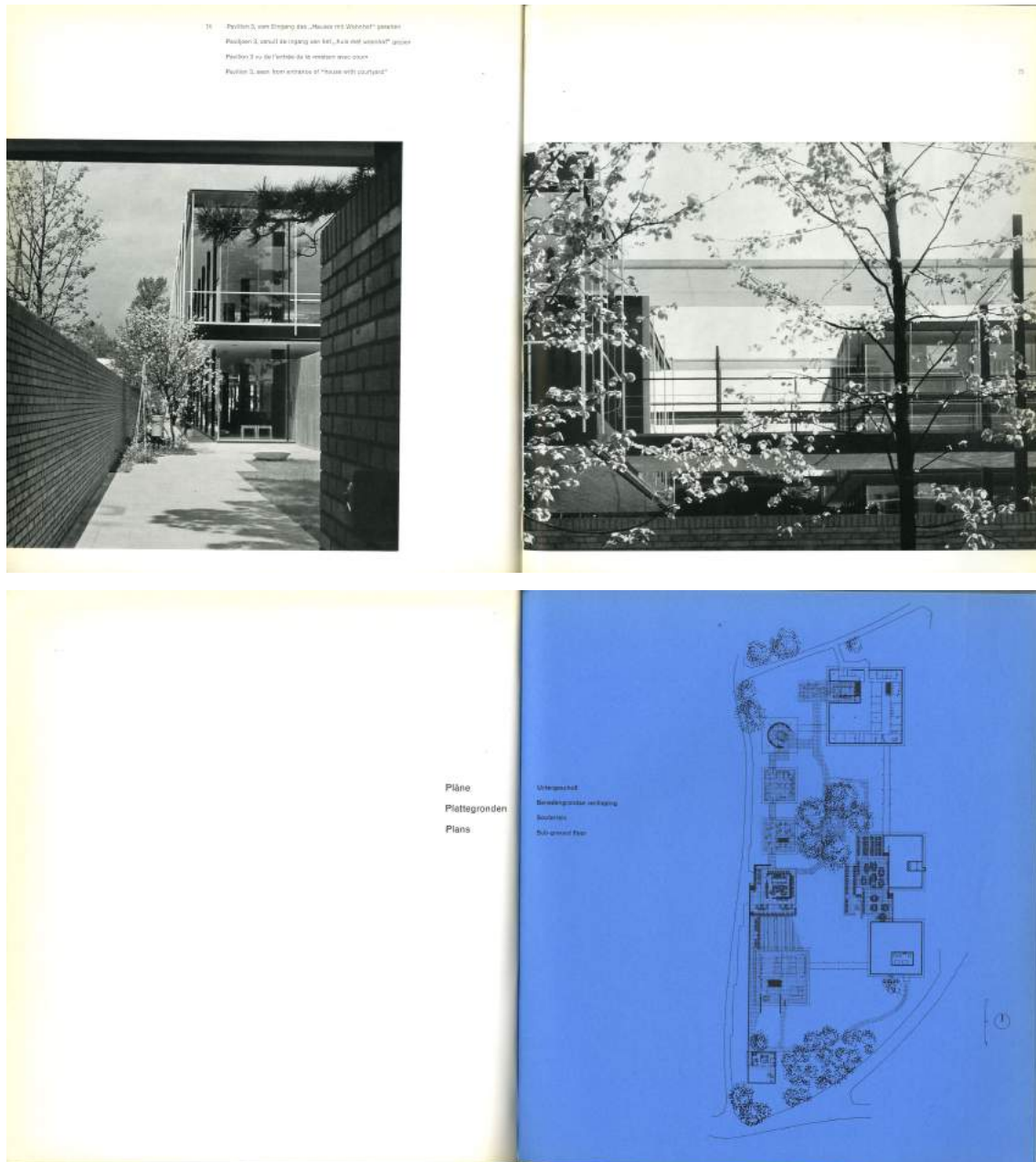
It appears that Ruf's role in representing the new Republic in Brussels had been a factor in his invitation to the Speyer competition, and the award of the first prize. Although the World's Fair is not mentioned in the jury report, local newspaper articles reporting on his selection note first that Ruf had designed "with Egon Eiermann, the German Pavilion for the Brussels World's Fair." The articles then continue with lists of other, perhaps more programmatically relevant projects: "...moreover, the Bavarian State Bank in Munich, Nuremberg and Erlangen; the Academy of Fine Arts in Nuremberg; and the Twelve Apostles and Christ the King Churches in Munich were built to his design."<sup>597</sup> Despite the impressive and relevant list of projects done within his own practice, the emphasis lay upon his collaboration with Eiermann on behalf of the Republic to recommend him for the Speyer college, a building that would need to embody the values of the country its student users would ultimately serve.

Certainly the experience of the Pavilion's design and highly specialized construction process would have been present in Ruf's mind as he developed the design for the college. Reflection on his earlier campus project, the Nuremberg Academy of Fine Arts, would also have been natural as Ruf undertook the Speyer competition. The resulting project for Speyer thus serves as a touchstone, both for Ruf's developing ideas about expression and construction, and about the nature of the campus itself. In terms of site planning, the Nuremberg Academy and the Brussels Pavilion evince a similar attitude towards a campus ensemble, expressed in a larger parti: both were based on a series of loosely connected pavilions whose relationship to one another defined

both identifiable interior courtyards and a larger landscape figure. This parti similarity has been noted in the literature, often as the grounds for the otherwise unsubstantiated but routine architecture historical practice of crediting Ruf with the site design while attributing to Eiermann with the building design and construction concepts.<sup>598</sup> However, this simplistic separation of the two collaborators' roles is not supported by the way in which Ruf handled a material and construction palette closely related to the Brussels pavilion but to very different spatial ends in his Speyer project. Clearly, Ruf had thought deeply about the relationship between architectural and spatial expression in the context of the Brussels campus, well beyond its affinities for the Nuremberg site plan, generated by the axial alignment of multiple, architecturally similar pavilions. He used the opportunity offered by the *Hochschule für Wirtschaftswissenschaften* to realign his own campus project referents with precedents derived elsewhere to generate an environment appropriate to a new, specifically West German administrative class.

This environment was the product of calibrations at multiple scales: site planning, landscaping, massing, spatial sequence, material choices, façade detailing, even the design of office furniture and accouterments. Each aspect is represented in drawings authored by Ruf's office, down to the numerals on wall clocks. The approach to total design is not unlike that common among American corporate projects: Eero Saarinen's CBS building included bespoke elevator indicators and telephone booth signage, for example,<sup>599</sup> an indication of the incredibly tight control possible in that era, of which Ruf also availed himself. Ruf's desire for control had been evident in working drawings produced for earlier projects – his drawings for the Academy in Nuremberg dimensioned floorboards in millimeters, a unit smaller than most saw blade kerfs, for example – but at Speyer, this control could be negotiated in collaboration with a powerful building product industry. The sophistication and variation of façade systems is only one example to be explored of how this negotiation played out.

## **Beneath the Vitrines**



*Fischer (1958)* showing the wall between pavilions 3 and 4 and site plan pp. 110-11, 138-9

Only a few images of the Brussels pavilion depict it as anything but transparent, underscoring the common interpretation that the buildings had been designed as vitrines for the objects they housed. A ring-like complex of buildings—four small, three medium and one large—was punctuated by an access bridge; the ensemble formed an ambiguous, ellipsis-like boundary between its landscaped interior space and the rest of the fairgrounds. Each component building’s location was selected to work around stands of existing trees, which predated, and outlived, the Fair. Visitors walked among the pavilions on open-air steel bridges, looking down

onto gardens designed by Walter Rossow. Activity in the gardens was focused on a restaurant, a shaded seating area, and a small lagoon, all of which feature prominently in both official photos and souvenir snapshots. Despite the many images of the photogenic pavilions, there is, however, little documentation or discussion of the buildings' ground plane juncture; of the 208 pages in the official documentation, only the few spreads included here capture the klinker walls from which the glass 'vitrines' cantilevered, and the architecture these walls defined. Although underplayed, this material palette and constructed landscape relationship presaged Ruf's vocabulary at Speyer.

The site offered to West Germany at the Brussels fair grounds sloped down from the primary path along which all national pavilions were arranged. At the upper portion of the site, where the topographic differential was small, in the two pavilions that aligned north-south along the site's upper edge, the brick base was merely a retaining wall from which the glass and steel superstructure rose. In the site's southwest corner and in the largest of the eight pavilions, however, the solid brick walls were used as an opportunity to develop a different spatial order. Like the glazed upper stories, the architecture of these buildings' lower portions evoked the architecture of Mies van der Rohe's German Pavilion for the Barcelona World's Fair, but bespoke much more overtly the difference between Mies's rarified spatial studies and the ambition to provide an architecture of so-called 'lightness' for the everyday citizen represented by Ruf and Eiermann's pavilion.

Similar to Mies's Barcelona Pavilion and to other early house projects from his German career, Ruf and Eiermann's building deploys these brick walls to extend the buildings' base geometries into their immediate exterior spaces. Closer analysis reveals that beyond this gestural comparison, the similarity is only superficial. Sometimes adjacent to structural columns, sometimes replacing them and elsewhere located according to purely functional dimensional considerations, the walls in the Brussels Pavilion did not aspire to Mies' careful calibration of structural grid, space-defining walls and exterior spaces. Instead, the walls were used to accomplish a set of architectural goals quite different from, if complementary to, the fully glazed boxes above them.

One of the brick walls bracketed the lower corner of the site, linking Pavilions 3 and 4 to a small model house with a *Wohnhof*, or domestic courtyard. The wall's more mundane purpose may

have been to discourage entry to visitors coming from the back of the project and proceeding out of sequence, from the west rather than from the path along the eastern edge; spatially, the shifts and offsets between the longer, north-south bracketing wall and the pavilions adjacent to it generated an orchestrated spatial sequence recognizable to the viewer as a series of linked, at least partially demarcated interior and exterior rooms. This kind of clear, framed sequence occurs elsewhere in the complex only along vertical movement axes, in section, through cut-outs in the floor slabs, rather than in plan. Originating in the exterior walls, which bounded the model house, the wall encircled the domestic courtyard, offsetting slightly to allow for two narrow stairs bypassing the terraces of Pavilions 3 and 4, and terminated in an L-shape that defined a seating area below Pavilion 4. In doing so, the wall framed views at an intimate scale attuned to the 2-3 meter wide walkway along the wall's edge. It unambiguously separated the complex's interior from the spaces beyond its site, in a manner entirely unlike the isotropic glazed vitrines whose facades remained the same regardless of orientation and whose transparency from both inside and out gave the impression of endless, not demarcated, space.

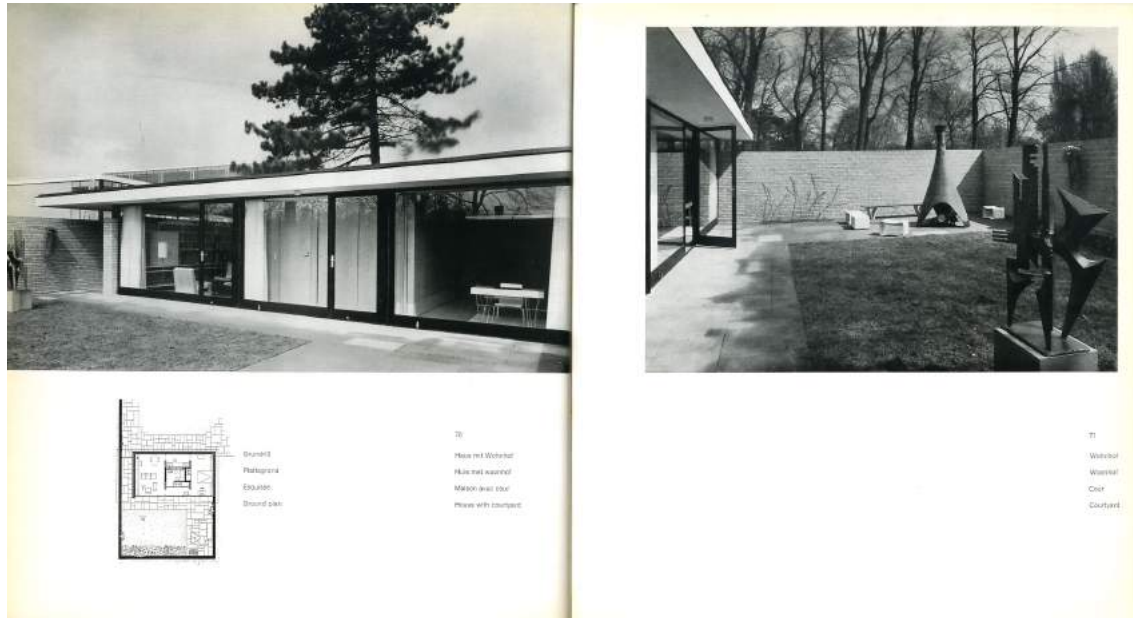




*Fischer (1958)* showing the library in Pavilion 8, interior and exterior views. pp. 74, 106, 108-109

The architecture of walls, especially those which defined the library in Pavilion 8 and its adjacent exterior spaces, allowed the architects to offer a few spaces with near-privacy in direct proximity to public activity. Right outside the book-lined library, populated in one photograph exclusively by studios, seated women, visitors relaxed in the sun – including two women stretched out flat on the round seating elements in a decidedly immodest posture for the standards of 1958. The women in these two photographs provide a subtext for the two juxtaposed spaces: decorous within the walled library, unrestrained on the open porch.

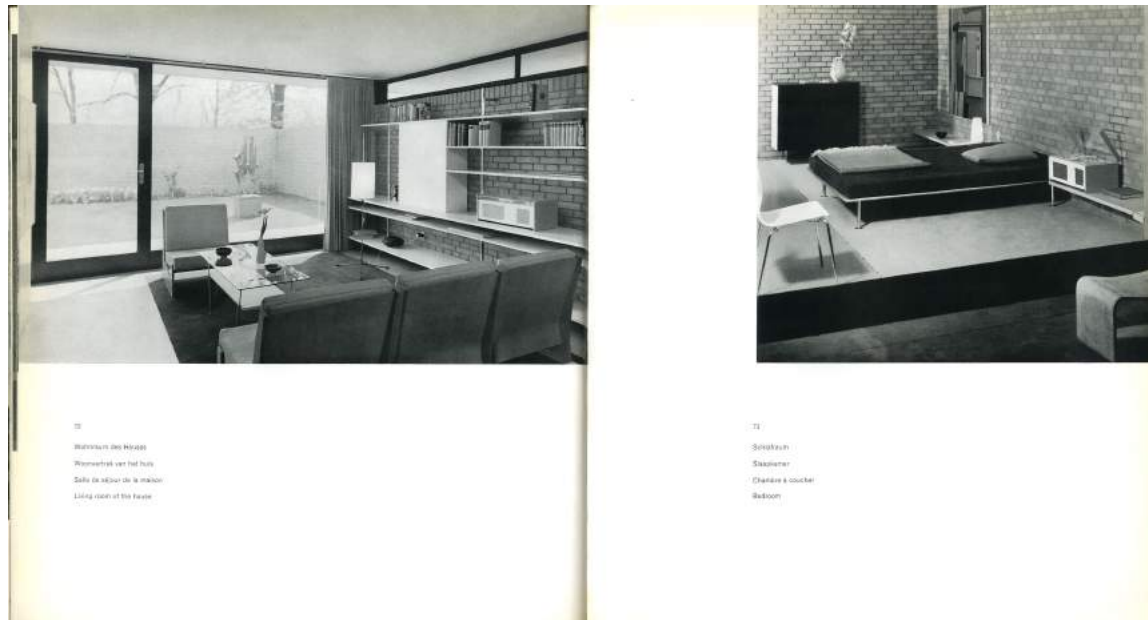




*Fischer (1958) Courtyard House, pp. 70-71.*

At the edge of the complex, the small courtyard house, enclosed by the full height wall that connected it to Pavilions 3 and 4, was excluded from the primary visitor route through the German exhibition. The extent to which it paid homage to Mies's Pavilion only demonstrated that the rarified atmosphere of a luxurious, perfectly crafted architecture devoid of function, created by Mies in Barcelona, had become the province of the middle class family. The compact interior space, a demonstration of how the typical West German lived, was fronted by a south-facing wall that opened on to a garden. A seating group and steel chimney had been substituted for the statue and reflecting pool that occupied the outdoor space of Mies's project, a humorous substitution that also affirmed the West German message that good functional design was integral to its democratization. The detailing of the house's black steel mullioned glass wall in black-painted steel, set back beneath a deep, thickly dimensioned overhanging was totally unlike the glazing elsewhere in the complex, in which struts, reveals and set-backs were used as an architectural technique to lend each element the thinnest possible appearance. The heavy frame at the base of the windows, where the glazing was fixed, was continued around the door to the courtyard in an equally thick dimension. The top of the fixed glazing was set without a frame into the roof overhang, allowing the ceiling plane to continue uninterrupted as an exterior eaves. This juxtaposition of heavy frame, clearly demarcating the difference between exterior and interior, to the absent header, implying continuity between those same two spaces, effected a careful balance between clear demarcation of a private realm and an embodiment of the new lightness

in architecture celebrated by the texts that accompanied the West German exhibition.<sup>600</sup> The proximity of these two spaces echoed the experience of the library – inside decorous and outside free – and of the several other walled spaces set off from the open, glazed architecture for which the exhibition would become exclusively known.



*Fischer (1958) Interior views of courtyard house, pp. 72-73.*

Although it has escaped nearly all mention in discussions of the pavilion complex, the walled architecture of the Brussels World’s Fair signaled an important spatial development for Ruf. He would go on to use it as a template for the Speyer project, as a means for both dealing with a difficult site and formulating a new, worldly yet modest architectural setting for students and civil servants in the making. This architectural vocabulary also provided an additional design asset. It served as an excellent context into which to introduce other referents taken not from contemporaneous West German architecture or from a Miesian constellation, but instead, explicitly, from the High Modern architecture of SOM’s corporate campuses.

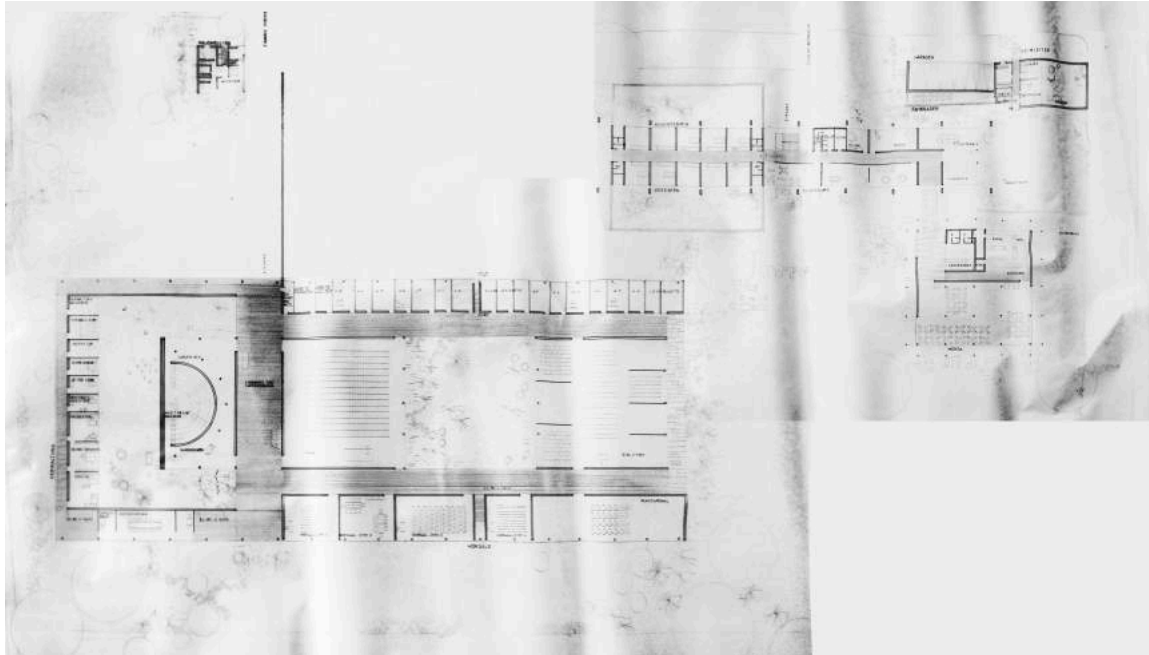
### **A Roman Atrium<sup>601</sup>**

“The ‘College Center’ with lecture halls, administrative offices and institutes is a new construction organized around landscaped interior courtyards akin to a Roman atrium. This provides a salubrious shelter from street noise. The lecture halls in particular receive light from these interior courtyards.”

“The architectural approach is distinguished by enormous clarity and a salubrious serenity in its landscape image. The grouping of buildings has a great deal of appeal and demonstrates a mature design ability.”<sup>602</sup>

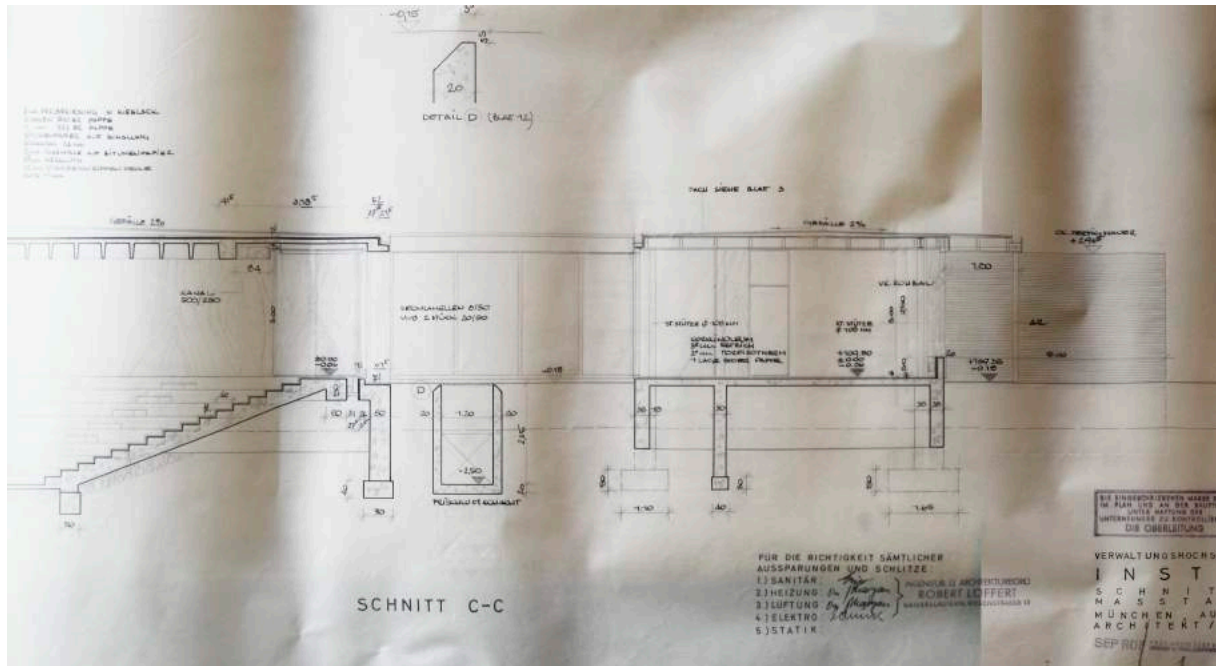
There was unanimous appreciation in both the competition jury and the popular press for the planning principles and massing Ruf developed for the Speyer College. The site, which had been the subject of such conflict because of its small size and exposure to a loud, heavily trafficked road on Speyer’s outskirts, did not at all conform to the new ideal of a campus ensconced in peaceful, natural surrounding, an ideal that contrasted to the historic position of European universities at the center of cities and reflected instead the appeal of an American or English campus typology. By proposing a deep, compact building configuration punctuated by interior courtyards in a typology that anticipated what Alison Smithson would later term the “mat-building,”<sup>603</sup> Ruf addressed both challenges simultaneously. The competition jury noted that only Ruf’s plan provided for future expansion to the campus buildings as needed and also praised the juxtaposition of the much larger central academic building to the relatively petite glass and steel cafeteria and infill masonry dormitory to its southeast. The compactness of Ruf’s scheme also promised greater economy and speed in construction, facts that likely also motivated the clients to accept the jury’s decision with little or no comment on the design itself.

Although all three are nominally courtyard campus schemes, the similarities among Ruf’s planning for the *Akademie der Künste* in Nuremberg, the Brussels Pavilion and the Speyer college are quickly exhausted. Unlike the suggestively defined courtyards that characterize the Nuremberg and Brussels campus planning, the Speyer building is organized around unequivocally closed interior courtyards, its relationship to the spaces outside of its boundary walls framed by heavy window frames, deep wood-clad overhangs and dark glazed brick walls extending perpendicular into the surrounding areas. Thus, in its massing, although not in its construction type, the college marks a new typological direction for Ruf, one that he would return to in the early 1960s for his reworked general plan for the *Germanisches Nationalmuseum* in Nuremberg (1962), the much smaller Olaf-Gulbransson Museum in Tegernsee (1962-1966) and perhaps his most well-known building, the Chancellor’s Bungalow in Bonn (1963-1964). The small courtyard house wrapped in the exterior walls of the Brussels pavilion campus may mark the inception of Ruf’s experimentation with this type.



Speyer campus plan, early; the main building depicts the auditorium on the left, library on the right and courtyard with adjacent lecture hall in the middle. *Dudenhoferstrasse* is on the left. As realized, the portion of the building containing the auditorium is smaller, and has only two small ancillary courtyards. *Collection of E. and N. Ruf, Gmund.*

In the Speyer building, the interior spaces were characterized by a muted material palette and limited side-lighting in contrast to open, planted courtyards, invoking an atmosphere of studious quiet and focus. Room heights were relatively generous in the broad corridors running along the courtyard perimeter and in the seminar rooms and offices; the same or similar ceiling heights gave larger spaces greater modesty. The architecture seemed in this way to elevate the work of the small academic groups by giving the rooms dedicated to them greater presence. The consistent ceiling height was therefore proportionately lower in the primary lecture hall, raised only slightly above the rest of the building, and remained flat in the auditorium, whose banked section was achieved by burrowing the space into the ground. The decision not to deflect the roof markedly to these larger rooms seems intended to ensure that the larger gatherings of students focused on a single professor had none of the potential demagogic implications that a more honorific-seeming hall could have had. On the exterior of the building, the even-handed massing meant that the college's inner working remained largely unexpressed to the outside. Only inside the building, as one moved between the bright, sidelit spaces adjacent to the courtyards and the rooms with their dark, varied material palettes, was the spatial parity among spaces for administrators, teachers and students revealed.



Section through the auditorium (left), the adjacent interior courtyard and the entrance (right). The roof height is continuous, with no manipulation to emphasize the auditorium. *Collection of E. and N. Ruf, Gmund.*



The auditorium looking towards the glazed wall adjacent to the interior courtyard showing side lighting. *Speyer Tagespiegel, September 14, 1960. Collection of E. and N. Ruf, Gmund.*

The decision to orient this building inwardly was, at least nominally, a prudent response to the site's disadvantages. Its proximity to a heavily trafficked road leading out of Speyer, *Dudenhoferstrasse*, had been noted in the competition brief distributed to the four architecture

firms invited to participate.<sup>604</sup> In advocating for Ruf's project, the jury noted that "particular value is attached to the way traffic noise is shielded by building technical means."<sup>605</sup> Certainly the concentrated *parti* was appropriately applied to this site challenge; but it is hard to imagine that this was Ruf's entire motivation favoring this fundamental architectural decision. The way in which the courtyards were developed points to other interests, and to other references, which would already have been associated with a new administrative class.

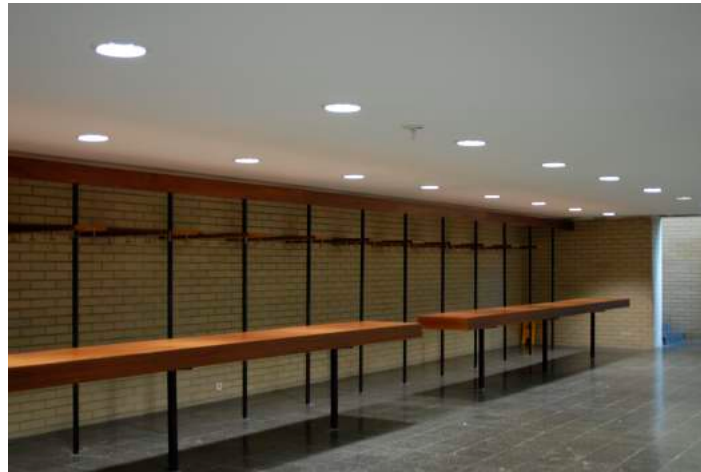
### **The Corporate Campus**

In very specific ways, the College of Public Administration complex evidences Ruf's familiarity with and interest in Skidmore Owings and Merrill: the courtyard landscaping that Ruf would realize there owes much to the collaboration between Noguchi and SOM, first celebrated in Lever House's popular reception; and the façade detailing, so completely different from what Ruf had pursued in projects only a short time before, more greatly resembles the Manufacturers Trust Company Bank (1951-1954) than Ruf's own *Academie der Künste* of those same years. The two buildings had both been published in Germany prior to the competition, Lever House in 1954 and Manufacturers Trust in 1956,<sup>606</sup> establishing plausibly that Ruf, and other German architects, would have known both buildings. In the case of Manufacturers Trust, the publication included a detailed section, which could have offered Ruf at least some basic information from which to develop his own façade construction.

The most likely *parti* reference for Ruf's project was, however, not the midtown office tower but rather, SOM's corporate campus typology. Only one of SOM's corporate projects had been covered by German journals prior to 1956, the Pan American Life Insurance building in New Orleans, published in fall 1955, but it was a bar building similar in scale to SOM's consular projects. Corporate headquarters projects located outside the city and conceived as campuses would not appear in German architecture journals until 1957, with the publication of the Kimberly Clark complex in Neenah, Wisconsin. Connecticut General Insurance Company (1954-1957), SOM's quintessential corporate campus project of the mid-1950s, was not published in Germany until well after the Speyer competition. Although access to these projects through German publications would have been possible during the College's design development phase throughout the late 1950s, the earlier original *parti* predates publication in Germany of SOM's American corporate campuses. While the actual source of Ruf's information on these projects

remains unknown – it is easy to imagine that Otto Apel could have passed along documentation of SOM's campuses, although his contemporary projects for Lufthansa at Frankfurt airport contributed to a different international architectural genre in which SOM was also involved, the long span building – the American corporate campus influence in the Speyer college, with its deep, flat floorplates punctuated by formal landscaped courtyards providing side light for adjacent rooms and corridors, is apparent. If one considers the milieu for which Ruf was asked to build, this choice of reference makes considerable sense. In the case of Connecticut General Life, the large insurance company had chosen to move out of the city and to realize a design, which expressed literally the transparency and horizontality of its new corporate structure. In the Speyer project, the move out of the city had been forced upon the college but the suburban campus type was ultimately embraced. What better environment for future administrators than one based upon an idiom, which was internationally recognized as a means to support efficiency, worker productivity and a culture of contentedness with the status quo?<sup>607</sup>

The material palette and fit-out developed by Ruf's office reinforce this reference, providing a decorous, although not obviously luxurious, everyday ambience. Except for the ribbed ceiling in the auditorium or the exposed beam grid in the lecture hall, the structural concrete walls and roof slabs are invisible, concealed beneath glazed brick wall cladding and spruce strips that cover the underside of the roof both inside and on the eaves. The floors are dark linoleum installed above a cork underlayment except in the lower level cloakroom, where black artificial stone was set above the foundation slab. Wood parquet flooring set in asphalt was originally foreseen for the lecture hall but ultimately, it, too, was covered with the black sheet linoleum used elsewhere. In contrast to these sober and unpretentious materials, all partition walls, doors, built-ins and custom-made furniture were veneered in Macoré, a reddish West African wood. The veneer represented a careful median between the explicit luxury of the extravagantly grained tropical woods favored by Mies and his acolytes, and the more somber tones characteristic of European hardwoods. The Macoré had a relatively ordinary grain; only its deep, unusual color indicated its exotic origins. Anyone other than a connoisseur would only subliminally notice the veneer; otherwise, its vaguely rich appearance lent the otherwise quotidian palette an elegant note.



*Left: Macoré, spruce and maple veneer fit-out in professor's office; Right: Macoré veneered cloakroom tables and black-painted steel uprights. Photos by the author.*

The built-ins were spare: floor to ceiling panels of Macoré for the cafeteria buffet, black-painted steel supporting simple Macoré-veneered table tops in the cloakroom, unusually high doors and partition walls also veneered with the same tropical wood. In the few instances where doors were lower than ceiling height, black-painted steel frames were used to define transoms, which set a horizon for the adjacent built-in cabinetry. Even if only clear upon closer inspection, everything was intentionally designed, from the hooks on which secretaries hung their handbags at their desks to the wall clock. By juxtaposing simple and exotic components, Ruf constructed an environment expressive of both a down-to-earth sensibility and a patina of refinement and good design. It was the world of the 'little man' reconceived for the civil servants who would assure that the little man's world maintained its orderliness.





*Left: Wall clock on a black glazed brick wall with spruce ceiling cladding; Right: Secretary's table with handbag hook. Photos by the author.*

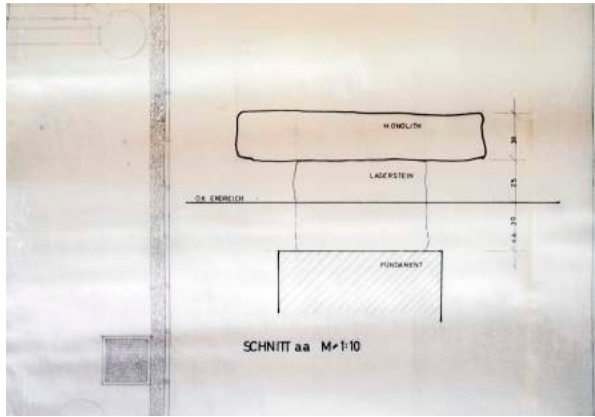
## **Inside/Outside**

The primary courtyard in the Speyer college, framed by a lecture hall and the library on its two short sides, centers the building geometrically, spatially and socially. Its long edges are flanked by fully glazed corridors, the sole circulation along that axis of the building. Administrators accessed their offices on the courtyard's east side; students and professors moved among seminar rooms and faculty meeting rooms on its west side. The entire school population could watch one another across both the length and width of the courtyard.

The main courtyard's landscaping and outdoor features, designed and detailed by Ruf's office, contrast to the building's regular, repetitive geometries. All of Ruf's site drawings, without exception, from his earliest drawings as a student of architecture through his late projects in the 1970s, depict the plant life that would make up his buildings' proximate landscapes. Early plans of the Speyer campus are no exception: along the building's exterior are circles, indicating larger trees, as well as freehanded patches of leaves in radial organization, stippled areas representing lawn, and irregularly dimensioned rectangular pavers. The main interior courtyard has a similar array of plantings, although the pavers there are set individually into a lawn area rather than combined to form a larger hardscape. Smaller and larger tables with chairs also punctuate the main courtyard, positioned on its edges closest to the west corridor. The landscaping as depicted in this drawing is close in character to the more naturalistic plantings in the courtyards at the Nuremberg Academy of Art, in which the grassy, tree-planted courtyards correspond directly to the park landscaping of the adjacent site. It also seems in character with the landscape developed for the World's Fair with Walter Rossow: a composition of rectilinearly framed areas for seating, fountains or ground cover juxtaposed to freeform plantings around larger trees. Rossow's courtyard design for the Academy of Art in Berlin (1957) give a sense of what Ruf might have envisioned at this early stage: shaggy grasses, water features and simple artificial stone pavers or borders.<sup>608</sup>

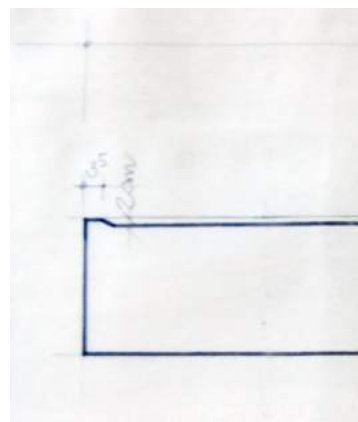
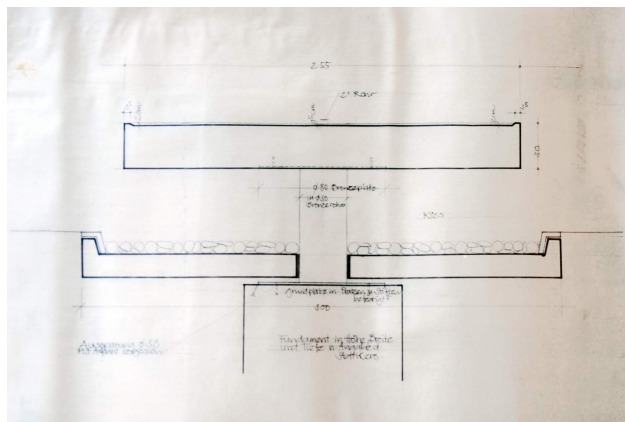
Nothing in these earlier drawings and projects seems to presage the courtyard design as realized. The courtyard's south end is occupied by a 3 meter-wide fountain, spanned an irregular, rough-hewn stone. A square basin elevated on a 45 cm stem, through which a





Top and Bottom Left: Detail drawings of the fountain, *Collection of E. and N. Ruf, Gmund*. Bottom Right: View from the fountain across the courtyard to the main lecture hall ca. 1960., *Fisch, op. cit., p. 24*.

The stones in the fountain and bridging element, despite their naturalistic appearance, were drawn and dimensioned in centimeters. Although the bridging stone, called out as a “monolith” on the drawing, was underpinned by a concrete foundation, the intermediary stone on which it rested continued a full 30 cm below the ground plane to guarantee that the technical engineering required for its erection would never become apparent. Instead, the coarsely chiseled monolith appears to balance with archaic precision on top of the equally rough plinth. The stone basin at the other end of the fountain was worked with much more obvious precision. Its narrow lip barely holds back the water flowing into the shallow basin before it displaces to the reflecting pool below.





*Top Right and Left:* Detail drawing of Ruf fountain, full drawing and fountain lip, *Collection of E. and N. Ruf, Gmund*. *Bottom:* Stone fountains at Connecticut General Life, from <http://skidmoreowingsmerrill.tumblr.com/search/noguchi>, accessed March 15, 2016.

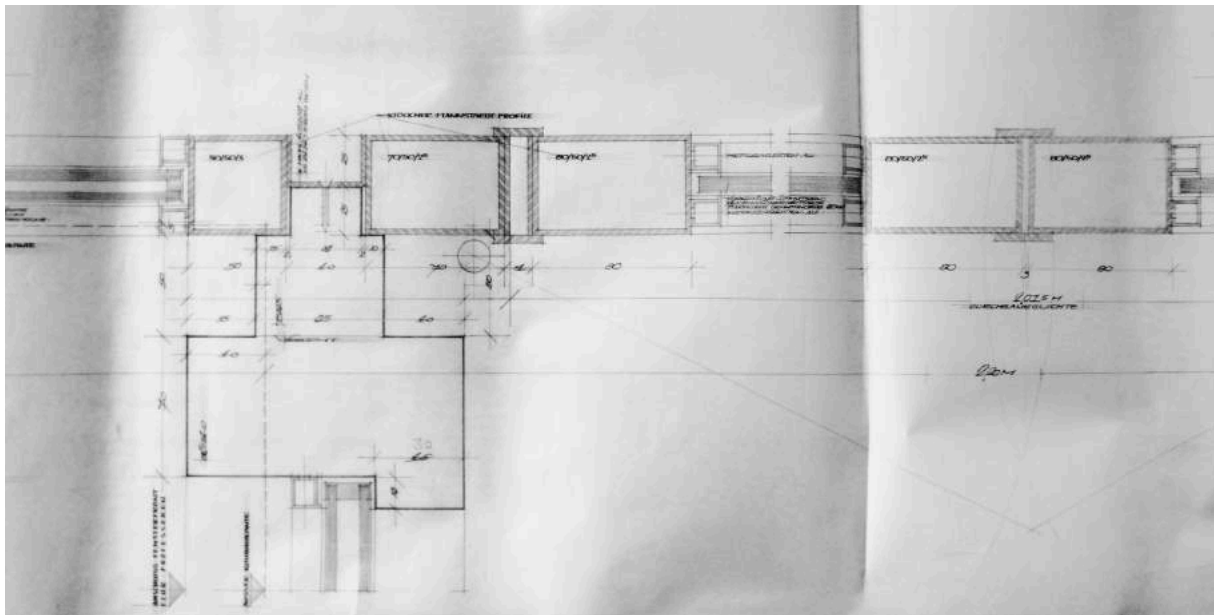
As is true of the corporate campus *parti*, the closest precedent for the fountain, and for the juxtaposition of the rough chiseled monolith to the precise, highly finished building, was again to be found in Connecticut General Life's headquarters. The first realized collaboration between Gordon Bunshaft and Isamu Noguchi, the campus's four interior courtyards are controlled juxtapositions of sleek curtain wall perimeter and the elements which would come to define Noguchi's corporate landscape vocabulary: water, gravel, finished and rough stone, monolithic rocks all carefully placed in a way that referenced an idealized Japanese garden tradition.<sup>609</sup> Ruf's fountain, with its thin, nearly invisible lip and reflecting water surface, owes more than a passing debt to Noguchi's circular fountains at Connecticut General Life. In the much smaller space of the Speyer courtyard, the monolithic bridge is an apt translation of the larger stepping stones so tempting in Noguchi CGL landscape that even a captain of industry had agreed to be photographed while skipping across them.<sup>610</sup>



Connecticut General Life fountain, and stepping stones, *Life Magazine* (October 21, 1957).

### **Windows and Curtain Walls**

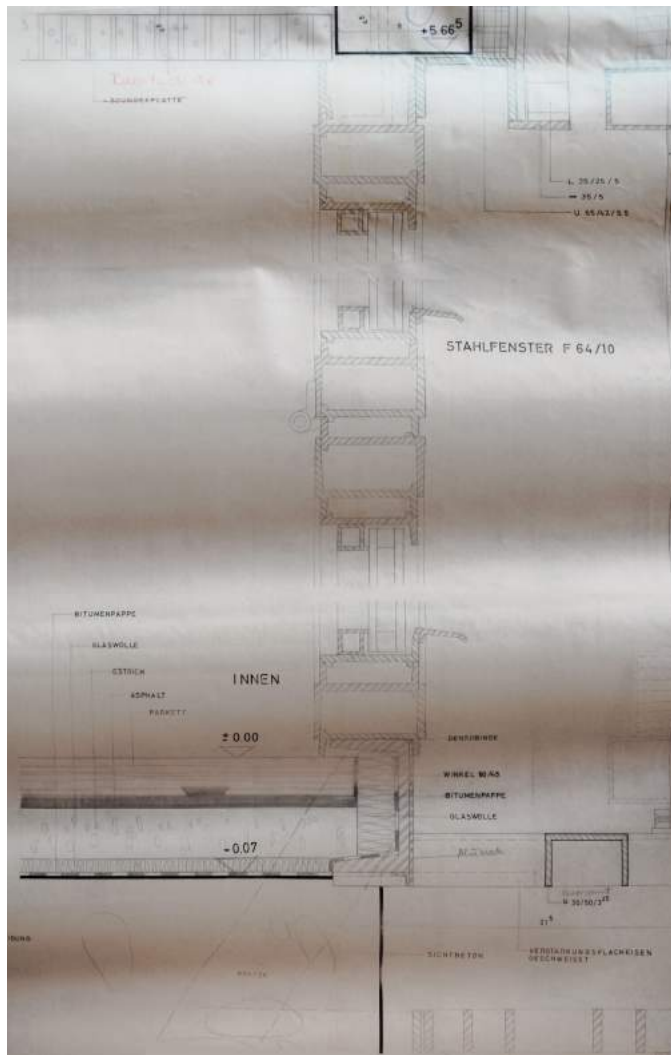
Unlike both the *Akademie der Künste* and the Brussels Pavilion, the façade construction at the Speyer college is heterogeneous, with different construction typologies ascribed to different parts of the building, including aluminum fixed glazing, operable steel windows and some glazed wood-framed door and windows, all of which are robustly dimensioned. The detailing evidences a much more sophisticated material palette and building-physical considerations than had been true of Ruf's work only shortly before: insulation at façade to concrete junctures, highly specific instructions for installing heating systems, built-in window roller shades, and the huge variety of metal façade components attest to a vastly more sophisticated building industry and construction practice as well as Ruf's engagement with it.

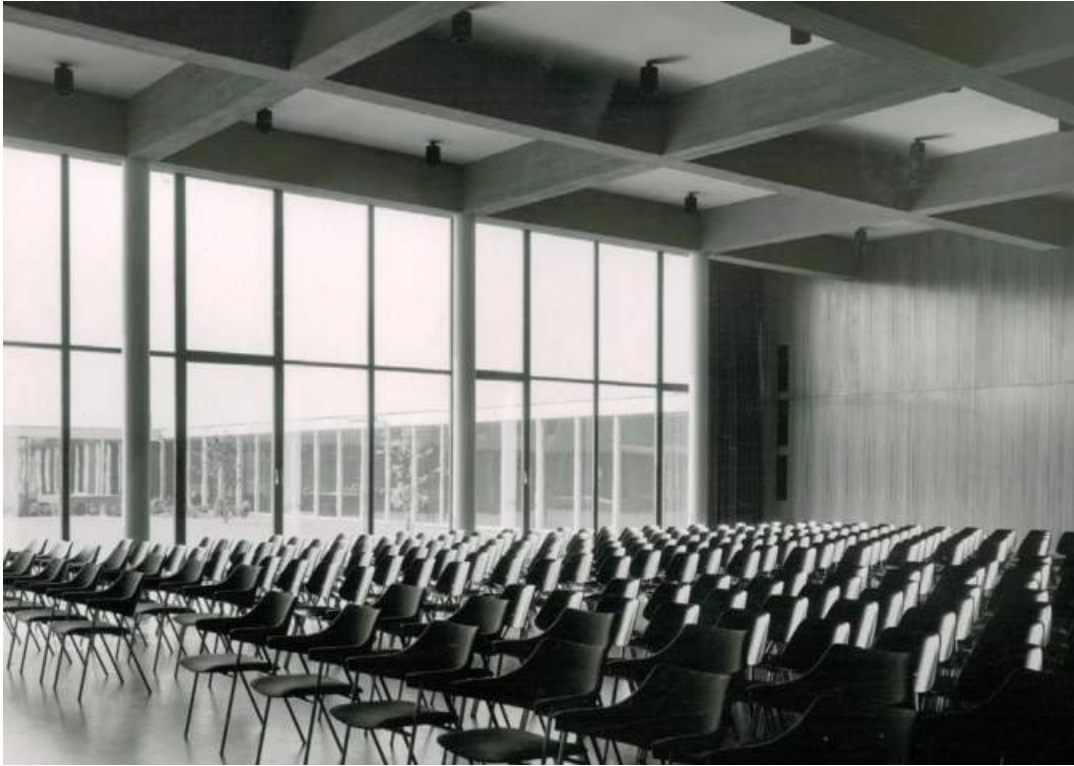


Top: View from the corridor in the administration wing into the courtyard, *Fisch, op. cit., p. 66*. Bottom: Horizontal section, corridor façade, *Collection of E. and N. Ruf, Gmund*.

Aluminum fixed glazing flanks the courtyard, fronting the corridors between lecture hall and library. It comprises heavy, 70 or 80x50 mm aluminum box sections, extruded by Klöckner, the same company that had fabricated the steel doorframes used in the Nuremberg *Akademie der Künste*. In the Speyer corridor façade, double-glazing has been mounted using chunky 15mm aluminum glass stops. Junctions between sections of façade frame are overlaid with additional 25x8mm flat aluminum bars. Unlike the reveals which Ruf had deployed in building up the Nuremberg window sections to retain the appearance of lightness and thinness in the frames, these flat bars emphasize the solidity and heaviness of the façade frames, which read as an overall 160mm wide frame, not as two conjoined, smaller 80mm frames. The sharp-edged

aluminum rectangular tube frames, joining bars and glass stops, had little plasticity: the offset among them was no more than their respective material thickness, around 2.5-3mm. The low, controlled relief was even flatter than what Ruf had achieved in the Munich American Consulate, and nothing even remotely like the cast shadows he had used in such earlier projects as the Nuremberg *Akademie der Künste* to create the impression of smaller dimensions in the window frames. The corridor facade is also unlike the early aluminum façade products developed by companies like Josef Gartner for shop windows and vitrines (see Chapter 6), which had used relief to downplay the thickness of profiles. Rather than emphasize the reciprocity between interior and exterior spaces by dematerializing the frames which hold the fixed glass panels by means of light color or high relief, Ruf's courtyard walls emphasize and consolidate the line of demarcation they form. Their flush surfaces underplay their tectonic history in favor of solidity and abstraction.





*Top: Steel façade at lecture hall, vertical section, Collection of E. and N. Ruf, Gmund. Bottom: View from lecture hall to steel façade and courtyard, Fisch, op. cit. p. 72.*

For the areas of the building with higher floor-to-ceiling spans, Ruf chose steel rather than aluminum. The steel façade designed for the tall glazed wall of the lecture hall on the courtyard's west edge uses no fewer than eight specifically configured steel channel shapes, finessed so that the upper hopper windows and the doors below appear identical, except for their motion. Like the aluminum façade in the corridors, the steel sections are assembled in low relief, with only minimal offset among components and glass stops. Detailed almost perfectly in plane, the steel frame is a hefty 150mm at the horizontal between door and hopper and 80mm at the jamb and sill. By contrast, the steel windows for the Nuremberg Academy were 38mm in height, and were offset 15mm from the 40mm fixed frame to appear even more slender (see Chapter 3). Each of the steel sections used in the Speyer College were manufactured for exclusive use in this particular façade construction. The presence of integrated drips, overlapping legs and interlocking components attest to this specificity of manufacture. This, too, is totally unlike the Nuremberg façade, which had been built up from much simpler, generic steel sections. In its component complexity, the lecture hall façade attests to the significant transformations undergone by the West German façade industry between the early and mid-1950s. Its heaviness, which corresponds to the aesthetic governing the adjacent aluminum façade and is



emphasized by the coat of dark paint, bespeaks a very different conception of how to effect transparency. In the case of the lecture hall, the structural columns behind which the glazed wall stretches and the beam grid that subdivides the ceiling define an open-web space against which the backdrop of the courtyard garden is framed. The juxtaposition of interior web and garden across the full height glass wall does not imply absolute continuity between interior and exterior, but instead, a parity of two adjacent conditions separated by the independent plane of glass.

The emphatic detailing of the plane of separation between interior and exterior at the Speyer College was not meant to undermine or detract from the relationship between the building and its proximate landscape, however. Elsewhere in the building, the clearly drawn line of glazing was intersected by other perpendicular planes, whether eaves clad in the same wood slats as the interior ceiling or walls clad continuously in brick, which effected interior-exterior continuity by material rather than spatial means. Along the building's exterior, for example, in the rooms facing outwards rather than towards the courtyard, this meant a solution unprecedented in Ruf's institutional work but suggestive of the courtyard house developed in Brussels, and in his other contemporary residential projects. The demising walls between each of the larger seminar rooms were extended beyond the plane of enclosure, well past the roof eaves almost to the full depth of the room behind. Exterior shades are located at the eaves edge in a clever detail that uses the differential between the roof's structural height and integrated roller shade shorter dimension to configure a gutter behind the fascia along the roof's edge. As was the case in Ruf's other projects, the junctures between elements was skillfully concealed so that the emphasis of the architecture fell on its finish surfaces and spatial configuration rather than on the act of construction or tectonics of assembly.



consulate commission, resonated in Ruf's case with his evolving thinking about the relationship between interior and exterior spaces, and his changing aesthetic predilections. No less important for the Speyer project was his encounter with SOM's ability to express a new breed of administrative culture. Throughout his career, Ruf's construction drawings evidence the intensity of his dialogue with the architectural implications of construction decisions. He always worked closely with the fabricators of his building's façade elements,<sup>611</sup> making him perhaps even more sensitive to changes in available products and practices. The finesse of his construction detailing sensitized him to the High Modernist idiom manifest in SOM's German work. His particular engagement of building technology offers occasion to rethink the German experience of the American Century in its architectural and technological permutations.

## Chapter 9

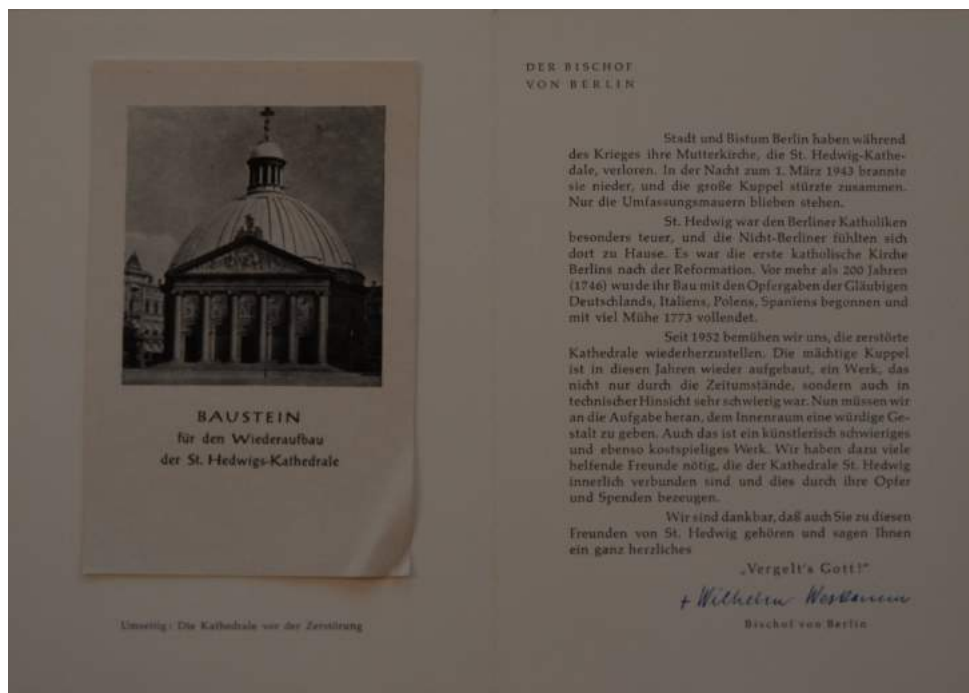
### Hans Schwippert's *Hedwigskathedrale*, 1956-63

**“...to stand for uncorrupted form where corrupted form fills the market...”<sup>612</sup>**

Internationally focused and broadly influential in his *Werkbund* capacity, Hans Schwippert enacted his architectural practice during the late 1950s and into the 1960s with a much lighter hand. The control he exercised overtly as well as behind the scenes on the publications, exhibitions and political agendas completed during his *Werkbund* tenure contrasted with his communications modalities as an architect. His inclusionary strategies for conceiving and realizing architectural work dated back to the 1930s and were apparent in the way he had detailed elements of the *Bundeshaus*, in spite of its break-neck pace of construction (see Chapter 2). In contrast to standard practice, Schwippert's detail drawings were only lightly annotated, so as to communicate how geometries were to be derived and exterior dimensions held but did not proscribe how those results were to be achieved. They were instructions for action rather than dictates focused on an inflexible outcome. They communicated his knowledge of, and respect for, the act of building as skilled, thoughtful labor. In this regard, Schwippert's approach to architecture was particularly well-suited to the immediate post-war culture of the *bricoleur*, if by necessity: the lack of standard materials and products with which to achieve a particular effect could only be overcome by construction finesse and ingenuity, both best realized in a collaboration between architect and craftsman. In this sense, his was an architecture that could operate with lesser means in terms of its material demands, depending instead his thorough knowledge of and trust in construction as a social practice.

This approach, as well as his strong connections to the Catholic Church in the Rhineland area, made him the ideal choice for the project that can rightfully be considered the most prominent public buildings of his late career. The renovation of St. Hedwig Cathedral in East Berlin (1956-1963) exemplifies Schwippert's ability to negotiate, and thrive within, a culture of material shortage. Commissioned and executed during West Germany's *Wirtschaftswunder* and, in large part, during and after the building of the Berlin Wall in 1961, the renovation required that Schwippert and his Düsseldorf office negotiate material limitations by accommodating, if not by circumnavigating, political barriers. These barriers were significant: the timing of East Germany's permission for and funding of the project in July 1961 to the amount of 260,000 Marks predated

the building of the Wall by only a month.<sup>613</sup> Because the project was jointly funded by West and East German agents, all purchases, commissions and materials were subject to double scrutiny; the shadow economy that might otherwise have provided unavailable resources in post-war East Germany<sup>614</sup> was not viable for the project. East Germany's focus on housing and public buildings, and its political aversion to religious organizations, mitigated against the diversion of scarce physical resources to the renovation. By any measure, Schwippert's seven year undertaking to re-consecrate the St. Hedwig's Cathedral despite the modest means at his disposal—as recorded in articles, letters, drawings and such documents as entry visas and detailed bills of lading—was no less heroic than his completion of the *Bundeshaus* renovation in less than a year.



Acknowledgement for donations from Bishop Westkamm, *Cathedral of St. Hedwig archive*

Schwippert's writing about the project focused primarily on the design process and his vision for the space. Still, with typical self-effacement and collaborative sensibility, his self-published brochure on the project begins by acknowledging the three architects in his employ during the project and the East German architect, Theodor Blümel, who was his site architect and who died unexpectedly late in the course of construction.<sup>615</sup> Blümel's history with the church predated Schwippert's: he had been involved in the engineering logistics of the church's new dome, built in reinforced concrete between 1951 and 1954 to replace the collapsed original wooden dome

from 1773. Unlike the later interior renovation, the dome's reconstruction had been treated as a high-visibility national project, employing the largest construction combine in East Germany and using the centrally located site to showcase concrete prefabrication. Blümel's relationship to the church and to its rebuilding as evident in an article he published in 1954 and in the voluminous correspondence that accompanied the building process in collaboration with Schwippert, offers insight into the undertaking's political, interpersonal, religio-social and material implications. The frequent and often touching correspondence<sup>616</sup> between Blümel and the site foreman, Horst Poller, reflects the intense personal commitment that allowed the project's realization despite limited resources; that same commitment played well to Schwippert's laconic construction documents. By developing a fuller account of conditions on the ground during the project, Schwippert's depiction of a design process that actively acknowledged the wider scope of authorship can be given contour. Stories of how materials were procured for the project, documented in both visa requests or bills of lading and interviews with Schwippert's associates, express in anecdote how this particular project linked the material act of construction to a unique social construct and context.

For Schwippert, whose efforts in *Werkbund* context made clear his cognizance of consumerism as the driver of form in postwar society, this project offered a clear divide between what he called "work" and "ware".<sup>617</sup> As architect, he claimed, it was his responsibility to defend this difference. "I thank my colleagues in work," he said in a speech on November 1, 1963 upon the Cathedral's consecration. "I hate, with them and on their behalf, the conflation between work and ware."<sup>618</sup> Even at that moment, as the first larger audience convened to admire the new building, its author insisted on distinguishing between the labor and skill invisible to them, and the physical outcome they enjoyed. The documents that made possible the Cathedral's reconstruction through an interplay between West and East German actors, and the way in which instructions were transmitted down to the construction detail, give credence to what otherwise would seem a disingenuous rejection by Schwippert of consumer-oriented design and its objects. It argues for the affinity among Schwippert's ideal of architecture as social enterprise, the construction process as bespoke and deliberate and an architecture characterized by material challenges, different in almost every regard from the developed material economy for which Ruf's contemporaneous architecture showed such affinity.

**"...The Fabrication Facility...at the Cathedral's Portal"<sup>619</sup>**

In early 1954, Blümel produced a highly technical article published in East Berlin in the monthly magazine of the GDR Ministry for Construction and Residential Economies and the Professional Construction Association. His author byline, unlike many of the other featured authors in the magazine, noted no affiliation with a central government organization: Blümel remained independent of, although known to, larger construction combines throughout his professional life, to Schwippert's great advantage. Blümel's article describes precisely the technique and static calculations behind the then-nearly completed segmented concrete dome atop the Hedwigs-Kathedrale. Its technical language softens only to express the author's sympathies when describing the conditions under which the Cathedral was damaged and ultimately slated for reconstruction. As he implies, the building's reconstruction was, in the context of postwar GDR decision making, not at all a foregone conclusion: although the *Staatsoper*—its immediate neighbor on *Bebelplatz*—was undergoing restoration around the time that the decision to permit reconstruction at the church was made, the Berlin palace had already been taken down. The fates of other damaged buildings along *Unter den Linden* varied, leading to either demolition or reconstruction regardless of architectural merit. In this context, the motivation within an adamantly secular society of limited means to rebuild a heavily damaged Catholic Church is particularly interesting.

Blümel's article offers some indication of how this decision might have been made, and how the East German Ministry for Construction might have turned it to distinct advantage. The Catholic Church maintained a single diocese in Berlin after the war, although the Catholic provinces that had been ceded to Poland became part of other jurisdictions.<sup>620</sup> The archbishop's residence, however, was in Berlin-Charlottenburg, in the city's Western sector; St. Hedwig's, the primary Cathedral, was on the other side of the political line, overseen by Monseigneur Heinz Endres.<sup>621</sup> Blümel's article refers vaguely to this inherent political dilemma. He wrote,

"In the night of March 1, 1943, the building was destroyed by Anglo-American bombs. Following the catastrophic fire, only the Cathedral's exterior walls remained. The dome of the venerable crypt was severely damaged by the entrance of water. By means of intervention by forces with a sense of responsibility, expressed in shared efforts to rebuild the Cathedral with state and church means, resistance was given to any further destruction. The cleanup and reclosing of the crypt vault was completed by volunteers. The order for the reconstruction came from Bishop *Wilhelm Weskamm*."<sup>622</sup>

The text walks a fine and careful line, using language to attribute the church's destruction to typical negative portrayals of the Western allies but then reverting to the passive voice and an abstruse reference to "forces with a sense of responsibility" to characterize the collaboration between the East German state and its ideological and geographic antithesis, Catholics in West Germany. Bishop Wilhelm Westkamm would later be responsible for commissioning Schwippert directly for the interior renovation project, which followed the come rebuilding a few years later. At the time of the article's writing, however, only the reinstatement of the domed roof was at stake, although Blümel's words do not make that entirely obvious.

To restore the church to its full functionality, including its liturgical equipment, may have been a political goal beyond the scope of the early 1950s. The restoration of the enormous dome, however, which measured 38.6 meters in diameter, offered the confluence of two agendas: the preservation of the Cathedral building, for which the Church and its parishioners in East and West were willing to pay, and the opportunity to demonstrate at a central location in the capital city the impressive technical and labor potentials of the GDR building industry. The project was a technical tour de force. For planning purposes, the dome was geometrically subdivided into 84 equal segments. An enormous tower 30.7 meters high was built at the church's center; it was to support a compression ring 8 meters in diameter upon which these segments would rest. The upper 1.1 meters of masonry was removed from the exterior drum which had survived bombing and replaced by a round, reinforced concrete ring beam, cast in place onto a special double layer of copper flashing between which graphite was applied. The purpose of this copper layer was to allow the beam to move against the masonry walls, which had not been designed for its thrust. A crane was built at the primary portal to position the segments, which would require centimeter precision, a tiny percentage margin of error given the scale of each piece.

It was the production of the 84 segments, however, which provided the most attractive opportunity to the GDR Ministry of Building. In 1954, when Blümel's article was published, industrialized concrete prefabrication was increasingly understood to be a solution to Socialist building both as a practical and an ideologically powerful alternative to bespoke on-site traditional methods. The article immediately succeeding Blümel's in the newsletter, for example, offered a late 1920s case study in concrete prefabrication for housing completed by a Dutch company in the southeastern Berlin district of Karlshorst. By Spring, 1955, the first Building Conference of the German Democratic Republic (*Baukonferenz der DDR*) had declared



industrialized building “democratic” and shortly thereafter, the GDR Ministerial cabinet had translated that declaration into law.<sup>623</sup>

Although the agenda associated with industrially produced large-scale prefabricated concrete construction had yet to dominate the building sector and the popular imagination as the *Platte* ultimately would, the St. Hedwig’s Cathedral construction site performed as an open-air factory, offering first-hand experience with mass produced concrete fabrication to anyone traveling through the center of Berlin. Four concrete positives, themselves made from concrete cast into wooden formworks on site, then polished, were erected in the public plaza in front of the church. The segments were cast onto the positives, then released after curing using suction at their two ends. Images show no fewer than six workers involved in the release process. Each of the four cast segments had to be placed, using a crane with a gantry arm, before the next set of segments could be cast. It is not hard to imagine how the rhythm of fabrication, release and placement of these enormous pieces would have dominated the view from *Unter den Linden* across *Bebelplatz* for the nearly three years required to complete the work. The activity was a tangible sign of a nation rebuilding and of the power with which its building industry supported it.

**“I had the impression that you were not the only one to find Schwippert sympathetic...”<sup>624</sup>**

Since its planning under Friedrich the Great of Prussia in 1745,<sup>625</sup> St. Hedwig’s value as a political symbol had been, and remained, significant. It was the first Catholic church to be built in Berlin since the Reformation; thus, by virtue of its prominent location and royal patron, it served initially as a symbol for Berlin’s policy of religious tolerance. It also fulfilled a political role by recognizing the faith of largely Catholic Silesia, a newly German territory and the homeland of St. Hedwig herself. At the same time, Friedrich the Great’s insistence that the building be modeled on the Roman Pantheon aligned the church with an architectural tradition of geometric, technological and philosophical referents associated with a rationalist tradition; it also gave rise to the liturgical challenges of a centralized plan, to which Schwippert would also have to respond two centuries later. In 1955, when Schwippert first visited the church,<sup>626</sup> it was perhaps the most important religious stepchild of the internal German East-West divide during a period when West German Catholic Chancellor Adenauer’s Christian Democratic Party dominated the *Bundestag* with well over a full majority. The rebuilding of Christian churches throughout West Germany had

been a first order of business throughout the early post-war period, indicating the central role played by a popular return to religion in the aftermath of the war. The situation for church reconstruction in East Germany was particularly critical by 1955: as of 1953, the GDR ended the distribution of tithes collected through taxation to the churches. Although churches were still allowed to demand tithes through their own collection, any plans to complete construction and facilitate religious practice in St. Hedwig's were made much more difficult without the support of a centralized funding mechanism.<sup>627</sup>

Monseigneur Heinz Endres' strategy was to appeal instead to a broader network of Catholic cultural actors. A letter dated September 10, 1954 refers to a set of plans for the church provided by Endres, indicating that he had already begun preparing the ground for an interior renovation even before the work on the dome was entirely complete.<sup>628</sup> The letter was written by Leonhard Küppers, a cleric and art historian who at that time was Chaplain and Professor for Christian Art and Iconography at the Academy of Art in Düsseldorf, as well as director of the Subrectory for Art of the *Pax Romana* or MIEC, the International Movement of Catholic Students.<sup>629</sup> In the letter, Küppers acknowledges receiving Endres's drawings and describes a consultation with "Dr. Weyres," then architect for the Archdiocese of Cologne,<sup>630</sup> where Schwippert's friend and mentor Rudolf Schwarz had served as General Planner until 1952. By 1954, Schwarz was also teaching in Düsseldorf, alongside both Küppers and Schwippert; contact between Küppers and Weyres may also have come from within the various Catholic organizations in which they shared membership. Küppers' letter said little about the plans themselves, however. Instead, he shared with Endres the content of two conversations with Bishop Weskamm of Berlin: in an initial conversation in the summer of 1954, Weskamm had told Küppers that the plans for the church's interior were still "premature."<sup>631</sup> In a later conversation, however Küppers reported, "In Fulda, I spoke with his Excellency personally. His Eminence suggested that I still wait until he was back in Berlin. I myself cannot come before October 18<sup>th</sup>...I believe to have heard that this date would also be suitable to his Excellency."<sup>632</sup> Weskamm's participation in the project, facilitated by Küppers' intervention, would prove decisive: in 1955, upon the twenty-fifth anniversary of the Berlin Bishopric, Weskamm announced a significant fund raising effort for rebuilding.<sup>633</sup>

Küppers' efforts on behalf of St. Hedwig's were not limited to behind the scenes persuasion to move the project ahead. As art historian with a particular investment in urbanism and architecture, he had also ensured for himself a role in deciding upon the architect and ultimately, the design to be realized. A letter dated December 10, 1954 discusses several architects that

Endres had suggested to Küppers: Felix Hinssen, a Berlin architect in the *Neues Bauen* mode from Erfurt who had designed the new concrete dome, served as the diocese's house architect<sup>634</sup> and would later to become Le Corbusier's Berlin contact architect,<sup>635</sup> Leitl, of whose St. Carolus church Küppers says only that it is "not extraordinary,"<sup>636</sup> and Paul Meyer-Speer. Küppers remains ambivalent about these choices but does not yet in that letter offer suggestions of his own. Nonetheless, to judge from the following letters exchanged, it seems that he might already have given thought to his architect of choice.

In a carbon sent to Endres of a letter written by Küppers on May 18, 1955, to Weskamm, who was ultimately responsible for the project's undertaking, Küppers conveys his thoughts about a weekend visit to Berlin with Schwippert. The two apparently flew together from Düsseldorf; Küppers' letter begins by describing their return flight as "less turbulent,"<sup>637</sup> setting a tone for the letter that is familiar in tone despite the steep church hierarchy. He continues,

"During the two hour flight, I was able to discuss several issues with Schwippert. By the way, I have the impression, that you were not the only one to find Professor Schwippert sympathetic, but even the auxiliary bishop and several gentlemen of the Capital found him sympathetic as well. What pleased me especially was that Professor Schwippert's suggestion for the interior design of St. Hedwig's was fundamentally what I had already proposed. An architect – it is of course finally his task and not that of a liturgist – can of course justify his ideas better."<sup>638</sup>

Of course Küppers' pleasure at finding resonance between his own and Schwippert's ideas for the church may well have been disingenuous: as colleagues, the two would have had ample time to discuss the project prior to the visit. Both of them taught together in Düsseldorf, where they might have found opportunity to coordinate even earlier. But Küppers' advocacy was central to Schwippert receiving the commission, especially as other opinions challenged Schwippert's design, most prominently Clemens Holzmeister, who had designed and realized a series of renovations to St. Hedwig's prior to the War. Holzmeister's project, completed in 1932, had served primarily to temper the circular space's implicit radial symmetry by emphasizing the importance of the altar: Holzmeister walled the two windows on either side of the altar to create symmetrical niches, but then used the darkened conditions to heighten the drama of a new aperture between the main sanctuary and the adjacent chapel. His other changes responded to functional considerations: the construction of side altars, new confessionals and an organ loft.<sup>639</sup> Holzmeister was asked to review Schwippert's design and, in addition to furnishing a scathing review, sent along his own design.<sup>640</sup> This conflict might have been anticipated when, in the fall of 1955, Schwippert returned to Berlin with a full set of plans and models for his new design

ideas, which deviated significantly from both Holzmeister's interventions and the church's earlier configuration.

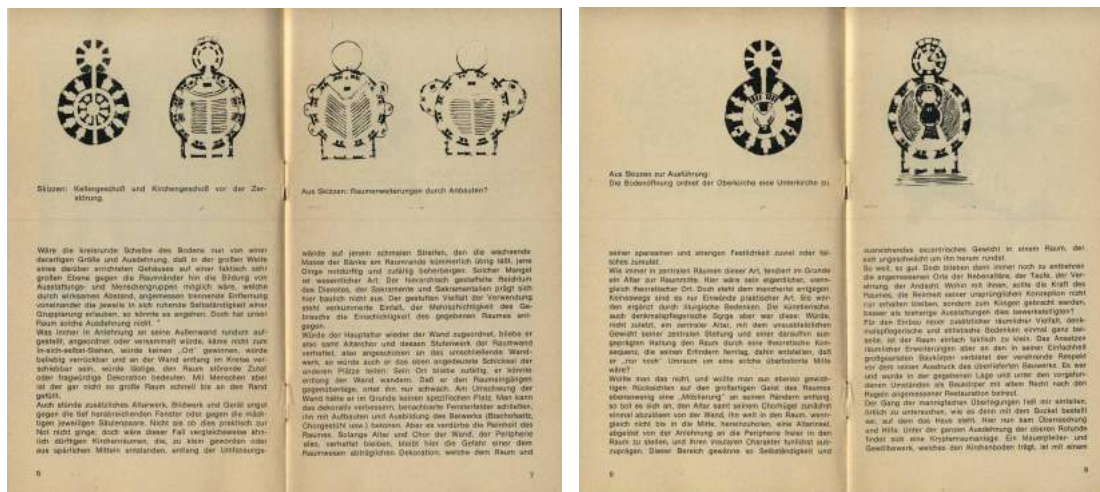
Küppers can definitively be credited with inserting Schwippert, in lieu of other perhaps better-known or more advantageously positioned architects, into the rebuilding process. But despite Küppers' increasingly close friendship with Endres, whom he addressed with the nickname "Enrico" in both typed and handwritten letters from 1956-1957, his role in the project was truncated, except in his capacity as a friend and confidant of Schwippert and Endres. In his place, Johannes Wagner,<sup>641</sup> Director of the Liturgical Institute in Trier and an advocate of the changes in liturgy that would culminate in Vatican II in 1959,<sup>642</sup> would be chosen as liturgical consultant to Schwippert's unconventional design for the church. Küppers was disappointed and frustrated with his removal from his semi-official capacity, and even more so, that he had not been informed appropriately: he learned of his removal only after hearing that Schwippert had presented work in Berlin in November, 1955 without Küpper's attendance or knowledge, as two letters in which he complains of this exclusion attest. Schwippert navigated this internal political challenge with care and charisma, meeting with Wagner in his official capacity but informing Küppers regularly about the project's development and integrating Küppers' suggestions into his ongoing design development. Certainly the project would face much greater internal challenges – not least of them the death of Weskamm in the summer of 1956 – but Schwippert's handling of this delicate conflict between personal loyalty and project realization offers one of the few documented insights into his particular approach to interpersonal politics, an approach which had permitted him success while earning him a reputation for generosity of spirit.<sup>643</sup> In large part because of his ongoing friendships with Endres and Schwippert, Küppers remained an advocate of the St. Hedwig's renovation: it was his 1957 article published in *Das Münster* that offered the public its first view of Schwippert's project.<sup>644</sup>



design process which led him to his final design parti. The parti remains controversial to this day, and is at present again subject to debate.<sup>649</sup>

The challenges represented by the building, as Schwippert could see even upon his initial visit in 1955, were multiple: the centralized plan was a long-studied typological challenge; the desire to retain a sense of the building as a near-ruin reflected a concern that Schwippert shared with other post-war architects, most notably Schwarz;<sup>650</sup> liturgical changes in the celebration of Holy Week beginning in 1955 and the approval of the vulgate in rituals other than Mass were harbingers of the change that would culminate in 1962 with Vatican II, a year before the church's completion; there was conflict implicit in the Cathedral's location in East Berlin while the Diocese, which did not recognize the city's division, was housed in West Berlin; and finally, given additional urgency by the new, unadorned concrete dome, the question of modern Christian art had to be considered. Schwippert touched on all these challenges in his brief but powerful speech at the Cathedral's dedication on November 1, 1963:

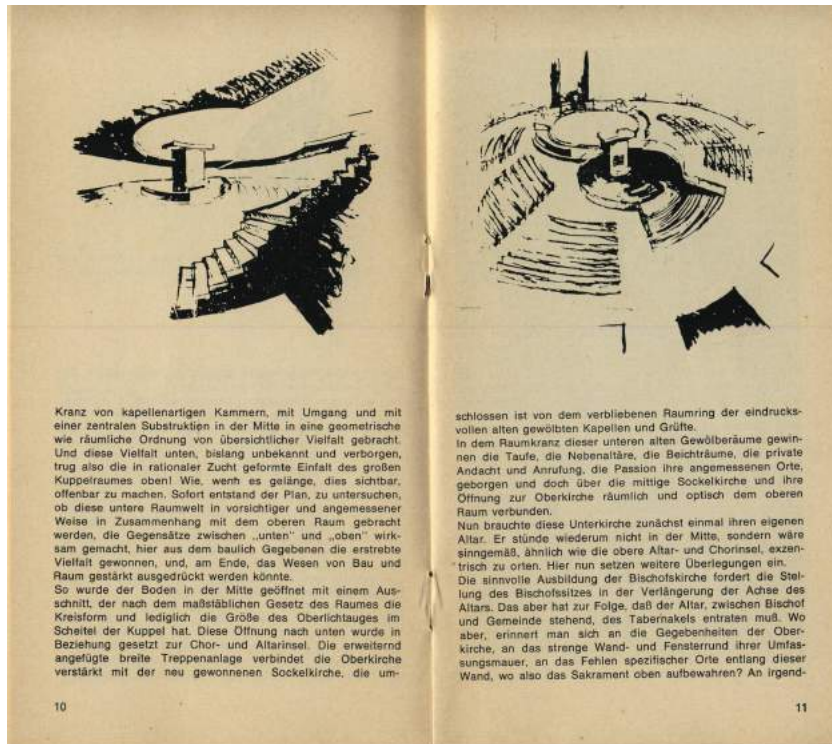
“There was a need to consider the use of a respected housing, the bearer of tradition, history and spirit, for new versions of older contents. There was the need to reconfigure obsolete representation in more stringent, more modest, more relevant forms, more relevant today – the need to do without the older and accustomed, the need for courage, sacrifice and diligence in the heads and hands of every assistant. There was a need, simply, to demonstrate what the efforts of a community, the achievements of people bound together in work, are. From exactly this bond arises work, and the highest work particularly, as well as political work in the ultimate sense of the word.”<sup>651</sup>



Pages from Schwippert, *Ausbau der St.-Hedwigs-Kathedrale zu Berlin 1956-1963*

The derivation of his design is documented in a series of hand sketches, which first depict the church before its destruction and then describe the evolution of his strategies for expanding its capacity. Six of those sketches, included in the 1969 brochure, describe the progression from a planimetric to a sectional design strategy. Schwippert began by differentiating this church plan from those central churches organized either by concentric rings of elements—ambulatory, niches, chapels—or upon a radial organization.<sup>652</sup> He concluded that neither the configuration of the church's perimeter nor its overall size would permit the positioning of the liturgical and representational elements appropriate to the Cathedral and necessarily for its use. Schwippert criticized his own attempts to position altar, choir and ancillary chapels as arbitrary, particularly in the case of the primary altar, noting that "its position would remain coincidental, it could wander along the wall...along the encompassing movement of the wall, it would have no specific place. One could improve this using decoration...but that would ruin the space's purity."<sup>653</sup> In addition to these challenges to locating elements along the perimeter, Schwippert notes that, "as always in centralized spaces of this kind, the altar tended fundamentally to the space center. This would be its actual theoretical location. But this is contradicted by many factors. There are not only practical objections. They are augmented by liturgical concerns."<sup>654</sup> Dimension, parti, liturgy, even the space as Schwippert found it—all argued against the first and most intuitive responses to the project. Schwippert found his answer not in abstract considerations at his drafting table but in the church itself:

"The trajectory of these manifold considerations led me to the insight that I should look on site at the way the base upon which the building stands was configured. Here, now, came surprise and help. Beneath the entire expanse of the rotunda above was a crypt complex. A spur wall and arch system, which carries the church floor, is set in a geometric and spatial order of understandable multiplicity by a wreath of chapel-like chambers, with an ambulatory and a central substructure. And this multiplicity below, long unknown and concealed, carried within it the unity, formed in rational genesis, of the great domed space above! What would it mean, were this condition to be made visible, apparent. The plan immediately arose to study how this subterranean spaceworld could, in cautious and appropriate manners, be set in connection with the space above, the opposition between 'above' and 'below' be brought to bear, the desired complexity be derived from the existing building and, in the end, the essence of building and space expressed emphatically."<sup>655</sup>



Pages from Schwippert, *Ausbau der St.-Hedwigs-Kathedrale zu Berlin 1956-1963*

Although presented as the logical culmination of a design process based upon process of elimination and elucidated by a deep understanding of the actual building at stake, Schwippert's design, which he depicted in the pamphlet in axonometric, elicited polarized responses from those responsible for the commission. The most influential opponent was Georg Banasch, the cleric appointed to oversee the process of rebuilding and author of a book on the church published in 1933,<sup>656</sup> after its first modernization by Clemens Holzmeister. Banasch commissioned three separate expert studies with which to undermine Schwippert's design. The latest of these, submitted on May 10, 1957<sup>657</sup> and authored by the art historian Prof. Hubertus Lossow, evidenced the radicality of Schwippert's sectional parti, for which Lossow tried in vain to find a precedent:

"Apparently Schwippert is thinking of Maderna's Confessio in St. Peter's and the organization of throne, presbyter seats and altar in a early Christian basilica. Nonetheless, in St. Peter's, the relationships and the liturgical demands are entirely different. Communication between the sub-church and the primary space would only be achieved here if one were to make the opening significantly larger, so that the upper church became something of a gallery and the lower church to the primary space."<sup>658</sup>



Nowhere does Schwippert reference a precedent, however, preferring instead to depict the design process as a collaboration among actors and, in the end, the building itself. His final design, in which the altar and choir area are configured as a raised circle, the tangent of which intersects the opening to the crypt, ingeniously resolved many of the problems he had initially diagnosed. The altar, configured as a two-story element that spanned between upper and lower church to include the tabernacle at the lower level, could be perceived as the church's factual, if not geometric, center, "standing between Bishop and congregation."<sup>659</sup> All ancillary functions, including baptismal font, secondary altars, and confessionals, were located in the niches at the perimeter of the lower church, lending them "their appropriate places, intimate and yet spatially and optically connected to the upper space by the centralized socket and its opening to the upper church."<sup>660</sup>

Schwippert's attention to spatial character, differentiating between the smaller, intimate spaces through which the church performed as the site of such individual, more quotidian practices as daily prayer, individual contemplation and the celebration of a baptism, and its role as a bishop's Cathedral in the divided city, reflects the liturgical trends of the late 1950s and 60s. As the church moved slowly towards Vatican II, and the assertion of a new Church mandate to connect more directly with its congregants' daily lives, Schwippert was able to create spaces that expressed the balance of quotidian and transcendent. His relationship with Küppers is at least in part to be credited for the way in which this balance was found: in two texts written in 1955, Küppers formulated a set of principles about the relationship between contemporary church building, liturgy and Modern art that may well be seen as the intellectual foundation for Schwippert's St. Hedwig's renovation.

### **Liturgy and Church Building**

Küppers' two texts, both academic lectures given in Düsseldorf and preserved in typescript among the documents in the St. Hedwig's archives, were written at the same time as his book *Kirche und Kunst in zeitgenössischen Dokumenten*, published in 1955 and comprising a selection of texts on Modern art and architecture in the context of the Catholic Church. Küppers, an otherwise prolific author who published nearly each year during his active career from 1939 into the late 1970s, had produced only this one book in the years between 1949 and 1961, possibly a reflection of the transition from the difficulties of the immediate post-war years to a period of constant engagement in teaching and active projects, including the St. Hedwig's

Cathedral. Perhaps as a response to the many authors from the 1940s and 50s whose literature he had reviewed for his book, both in favor of and opposed to Modern art in church context, Küppers' typescript texts discuss his own theories on the criteria for creating Christian art and architecture in the contemporary climate. Although only obliquely stated, his support for a Modern idiom in interpreting the Church's meaning and practices is clear.

Written in January 1955, 'Liturgy and the Church Building' laid out, in a brief page and a half, a set of principles for the configuration of each spatial component of a church – choir, altar, the shape of the church's plan, the ceiling form. Küppers communicated his positions with total certainty, listing requirements for each part of the church and, from the start, warning against "experiments in which the holy gives way to the sensationalistic in the foreground."<sup>661</sup> His dictates are straightforward. First, the altar "must be inaccessible for the people...in order to offer the viewers a wonderful theater....The reasons given: thus, the mysterious character of the sacrifice remains protected; furthermore, the special status of the priest should be demonstrated. He not only serves the congregation but is an intermediary between God and God's congregation."<sup>662</sup> In the following paragraph, he added that, "under any circumstances, it is wrong to make the altar the center of the church. The altar is never the center, but is the mediator to God."<sup>663</sup>

Towards the text's end, Küppers also discussed the form a church's plan should assume. "As regards the form that the plan of a church should take," he wrote, "so the following should be said: the circle is a symbol of the divine, the square is a symbol of the earthly."<sup>664</sup> For an author whose first post-war book in 1946 documented the Medieval and Renaissance churches in Umbria and Tuscany,<sup>665</sup> the unorthodoxy of this statement should have been clear. Historically, debate on church typologies had juxtaposed the virtues and shortcomings of the cruciform and centralized plans. It had not traditionally asserted that the circle and rectangle in themselves were meaningful church plan types. Küppers, who otherwise carefully referred to precedent in making his claims, left this one historically ungrounded.

Küppers' thoughts on liturgy and the church building here seem initially out of character with his otherwise progressive positions. They are difficult to accept or even to decode, unless they are considered relative to St. Hedwig's. Imagining his preoccupation with the church in early 1955 can explain his interest in the centralized church plan—the circle as a symbol of God. His

thoughts about the position of the altar in the middle of that church are also registered in Schwippert's own account, years later, of the struggle with the fact that "as always in centralized spaces of this kind, the altar tended fundamentally to the space center.... There are not only practical objections. They are augmented by liturgical concerns."<sup>666</sup> The description of a choir separated from the congregation to create a sense of theater, and of an altar that mediates without occupying the church's literal middle presages the design at which Schwippert would arrive. Küppers thus meant quite literally the words wrote to Westkamm in May 1955 after Schwippert's first visit: "It pleased me most that Professor Schwippert essentially proposed for the interior design of St. Hedwig's what I had already proposed earlier. An architect such as he—it is in the end of course his job and not that of a liturgist—can justify it much better."<sup>667</sup> Küppers' liturgical underpinning for the initial design may well have safeguarded the project against the onslaught of attacks solicited by Banasch.<sup>668</sup> Banasch's minions Lossow, Holzmeister and Building Commissioner Schädel each cited the design's lack of architectural or typological precedent, arguing in at least Lossow's case for abandoning the old church altogether in lieu of a newly built Cathedral "on an unlimited site."<sup>669</sup> The liturgical strength of Küppers' foundation for Schwippert's design prevailed over these objections, even for Schwippert's radical sectional proposal, in which the altar, as foreseen by Küppers, was quite literally a "mediator"<sup>670</sup> between upper and lower churches.

'Modern Art in the Space of the Church,' Küppers' other typescript, asserts that there is no specific or singular form, technique, rule set or aim for Christian art; in fact, Küppers states, "there is no Christian art. There can fundamentally only be an art of Christians... True art is everything that operates at the level of absolute beauty, Christian longing and hope."<sup>671</sup> For the creation of Christian art, he explains, "the Christian artist is a prerequisite. In order to depict aspects of Christ, one must know about Christ's life, more still, one must live with Christ... Thus the demand arises that there be no true Christian art without the true and Christian artist."<sup>672</sup> For Küppers, Christian art must be both "true" art and Christian, which can only be achieved when the same holds for its maker. At the same time, he insists that "the question, whether Modern Art can be introduced into the Church is first of all incorrectly answered if it is divorced from the essence of Modern art. By the same token, it must be answered by questioning the nature of the Church."<sup>673</sup> Küppers also advocates for an art that is in equal parts intellectual and impassioned. He wrote,

“The basic error in Modern art within the space of the Church to date is certainly that it was produced in the spirit of subjective fervor. The basis for the art of the Christian church must instead be the demand for the objectively divine, in other words, the words of the Lord must be visible. And a second factor must also be acknowledged, that it is a matter here of the formless encounter between God and His congregation, in other words the congregation must be able to pray in the name of God. If these two preconditions are not met, then one must speak of a non-objective manner of work, and through this non-objective work arise mere experiments.”<sup>674</sup>

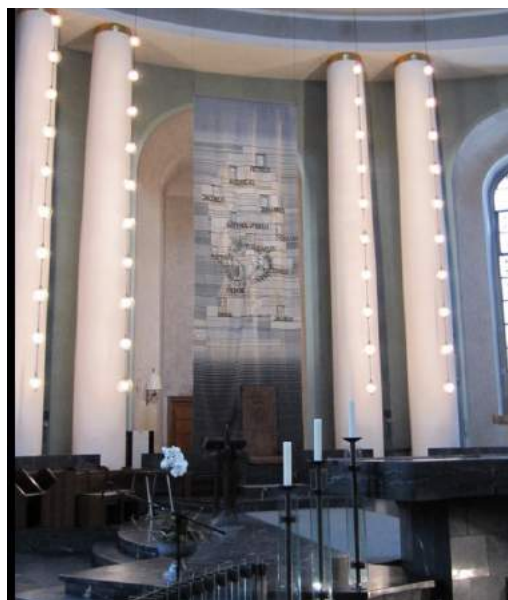
The idea that Modern art forms could serve as an ideal abstract intermediary between God and congregation appears, too, in a text by Walter Warnach included in Küppers’ 1955 edited volume. Küppers selected a passage in which Warnach asserted, “It is enough to ascertain that abstract art evidences a serious will to realize, in opposition to the downward tendency of the modern world, a bright order made up of the real...”<sup>675</sup>

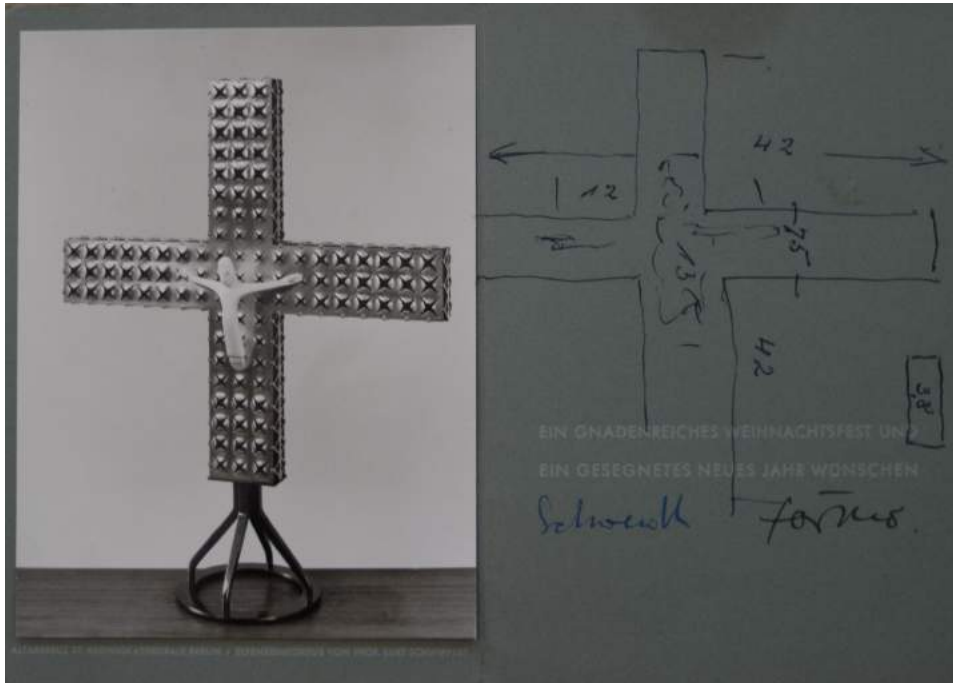
Küppers’ influence on Schwippert became evident as the project progressed. Just as Küppers advocated for the power of abstract art in a church context, Schwippert, too, favored the same arguments for the devotional artifacts designed for St. Hedwig’s. Many of those artifacts, including the tabernacle, altar cross, tapestry and stained glass windows, were made in Cologne or Aachen by long-time collaborators of Schwippert’s.<sup>676</sup> He understood well the need to balance between abstraction and narrative legibility. For example, his recommendations to Endres for the commissioning of the tapestry, ultimately completed by Grete Reichardt, a Bauhaus-trained textile designer living in Halle, cautiously reviewed the three artistic possibilities he foresaw:

“Naturally, there is the excellent possibility of the “pure” and precious tapestry. Here, in the valuation and application of the inspiring linear and color-based study and factoring of contemporary two-dimensional art, a composition could be generated that, in a different, contemporary manner, could carry as many abstract mysteries as the large oriental carpet has always done....In addition, there is always, unchanged, the other pathway of a pictorial tapestry with narrative scenes, representative (allegorical) motifs....A third possibility is a monumental, textile text across its entirety, the work of letters across the entire surface (including initial and quotation) in consistent scale and rhythm.”<sup>677</sup>

All the liturgical art at St. Hedwig reflects the ideas put forth by Küppers in 1955 about the balance between the “objectively divine” and the “formless encounter.”<sup>678</sup> Reichardt’s tapestry, which elegantly integrates all three of the options Schwippert outlined although not completed until 1963; Schwippert’s own design for a small chest for anointing oils; and the cross, its gold fabricated by Aachen goldsmiths with whom Schwippert had worked since his time in Schwarz’s office and its attenuated Christ figure hand carved from ivory by Kurt Schwippert, Much like Schwippert’s radical parti, they represent a moment in which the possibilities opened by the

Modernist idiom could be used to represent an “opposition to the downward tendency of the modern world.”<sup>679</sup> At St. Hedwig’s, the ‘modern’ world immediately outside the walls was Socialist, a fact, which underlay the many difficulties that the church hierarchy, its congregation and even the building’s renovation faced. It is not difficult to draw a parallel between Schwippert’s questions at the 1951 *Darmstädter Gespräche* about the will to an open architecture despite living in a world of existential threat<sup>680</sup> and the opposition between a difficult daily reality and the way in which the Cathedral’s Modern art communicated with its viewers and users. The “little man” of West Germany was at home in the world by the time of Cathedral’s completion in 1963; the people of the East German capital, as Schwippert’s drawings and construction supervision correspondence document, were still forced to realize their “Wohnwollen”<sup>681</sup> amidst material shortage and everyday frustrations.





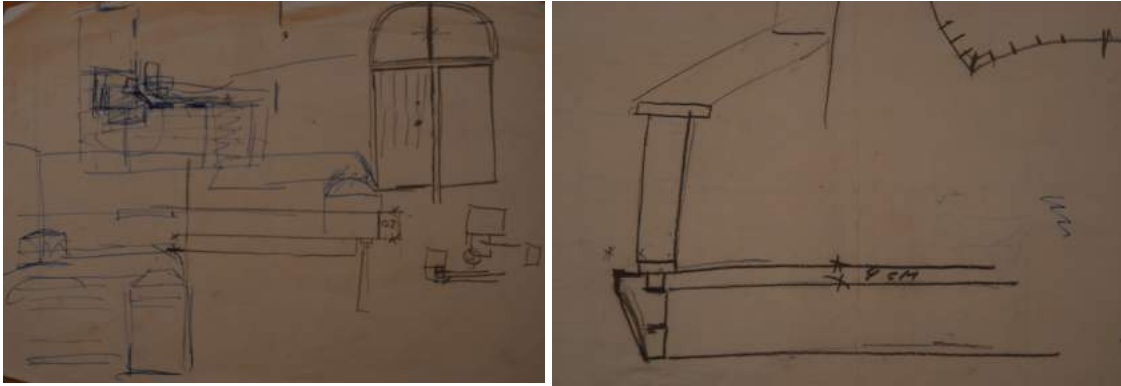
From top left: Grete Reichardt, Tapestry of Heavenly Jerusalem, 1963; Schwippert/Kohlmann, Drawing of chest for oils, June, 1963; Kurt Schwippert, Fritz Schwerdt, Hubertus Förster, Altar Cross, 1963; photo source: <https://www.flickr.com/photos/himmlischesjerusalem/6401298729/in/photostream/lightbox/> accessed April 23, 2016; drawing and brochure, *Archive of St. Hedwigs Cathedral*.

### Construction Documents and Church Building

From the time of his first visit to the delivery of the last elements to the Cathedral, well after its consecration on November 1, 1963, Schwippert spent, by his own reckoning, more than a decade on the completion of St. Hedwig's. The correspondence, invoices, visas, bills of lading and telegrams preserved in the job books attest to the enormous logistical machinations the project demanded. A full network of individuals in Berlin and elsewhere in Europe, including the strange bedfellows of clergy, combines, craftsmen and custom officials, was required to ensure that electrical wiring was copper, not aluminum,<sup>682</sup> that door closers were correctly specified and brought across the German-German border; even that the oil heater was delivered, not a year after the consecration but on time.<sup>683</sup> This network, facilitated by a postal system that carried letters within a day's time from *Unter den Linden* to Düsseldorf, was actively tended by a few, highly disciplined individuals: Monseigneur Endres, Theodor Blümel and foreman Horst Poller on site in Berlin, together with Fritz Kohlmann in Schwippert's office. Even in face of the political developments culminating in the Berlin wall, they maintained tight coordination and control.

This tight control by no means extended to the way the project was communicated through drawings, however. As had been typical of Schwippert's construction drawings for the *Bundeshaus* seating and, prior to that, in his designs for affordable furniture,<sup>684</sup> the construction documents for St. Hedwig's offered only basic material and performance guidelines. They are sparsely annotated and dimensioned. In several, a verbal description of the recommended order of construction, relational dimensions and desired surface finish effect appears as a block of text on an otherwise unannotated drawing. These kind of descriptions replaced thorough detail drawings typical of architectural construction sets, in which the drawing functioned as a means of communicating standards and intentions not only between architect and craftsman, but also among crafts. Such drawings support a negotiation between what the architect envisions and what the craftsman who is to execute the work will do in order to realize it.

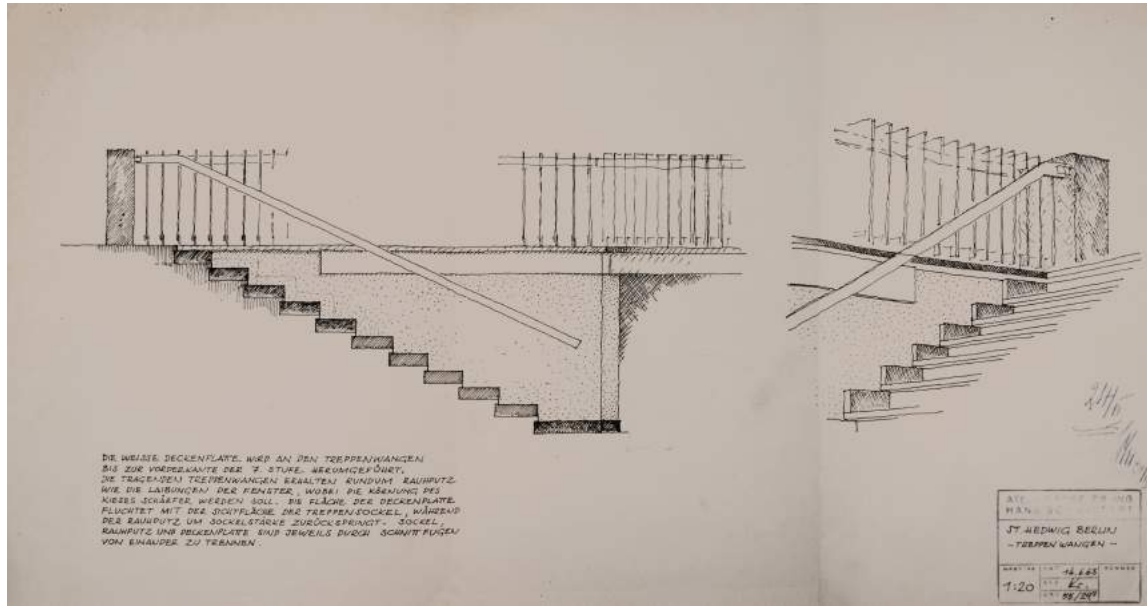
This did not mean that Schwippert, Kohlmann and the others did not make extensive use of drawing for this project. The importance of drawing as an immediate means of communication is clearly evidenced in the St. Hedwig's job books by the numerous pencil sketches drawn on the backs of correspondence, letterhead or meeting notes, whatever paper was readily available during meetings. The difference in the use of drawing as communication between the many impromptu sketches and the construction documents could only have been supported by intense personal interactions: multipage letters traveled daily within Berlin and the rate of correspondence between Berlin and Düsseldorf was only slightly less. Given the need for this communication, the very slow pace of on-site work dictated by material, product and labor disruptions became a virtue, allowing for discussion and consultation on many items that would otherwise have had to be dictated by a standard drawing set. The final form taken by each aspect of the building was decided pending availability of the necessary components; unlike the standard practice in West Germany during this period, as evidenced in Ruf's construction documents for the Speyer college, it was not possible within the constraints of a German-German project to assume standardized products for any particular material or detail. Each solution was bespoke. In this regard, the St. Hedwig's construction site resembled more closely the conditions of the early post-war years of West Germany more than it did contemporaneous construction practices there.



Sketches for various details on the back of correspondence and on stationery from site meetings, job book, *Archive of St. Hedwigs Cathedral*.

One drawing, loosely deserving the designation ‘construction document,’ describes the stair between the upper and lower church. This stair was one of the primary elements in which the restrained architecture provided a more obvious opportunity for virtuoso craftsmanship, which was lavished on the balustrade and railing. Despite the stair’s elaborative potentials, the architect’s drawing offers a clear example of how Schwippert’s negotiated approach to construction documents played out. The juncture between stair adjacent wall was described in a single sheet, showing only sectional elevation and axonometric at 1:20 scale. Information that would normally have appeared in annotations, such as material designations, relational dimensions that require alignment with other parts of the building and reveals between finishes, were described instead in the text block. This juncture was vital to the accurate installation of the glass and bronze handrail, fabricated by East German artistic metalworker Fritz Kühn, the leading actor in religious art in the GDR.<sup>685</sup> Its margin of error was extremely tight, requiring precise spacing relative to the upper steps and precise rough construction to assure alignments among differently dimensioned finish materials; in this drawing, however, no mention is made of absolute dimension, and instead, only the final alignments with other elements in the church are noted. Even as an auxiliary drawing intended to augment directions given in other documents, this sheet is astonishingly understated, viable only under the assumption of excellent coordination and highly insightful craftsmen of all associated trades, able to anticipate and negotiate on site one another’s requirements and tolerances based only on a depiction of the desired outcome.





Construction drawing for the stair between upper and lower church, job book, *Archive of St. Hedwigs Cathedral*; Fritz Kühn, crystal and bronze handrail, photo by author on left and on right, from *DKA NL Schwippert*

The block text reads, “the white floor plate will be continued around the stringer to the front for the seventh step. The bearing stringer will be plastered entirely in rough stucco like the window embrasures, although the grain of the aggregate should be sharper. The floor plate’s surface aligns with the visible base of the stair sockel, while the rough stucco is set back the depth of the sockel. Sockel, rough plaster and floor plate edge are each separated from one another by a reveal.”<sup>686</sup> The complexity of construction negotiations embedded in this text and explicated only by the elevation and axonometric drawings is remarkably high. Stucco, floor plate and sockel all required different depth for installation; during rough construction, all of these different material depths would have had to be reflected in the work of demolition, when the hole for the stair was configured; in the work of the masons, who configured the walls along which the stair stringer was installed; in the work of the stone masons who cut the stairs; and in the work of the

metalworkers who fabricated the stringer. The desired alignments would not have been visible in the rough construction phase, and would have had to be ascertained using snap lines, levels and strings stretched between points, some only virtual before construction was completed. Without a drawing by the architect to designate each of these dimensions and precise locations, the work of interpolating between a desired finished state fell to the site architect, in this case Theodor Blümel, and to the capacity of each craft on site to anticipate, respond to and respect the differing margins of errors typical of their respective practices. The drawing provides absolutely no recommendations on how to negotiate these dimensions, except by specifying the desired relationship among finished surfaces.



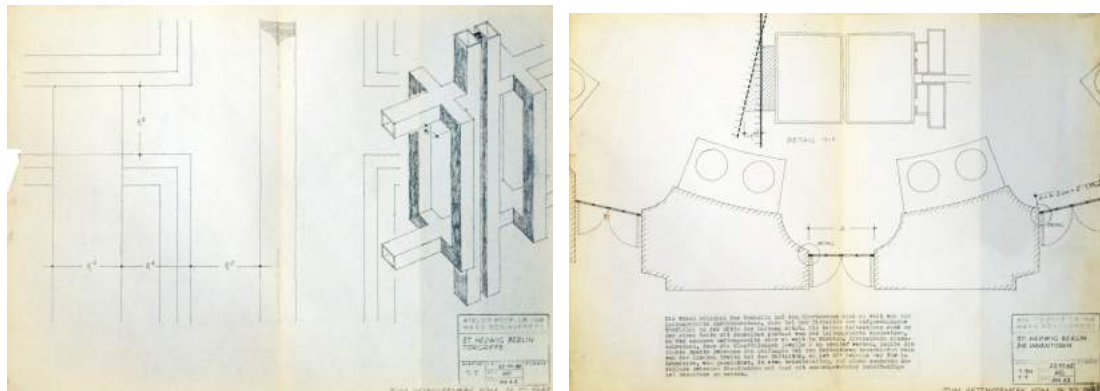
Stair to crypt under construction and upon completion. The column on the right hand side of the photo on the left is the “Mannesmann-pipe filled with concrete” to which Endres referred on p. 32 of his brochure on the project.<sup>687</sup> *DKA NL Schwippert*

Two photographs, one printed only on a contact sheet dated May 30, 1963 in the job binder retained in Schwippert’s archive and the other cropped and pasted up as part of a publication mock-up, describe the relationship between the stair in process and its desired completed state. The latter shows clearly the complex three-dimensional development of floor edge, stair, and

wall, particularly at the juncture to the tabernacle. The former depicts a job site in which the implements of work and building seem limited, showing only a wooden ladder, some wooden scaffolding or shoring, and rough boards supporting what appears to be a mock-up for the stair. In the background, at the level of the upper church, is a crew of five or six men, one with a wheelbarrow and another few working at a rough wooden table, which appears to have been nailed together on site. This image, supported by other construction shots, indicates a construction site in which labor was more plentiful than materials, or at the very least sophisticated materials. Schwippert's style of detailing, focused on communicating parameters to those who would execute the work rather than on specifying definitive material relationships, would have been at home in this context. Indeed, it would hardly have functioned without a strong labor presence on site.

Schwippert's drawings for other elements of the interior fit-out, including the entry doors, the main door handle and the pews, are also retained in the St. Hedwig's archive. They are only slightly more explicit than the stair drawing, bearing out the assertion that Schwippert's office used this modality of construction communication as a rule throughout the St. Hedwig's renovation. The doors and door handle were both metalwork, drawn to be put together using standard steel rectangular tubing. The handle, a sculptural element ultimately executed only in greatly simplified form, is depicted in flattened, elevational view at full scale, with exterior dimensions given with millimeter precision. The handle's depth is shown – 8 centimeters – only in the accompanying axonometric, whose scale is not noted. On closer inspection, the drawing's lines appear to waiver slightly, as if traced freehand above millimeter paper or a drafted underlay. The apparent casualness or imprecision is at odds with the way the slightly radiused corners at each weld are drawn accurately and realistically, although not annotated or dimensioned. The precision in dimensioning and depiction is tempered by the apparent informality of the non-drafted lines, as if the architect were on the one hand providing only a sketch upon which to base a conversation with the fabricator while still asserting clearly the desired finished product. This drafting style extends to the front door drawing, as well, although the non-definitive character of the wavering lines seem particularly odd in contrast to the much more final-seeming drawing notes, typed on transparent paper and spliced into the drawing before blueprinting. Only one horizontal sectional detail is offered for the swinging doors, at the meeting of the fixed and operable frames. There is no indication of the hinge type, how it would be welded to the two frames, in what way it attaches to the wall or where it should be positioned;

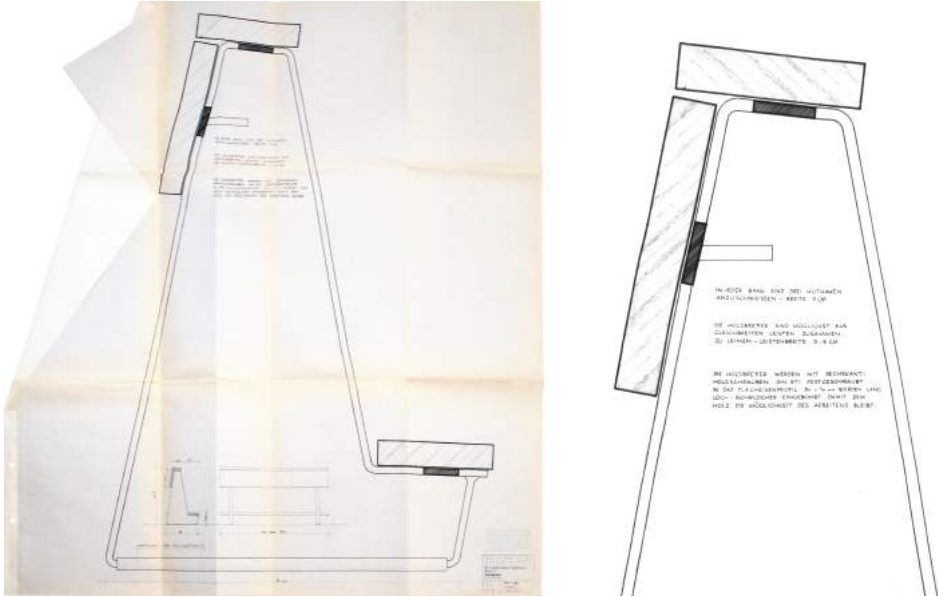
the header and threshold details are not even suggested in drawing. The construction document also addressed briefly the difficult geometric adaptations, which would be needed to have the same door type fitted to the angled side walls of openings cut radially in accordance with the church's circular geometry: the full-scale detail showed a hatched material – wood? metal? mastic? plaster? – which would offset the door from the pier wall. A note indicated that this hatched material should be 35mm wide to account for the radial geometry, but a “~?” next to that dimension would have told the fabricator that it was his responsibility to verify this dimension on site. The typed text expressed this responsibility unequivocally: “Special attention should be given to a clean connection between fixed frame and wall, with recessed reveal.”<sup>688</sup>



Entry door and door handle drawings, including full-scale details. *Archive of St. Hedwigs Cathedral.*

The drawings for the pews went through several iterations. There are two versions for which documents remain, one which foresaw leather upholstered fir and foam seats and one which foresaw all horizontal elements in wood. The former was intended for clergy; the latter was realized for the congregation. Schwippert and Kohlmann recommended in favor of ash for the furniture, but the choice of a common, inexpensive wood elicited resistance from Endres;<sup>689</sup> ultimately, the pews were executed in walnut, imported via West Berlin through the Catholic charity *Caritas* with no small amount of consternation and delay.<sup>690</sup> The drawing, quite beautifully laid out, uses a 1:1 scale drawing of the pew to frame two 1:10 scale elevations, one lateral and one longitudinal. All dimensions are noted at the 1:10 scale, leaving the 1:1 drawing to serve as a template for sizing. The notes here are different in character than the other drawings, giving directions for how to affix the wood seats and surfaces to the metal frames in order to allow the wood to move, or ‘work’, to account for differential movement between wood and metal. Given the general terseness of the notes, this content is surprising sine the differential movement would have been an aspect of the construction familiar to the craftsmen building the pews.

Schwippert's specifications here are similar to more conventional working drawings, intended to help resolve a practical problem in an aesthetically satisfactory way. The pews, simple and robust in construction but transparent and simple in the space, were vital to the effective spatial calibration with which Schwippert's design allowed for the greater occupancy required of a Cathedral while balancing the rows of seating against the building's dominant circular geometry. The drawing's simple layout represents the pews' effect in space – thin in profile – and encourages the fabricator's need to think along with the draftsman. Its simplicity counterbalances the complex mobilization and logistics happening in real time, during which solid walnut was brought to Berlin for fabrication.



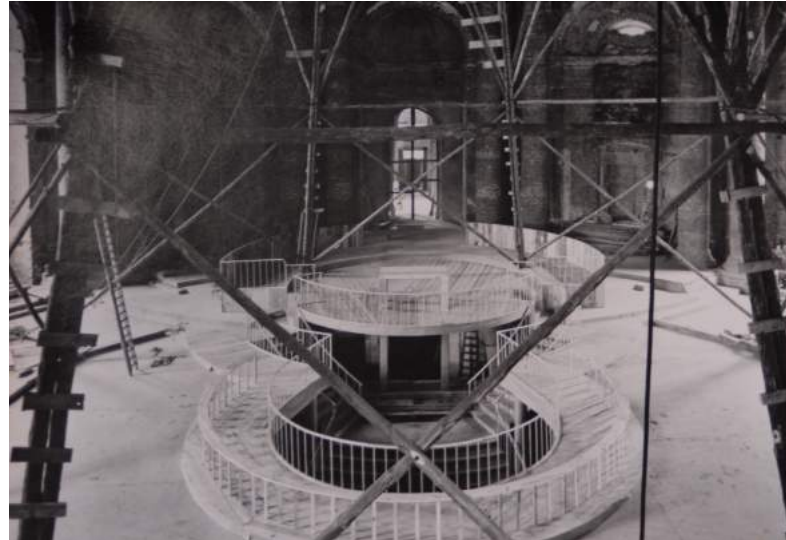
Drawing of pew in steel and walnut. *Archive of St. Hedwigs Cathedral.*



Pews in the St. Hedwig Cathedral. Photos by Author, October 2014.

### **Construction Materials and Church Building**

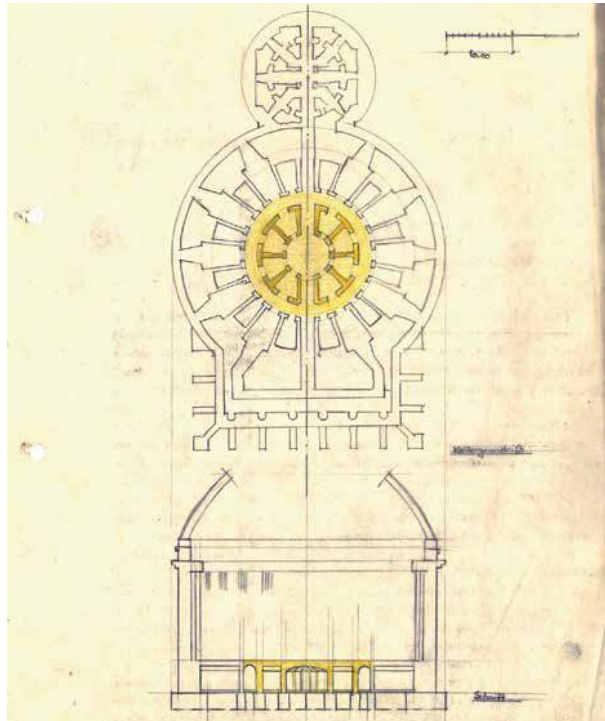
Even the most banal of building materials seems to have represented a challenge during the years of active construction at St. Hedwig's. A letter dated October 3, 1962 from Poller, the onsite foreman, to Blümel offers multiple instances of this challenge—the tile layer was ready to work but had only white tiles; there was no grout for the column bases; three packages of binder were still missing for the painter's spackle.<sup>691</sup> Photographs of on-site construction reflect the significant material limitations: the only construction materials or equipment shown are wooden boards used for makeshift shoring and scaffolding, rope for lashing or other simple implements such as saw horses and wheelbarrows. A note written to the Magistrate of Larger Berlin in July, 1959<sup>692</sup> evidences just how dire the limitations on this job site were: following up on a request made a month earlier, the author, the secretary to the St. Hedwig's Cathedral office, requests permission to import a tubular steel scaffolding from West Berlin in order to "circumvent the shortages in the scaffolding sector."<sup>693</sup> The scaffolding was needed "urgently"<sup>694</sup> to complete work on the cathedral's columns and main portal. As the letter recorded, a special license had already been granted earlier in the year for the scaffolding; to motivate the issuing of the license, the letter also mentioned that the scaffolding would ultimately remain in East Berlin after the Cathedral's completion for use in other church rebuilding projects. Archival material does not record whether the import paperwork was provided, and there are no photographs that depict the steel scaffolding in use, but the extensive use of wooden shoring indicates that the difficulty of accessing steel scaffolding was acute. By the same token, the carefully formulated correspondence does not reveal whether on-site shortages were the result of material or political conditions. The likely answer is that it was a combination of the two. While the construction of the dome had been given high priority and visibility because it showcased prefabricated concrete technology, it is difficult to imagine what might have been attractive to the East German bureaucracy in an interior fit-out which would allow the Cathedral's reinstatement as a place of worship—so much less so given the Diocese's refusal to recognize the political divide within the city it served.



From top left clockwise: undated demolition photograph; undated image showing interior shoring and scaffolding for dome plastering and one of the 1:1 mock-ups within the church for the opening between upper and lower church ca. 1958<sup>695</sup>; photo identified as 'Youth Mass, 'Christ the King', 28.10.62 in St. Hedwig Berlin, led by Archbishop Dr. Bengsch' showing reconfigured opening to lower church; undated photo of arched doorway in lower church. All photos, Germanisches Museum *DKA NL Schwippert*

The church interior, only recently cleared of rubble<sup>696</sup> and still stripped to its bare masonry in 1955, would have seemed a familiar setting for these very primitive construction techniques to architects like Schwippert and his associates who recalled vividly the initial work of reconstruction after the war. Evocative of the images, which have become emblematic of the *Trümmerfrauen*, working amidst provisionally buttressed masonry to rebuild after war destruction, the construction site as Schwippert would have found it in the mid and late 1950s became an open invitation to full-scale experimentation. The aperture between the upper and lower church, evoking the hole created when the cross, mounted at the center of the wooden dome, fell when the dome was consumed by fire after bombing,<sup>697</sup> was completed some time in 1956. Thereafter, with the support of Berlin bishop Julius Döpfner,<sup>698</sup> Schwippert was able to realize an experimental, full-scale mock-up in wood of the design for connecting the two church

spaces. This was the design, which Küppers made public at the end of his 1957 article<sup>699</sup> and to which Endres referred as a “so-called phantom...that allowed for the maturation of the final plan.”<sup>700</sup> In addition to the benefit to design of this mock-up, the use of job site as design laboratory could directly involve those craftsmen who would be called upon to engage the project much more immediately, and offered opportunity to cultivate an immediate relationship between architect and job site, despite the physical and political distance between Düsseldorf and East Berlin. The act of building was, in this case quite literally, integral to the design process.



Demolition plan, 1956, based on Schwippert’s instructions. From *Krieger*, p. 82

While even mundane materials, from wood to wiring to fasteners, represented a challenge, the provenance of the Cathedral’s more significant elements describes more fully the challenges of a job site at which East and West Germany were to be equally represented. In his 1963 assessment of the project, Endres attests to the success of this strategy:

“The form’s simplicity should not be underestimated, in that here, the determination to use the best materials and to realize artistic achievement at a high level dominated, and is nowhere lacking in the interior space’s configuration. For the entire floor, Kapfenberg marble from Thuringia was used, a natural stone material generated by the local earth.”<sup>701</sup>

The success of the church’s powerful, simple formal language, Endres asserted, relied on the use of the best materials, not least among them a marble derived from “local earth.” This



balanced representation of West and East, relevant apparently even in the construction material that would be subsumed in the floor, was explicit and programmatic for the integrated artworks and their conception. This ambition came not from the client alone but also from the architect.

In June of 1961, Schwippert's office issued a twenty-page document titled 'Notes on Interior Fit-out' (*Notizen zur Ausstattung*). By that time, the difficulties involved in sourcing construction materials for the project would have been obvious. Therefore, the document begins by recognizing the unusual circumstances implicit in the undertaking and their implications for project and architect:

"The uniqueness of the charge presented by a restoration based in renovation and new design as well as by the given location in East Berlin foregrounds the following:

Inasmuch as artistic and artisanal capacities of the highest artistic quality, if not to say of appropriate European significance, are available in East Berlin and East Germany, then they should be granted priority for appropriate commissions in both design and execution....

To that end, negotiations should therefore be initiated from the outset. I do not doubt that all involved will show understanding for this process given the situation, even in areas where, unlike, for example, window fabrication, it is unusual.

The responsibilities and decisions of the architect to assure that details accord with the entire spatial idea are expanded to the additional responsibility to serve as the connective figure between designer and fabricator.

Fundamentally, the following is noted with the greatest emphasis:

The seriousness and international significance of the commission does not tolerate any artistic half-measures."<sup>702</sup>

The attached document reflected precisely Schwippert's assessment: covering every possible instance, the inventory lists altar utensils, wall painting and graphics, tapestries, sculptures and windows, to which alone one-fifth of the document is dedicated. Echoing the cover letter, each item not only offered a number of proposed designers and fabricators—ranging from Schwippert's brother Kurt to Marc Chagall—but also noted fabrication potentials in the Eastern part of Germany, although never referenced by the country's official name. Among the artworks and utensils, the windows in the upper and lower church, as well as in the lantern of the dome, were perhaps most fundamental to the church's spatial integrity. These would by any standards have demanded the architect's attention. Even so, Schwippert could hardly have imagined the way in which their design and execution would "expand" his role as a "connective figure between designer and fabricator."<sup>703</sup>



Hans Schwippert, Window sketch on stationery from the Berlin Diocese. *Archive of St. Hedwigs Cathedral.*

There were three sets of windows to be designed and fabricated, one at each level of the church: crypt, upper church and dome lantern. For each, Schwippert produced a sheet that described his design idea – “strongly colored, although light (in order to allow light to enter)”<sup>704</sup> for the lower church or “light glazing, ‘cool’, no coloration, sober, based upon classicist ornamentation (geometry)” for the upper church<sup>705</sup> – as well as a few prospective designers and notes on fabricators. The name of a fabricator and its location in Berlin-Treptow, in the city’s southeast, is handwritten onto the sheets: “Puhl Wagner.” In fact, Puhl and Wagner, founded in the 19<sup>th</sup> century, was not in Treptow at all, but in Neuköln, on the other side of the border. The misattribution to Treptow derived from the company’s recent work: after furnishing glass mosaic and other decorative glazing to the lion’s share of these kinds of commissions during the Third Reich, the company had launched their postwar business in 1946, with the commission for the Soviet Memorial in Treptow Park.<sup>706</sup> There is no evidence in correspondence, however, that Puhl and Wagner were ever considered for the commission.

All in all, the St. Hedwig's job book documents the significant effort invested in finding a window glass fabricator in the East. The struggle to source and deliver decorative glazing began in late 1961 and continued through 1964. In addition to a brochure from the *Glaswerkstätten Rudolf Beier* in Dresden and Pillnitz, the job book even includes a letter dated 1954, likely re-filed for reference from an earlier phase of renovation, from Richard Eitel and Tomee, a glass provider in Berlin Mitte, with the news that two specific shades of green were no longer available to them, and asking whether this would cost the company the commission for the windows. An August, 1962 letter from Schwippert to Endres and Blümel conveyed that "unfortunately the large and long-standing glass workshop and factory in Pirna,"<sup>707</sup> Saxony, would not be able to provide the glass. Soon thereafter, in note to Kohlmann, dated October 9, 1962, Endres described a visit from the *Glaswerkstätten Potsdam* to discuss the glazing in the lantern, during which he would procure color samples.<sup>708</sup>

The failure to find a source in East Germany for the glazing might be attributed to the choice of Anton Wendling to design the windows. The Aachen artist supplied samples, delivered to Schwippert's office in summer of 1962, which were to be matched on site.<sup>709</sup> The likelihood that an East German company would be able to access exactly the same colors and to produce the same glass specifications was small. Ultimately, the commission went to *Derix Glasstudio* in Darmstadt. The solution of one problem produced a new one: how to organize the transport of the leaded glass across the border.



Left: Study for stained glass window, *DKA NL Schwippert*

Right: Stained glass in entry area with trough for condensation. Photo by author

Although Wendling's glass samples had already been prepared in 1962, the design for the windows was slow in its development. Kohlmann's meeting minutes from a three-day site visit in

October, 1962 reflect the decision to ask Wendling to revise his design to include the entire window, not only its top half. At the consecration in 1963, moreover, the windows were all still filled with clear *Rohglas*. As late as 1963, according to Heinz Endres's book, the designs had only then been recently finalized. Endres's description of the way the windows were to relate to the rest of the building reveals the extent of his support for Schwippert's concept. It also reflects the degree to which the architectural agenda was embedded in the program for the art:

"For the windows, the cartoons based upon designs by Professor Anton Wendling, Aachen, are complete. The artistic glazing of the eight windows, still filled with rough glazing, will do justice to the church building's essence. The windows should neither serve the purpose of looking out, nor bring the world into the church. They are the continuation of the walls, and the structure of their glazing must be like tapestries, which are intended to diffuse, screen and transform earthly light. Therefore, the walls' geometric figures and tones transition to the windows. Made of delicately hued glass in grey, green and reflective silver-yellow, they will create a net-like graphic curtain."<sup>710</sup>

This description corresponded to the light colors and geometric motif conveyed in Schwippert's initial suggestion from 1961 and reinforced in numerous sketches from Schwippert's own hand over the years between conception and completion. The details certainly accorded with the larger spatial ideals, and as correspondence bears out, the architects assumed responsibility for the design execution with no less conviction than they had applied to its conception.

By February, 1964, *Derix Glasstudio* was ready to furnish samples of all no fewer than ten variations of each shade of glass. Kohlmann, writing to Endres, argued that the final decision on which shade was best could only be made on site. He instructed Endres to have the on-site glazer, Rabach, "remove around 9-12 horizontally and vertically adjacent fields from windows that are already installed. We will then insert pieces of sample glass into different areas of the edge glazing, return the windows to their installed locations and decide then which of the two hues we wish to use additionally for the edge glazing. Only in this way can a perfect decision process be possible.... For a visa to permit the transport of around 10 sample panes, I would be grateful."<sup>711</sup> Endres requested the visa on February 18, and in an unusual example of logistical efficiency, the visa was available for Kohlmann on February 25 to bring the glass to the site. The painstaking process of filling sample glass into the steel frames took place over the course of Kohlmann's multi-day site visit, and the final decisions made. Although slightly less colorful than another version of the story in which the colored glass was smuggled across the border in a handbag,<sup>712</sup> the obvious effort invested to ensure that the stained glass had the ideal colors and

textures demonstrates emphatically how the architect as “connective figure” was given, and performed, a greatly expanded role here.<sup>713</sup>

### A Silk Purse from a Sow’s Ear



Detail of glass stop tabs, steel window at St Hedwig. Photo by author.

As careful and complex a process as it had been to select and procure the stained glass panes, the window frames into which they were inserted could hardly have been more straightforward: the portion of the frame facing outwards was made of welded steel T-sections, into which steel glass stops were caulked from the inside. Tabs at the meeting of each panel permitted the removal of the glass stops as needed. Much like the window detailing typical of West Germany in the late 1940s and early 1950s, the finesse in detailing came from careful assembly – the slight shift in plane from the surface of the T-section to the glass stops to create a reveal, the pinwheel pattern created by the steel tabs – and not from features endemic to specially fabricated window components. The practice of making a silk purse from a sow’s ear, or in German parlance, making a virtue of necessity (*aus der Not eine Tugend*) was nowhere more apparent, however, than in the modulation of St. Hedwig’s wall surfaces. The highly differentiated, meticulously specified plasterwork was realized not with specialized materials that would have needed to be imported or procured through great effort but rather, with common

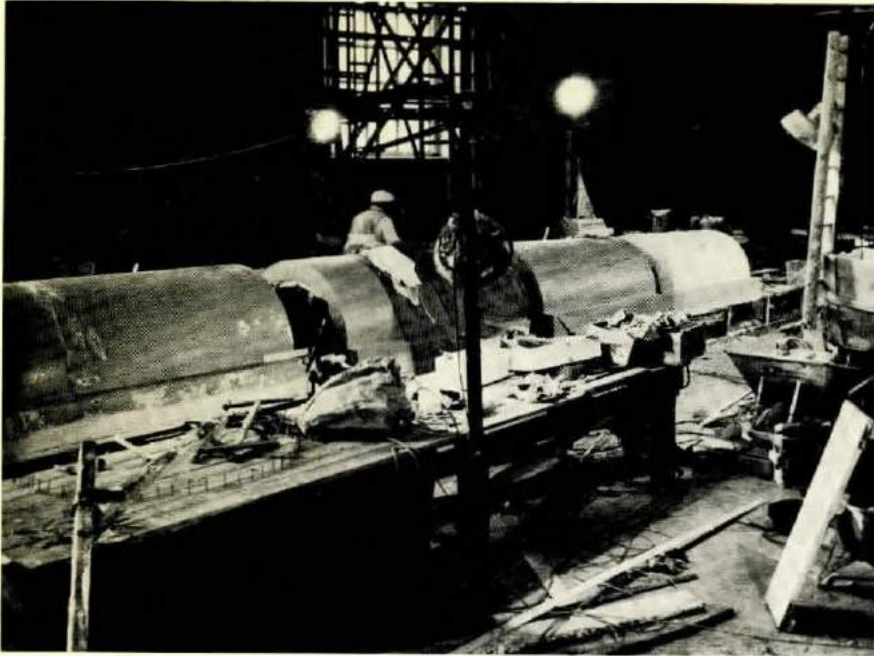
components treated with particular precision and skills. In this sense, the wall plaster represents Schwippert at his most ingenious; it is, relative to the building's current condition and future fate, also the most fragile part of its architectural effect and the one most easily destroyed.

In his description of the building, Heinz Endres dedicated several paragraphs to the interior plaster and its effects. He wrote,

“Upon observing the simplified classical space, we become aware that the inside wall of the cylindrical walls bears a particularly interesting finish plaster. To ensure an appropriate surface effect, the remains of the pilasters behind each of the twelve columns was removed. The checkerboard-like plaster texture applied to the exterior walls was installed by hand, and proves to be a good solution for both scale and craftsmanship. It also improves the acoustics. The window embrasures were treated with a smooth plaster. The tonality of the ring beam, which is visible behind the architrave and supports the ribbed dome, approximates the wall surface. We note a desired connection among wall, marble floor and dome interior, created through coloration and structure. The fine, quadratic structure of the wall plaster is echoed in the acoustic panels inserted between the dome's ribs. The domes' subdivision into segments finds its correspondence in the radially patterned marble floor.

Standing in front of the interior wall are the twelve paired columns and architrave, with simplified profile, in light plaster. In the search for the best way to clad the columns, a prefabricated plaster shell was decided upon. Since the remaining masonry column cores were partially in front of the architrave, their complete diameter could only be restored through addition and the fabrication of the plaster shells already mentioned....

Columns and the architrave they support were colored titanium white. A narrow encircling profile on the cornice was gilded. The coloration expresses clearly the static function of each building element. Above the cylindrical wall sits the ring beam, upon which the ribbed dome rises. All three elements are colored grey green. The column group and the architrave with the dome's ringed base, all luminous white, are set off. The decorative significance of the columnar elements is obvious; the columns do not pretend to carry the dome.”<sup>714</sup>



*Herstellung der Gipsstuck-Säulenmäntel in der Kathedrale*

Image of the prefabricated plaster shells for the columns, on-site installation. *Endres* (1963), p. 38.

The plaster treatment was evolved over several months, with reference to on-site samples reviewed during meetings at which all of the participants, from the highest ranking to the most hands-on, were assembled on site in East Berlin, no mean feat given the challenges of procuring entry permission for those from both West Germany and West Berlin, for whom different rules and border crossings applied. In his eight-page recapitulation of the progress on site from 1960 to November, 1961, Schwippert references an earlier site meeting in January, 1961, at which the decision to install on-site mock-ups of various plaster treatments was made by a smaller group of clerics involved at the church on a daily basis, among them Endres, as well as Blümel and Fritz Kohlmann, visiting from Düsseldorf.<sup>715</sup> Schwippert explained the architectural thinking behind the plastering, writing “it had become clear that, as we had long argued, the building’s nobility demands this wall treatment, appropriate in terms of both scale and material value, and in harmony with floor, columns and ceiling. All wall surface treatments attempted until then at the clients’ behest, regardless of type or color, were seen to be inadequate and inappropriate with regards to their combinatory potential.”<sup>716</sup> Half a year later, in early June, the decision-makers

assembled: Cardinal Döpfner from West Berlin, Endres and Weber from the church, Blümel, Kohlmann and Schwippert, as well as the artist Fritz Kühn who had already been commissioned to design and fabricate the balustrade between upper and lower churches. A week earlier, Blümel had visited Schwippert's Düsseldorf office to review progress on site; one of his points had been the plaster samples, which he had supervised and described as having a "true" plasterer's surface texture.<sup>717</sup> The scene was set for the decision that Schwippert favored. Much of what Endres would later describe in his book was registered in Schwippert's meeting notes recording the on-site decision:

"The space's wall is to be covered with the plaster surface treatment represented in the sample with the small format. To achieve the greatest surface effect, the pilasters behind the columns will be removed. Because the window embrasures will have smooth plaster because of their surface area, the smooth plaster fascia in the wall must be appropriately dimensioned. At the top, the plaster texture meets the ceiling directly; at the bottom, it will transition to a smooth strip still to be dimensioned. The plaster will be white.... The columns will be extremely smoothly plastered (stucco) and finished with wax. They will remain pure white.... The upper architrave will be pure white, perhaps with a narrow gold band."<sup>718</sup>

The decision to treat the surfaces in this way must have been a comparative relief to Theodor Blümel, leaving him only to ensure the procurement of material, which seemed from later correspondence to have been quite straightforward, and to solicit acceptable bids from the trade. A letter from Schwippert shows that Blümel did his work well, soliciting estimates that compared *in situ* stucco with applied gypsum board for both walls and columns. For the walls, the cost of prefabricated panels was more than one and a half times the cost of *in situ*, an argument that supported the resolution of Schwippert's concern that the prefabricated elements could result in "significant lack of vitality" in the finished surface.<sup>719</sup> In the case of the columns, the prefabricated column cladding was the only practicable option, since the distance between the columns and wall was too narrow to run a jig along its surface. This, too, was a good practical argument for the smooth prefabricated finish, which Schwippert preferred in any case. At the bottom of this letter was a handwritten note from Kohlmann to Blümel, asking that Blümel send along sketches for the junctures between the walls and adjacent planes, most of which were resolved in deep reveals (*Schattenfuge*) simply and without fanfare.

The confluence of practical and design interests produced a situation in which traditional construction methods and materials were the means of a radically modern take on a fundamentally classical building. The words of Schwippert's contemporary Rudolf Steinbach, responding to Schwippert's prompt at the *Darmstädter Gespräche* of 1951, might be easily have



applied the effect achieved in St. Hedwig's: "Whoever enters the small gate chapel at Lorsch...finds himself vis-à-vis with a wall that is a *pure plane*, a solid masonry wall. It is covered by a few poor, painted Romanesque columns. Between them, the wall seems to vibrate on account of the workmanship of the plaster, which contains irregularities. Immediately, for us, we sense the entire world as it is present, but also as it might entirely be imagined."<sup>720</sup> With the simplest of means—traditional textured plasterwork—Schwippert associated his church renovation with those aspects of historic buildings, which for his cohort of Modern architects retained fascination: the "pure plane."

The immediacy implicit in the "pure plane" was a natural locus of synergy not only for the architect and the construction worker, but also for the architecture and its audience. The building's early reception in international press coverage upon its consecration attests to the appeal of the modest, stringent reconstruction architecture. Articles describing the struggle to rebuild the church and the efforts to take up its use as a Cathedral appeared in no fewer than four languages, and focused on aspects as varied as its liturgical meaning, its geopolitical symbolism, its architecture and its popular appeal. Dieter Hildebrandt, writing in the *Frankfurter Allegemeine* just after consecration, focused on the connection among these various aspects:

"Even at the border crossing Heinrich-Heine-Strasse, the church bells can be heard. The press of West Germans who want to go to East Berlin is particularly large this morning. It is All Hallows' Day; many have come to Berlin for a long weekend to see family. The Berlin event of All Hallows' 1963, the altar consecration of the St. Hedwig Cathedral in East Berlin, is already making itself known in the barracks: three clerics with suitcases marked in block letters with the airport name 'Rome' are lined up for a day pass. One hour later, however, they are sitting, now in their red garments, on a bench in the broad rotunda of the reconstruction church, in a space characterized by sobriety and clarity, from nearly Protestant modesty (if such characterizations can still hold). The colors are grey-white in this church rotunda, the twelve columns pairs rise in their whiteness to the dome, which in turn consists of 84 steel ribs. Dark grey marble makes up the floor; in the center of the church, a stair leads to the lower church from which the altar, again in grey marble, rises up into the upper space....There are moments on this Friday morning in 1963 when the past and the present seem to become identical...Is this not the meeting at this moment of two reconciliatory tendencies in church history: then, Prussia's first step away from the totalitarian implementation of Reformation principles, today the conciliatory and insightful words of Pope Paul to the Council to which Archbishop Bengsch will return after the consecration? 'The House will remain,' sings the congregation with the clergy, the first mass is celebrated at the newly consecrated altar and in prayer, even those who only have a day pass think deeply about God."<sup>721</sup>

Hildebrandt's article reflected familiar tropes aligning architectural modesty with positive community and political reconciliation. He added to this the idea that, with architecture as a

symbol and vehicle, two significant liberalizing moments in German religious history could be evoked and associated. As a shared, tangible artifact, the Cathedral represented a collaborative potential, which, in a physically divided city increasingly felt to be a geopolitical flashpoint, carried significant weight.

Writing briefly after the consecration, Endres described a similar sense of the degree to which the Cathedral embodied—even more so than simply symbolized—collaboration. He ended his short book with an acknowledgement of the effort, which had been vested in the church's reconstruction, and speculated on what it meant. He wrote, "Particular recognition should also go to the many craftsmen who served the work loyally and reliably. The devout of the entire Bishopric, however, who always contributed with willingness for self-sacrifice to the Cathedral, have the right to claim: This is *our* St Hedwig's church."<sup>722</sup> For Schwippert, an architect who flourished in a context of lesser means, this ability to produce a building, which could be deemed able to reconcile political division and elicit loyalty was conceivably his greatest possible achievement.

## Concluding Remarks

Over the course of the six years it has taken to research and write this study, major monographs on Ruf<sup>723</sup> and Schwippert<sup>724</sup> respectively have been published. The impending destruction of Schwippert's St. Hedwig's Cathedral reconstruction, one of many controversial projects in a long line of *Rückbau*-inspired nostalgia in Berlin, has garnered significant current media and preservationist attention. A facsimile of Ruf's *Kanzlerbungalow* was built as Germany's contribution to the 2014 Venice Biennale.<sup>725</sup> Ruf and Schwippert, it would seem, are among the many recent subjects of new scholarly, architectural and popular interest in 'Midcentury Modern'.

There is no denying that, at mid-Twentieth century, the role of architect had reached an apogee in its historically vacillating relationship with power and influence. The sheer quantity of building to be done in Germany as elsewhere in Europe was matched by the willingness of clients, finance, government, construction industry and even general populace to embrace the architect's expertise and to follow the architect's dictates. The free hand given to architecture, design and engineering in the period may well be part of its attraction. Reflecting a professional life so utterly unlike the bulk of architectural practice today, the archival material left by Ruf and Schwippert attests to their capacities, each man in his own way, to maximize the potentials offered by that era. To do full justice to their legacies, it could be argued, is to acknowledge the backstory – the day-to-day of realizing architecture – as well as to appreciate the resulting work.

To argue for backstory is also to beg the question of whether this period, the buildings at stake in this study, or Ruf and Schwippert in particular demand this expanded analysis any more so than do other periods, works or architects. Clearly, architectural history embraces a broad range of methodological approaches. The development of backstory here was intended to address a specific methodological challenge:<sup>726</sup> to balance an immanent critique, derived from first-hand knowledge of project development and realization in the present, against appropriate consideration of historic context, formal analysis and *Rezeptionsgeschichte*. Looking carefully at the documents generated in the act of producing a building offered an opportunity to understand the work of architecture from the perspective of its author, or authors, through evidence, rather than through speculative empathy.<sup>727</sup> Decoding the act of integrative problem solving which produces a building, and doing so in a way that is document-based, can offer insight into the interplay of intellectual, social and material histories. It was more than fortunate that the

materials left by these two architects facilitated this approach: one generation's ephemera are another's historical documents.

The strength of the backstories researched and narrated here has been their capacity to hold together items that seemed initially only tenuously related. It would be a measure of this study's success to have revealed the extent to which they are complexly and differentiatedly networked. Under normative methodological conditions, comparisons between, for example, a cathedral in the capital of East Germany and a small college campus in provincial West Germany might seem at best far-fetched. To find continuities between Schwippert's statements at the *Darmstädter Gespräche* of 1951 and his 1955-8 program for the West German World's Fair pavilion might seem naïve. In both cases, only superficial similarities – periodization in the former and authorship in the latter – facilitate initial comparison, if tentatively. But the central question at stake here is one that cannot be addressed only through a stylistic analysis based upon either period or authorial preference: what accounts for the rapid, broad-based transformation in the appearance of West Germany architecture and design between the early and mid-1950s?

It is in addressing this question that the real value of backstory in this study became evident. Postwar architecture in West Germany was not factionalized in the same way it may have been elsewhere: Miesians against Corbusians, Internationalists against Regionalists, charismatic practitioners against corporate stylists. Amidst their stylistic similarities and differences, both Ruf and Schwippert worked within a common architectural culture. Both used their work to recognize and distill the spatial and tangible potentials that the quickly-changing German *Wohnwelt* offered. In this study, the use of diverse documents, from intellectually rich to quotidian, has helped to characterize this culture, to trace its interplay with the genesis of these two men's architecture and to understand how it manifests itself in what their buildings look like.

For the mid-20<sup>th</sup> century in particular, the backstory of construction material is one that could be especially fruitful. Appeals to industry during the research process, among them Ytong and Dupont, revealed that precise documentation on the uptake of new building technologies and products is still rare. Without research completed in the interest of conservation or historic preservation, information on how new material technologies moved into the architectural mainstream would be all but absent. Given the frequency with which these transpositions

occurred especially after World War II, not to mention how influential they have been, this area of research for mid-20<sup>th</sup> century building seems largely underrepresented.<sup>728</sup>

Physical works of architecture are finite, at least relatively, even given inevitable change over time. Backstories as a category inclusive of interpersonal and material details are much more difficult to circumscribe. The entire field of Science and Technology Studies bears witness to the expanding intellectual enterprise between finite results and their rangy backstories.<sup>729</sup> STS as a methodological precedent does not transfer directly to architecture, of course, and even more importantly, it does not offer applicable guidelines to determine the boundaries that should rightfully be imposed on research into the comparatively infinite everyday. Diving into and climbing out of rabbit holes during the course of this study became as much determined by available material and discretion as by the ambition to set a methodological precedent.

That said, the construction of a more inclusive account behind Ruf and Schwippert's idiomatic choices suggested numerous areas for both new and expanded future research. To expand upon Paul Bett's insightful study of German industrial design from 1933 through the 60s<sup>730</sup> in a way that interrogates how architecture at the domestic scale contributed to German identity formation during that era would be enormously valuable. Likewise, one might apply the depth of research and quality of narrative in Werner Durth's *Deutsche Architekten Biographische Verflechtungen*<sup>731</sup> to the professional and personal architecture networks of the 1950s and 60s. Frederic J. Schwartz's approach to the symbiosis between critical theory and visual culture in the Weimar Republic<sup>732</sup> would be as appropriate to a 1950s context in which West German intellectual life was rewritten through design culture representing the newly republican state. This is only to mention a few of the many outstanding scholarly works upon which this study has drawn.

Some surprisingly overlooked research areas included the West (and East) German reception of Mies van der Rohe between his emigration in 1938 and his death; a thorough study of West Germany's 1958 World's Fair pavilion as a construction proposition; and a dearth of material on how the work of American corporate firms was realized in West Germany, especially during the Marshall Plan. Despite the important research on the architectural education enjoyed by the 'early' moderns, there is also little information on the role played by architectural education in the interwar and postwar periods, especially as it relates to the transformations in building

expression via construction advances and their dissemination. Most surprising of all was the near-complete erasure of Otto Apel from the architecture historical consciousness.

Perhaps the most contentious boundary imposed on this study will prove to be the choice of buildings discussed.<sup>733</sup> The first pair, Schwippert's *Bundeshaus* and Ruf's *Akademie der Künste*, had already been associated by virtue of their inclusion in the exhibition at the 1951 *Darmstädter Gespräche*. The consulates by SOM and Ruf marked a turning point both in Ruf's idiom and in the larger relationship between architect and building industry in West Germany. SOM's influence on this relationship in the US gave credence to the hypothesis that its model of practice could have served as a precedent for a parallel development in West Germany. The final pair may prove the most contested. St. Hedwig's Cathedral, despite the fact that it occupied Schwippert's attention for years, had remained relatively understudied until recently. In this study, it also offered an excellent opportunity to compare how Schwippert worked with material limitations and Schwarz'ian spatial ideas nearly a decade after the *Bundeshaus*. While it would admittedly have been possible to compare St. Hedwig's to Ruf's contemporaneous St. Johann von Capistran in Munich-Bogenhausen (1957-60), also a centralized church, the *Hochschule für Verwaltungswissenschaft* in Speyer permitted much broader reflection on Ruf's changing interests. It also supported comparison to his earlier *Akademie der Künste*. The ambition of both these later buildings to represent their occupants' politically-charged individual identities in the public realm provided an irresistible denouement.

Although he might have been surprised to learn this, Ulrich Conrads is the *sine qua non* of this undertaking. I still regret that my friend and former *Daidalos* colleague Joseph Imorde and I never carried out the oral history we had planned to propose to UC, as he was known familiarly. His archives, writings and library could support a broad study of West German architectural vicissitudes from 1945 through the late 1990s, one that would hopefully be no less provocative than he was.

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<sup>1</sup> Photographs in the as-yet unnumbered Hans Schwippert Archive at the Germanisches Nationalmuseum in Nuremberg show a “Mad Men”-like scene of the men seated together at a long, dark wood table, cigarettes in hand.

<sup>2</sup> List of attendees can be viewed at the *Haus der Geschichte* archive in Darmstadt, in the files related to the various *Darmstädter Gespräche*.

<sup>3</sup> Construction drawings and photos in the Paul Baumgarten Archive of the Technical University of Berlin, for example, document a similar shift from his bespoke detailing for the Auditorium at Berlin’s HdK (1952-3) and his mid-sixties cafeteria for the University in Tübingen. The evolution of Otto Apel’s work from contact architect for HICOG projects to his own corporate firm ABB tells an analogous story. Similar idiomatic shifts are evident throughout the more anonymous cityscapes of post-war Germany.

<sup>4</sup> Ulrich Conrads, Peter Netzke, ed., *Mensch und Raum das Darmstädter Gespräche* (Braunschweig: Vieweg, 1991), p. 106.

<sup>5</sup> “Es hatte leider keine Auswirkung, es blieb ohne Antwort.” UC to LW, February, 2004.

<sup>6</sup> *Mensch Und Raum: Das Darmstädter Gespräch 1951*, ed. Ulrich Conrads and Peter Netzke, Bauwelt Fundamente (Braunschweig: Vieweg, 1991). P 106. The question cited is part of a longer passage: “If we had neither steel nor glass – restricting ourselves only to those two materials – or only some of them, or if certain things were to disappear forever or at least for a time, or if perhaps certain things were no longer desired or permitted for whatever reason – is spatial building in the sense of the kind of dwelling we desire and require thus at an end?”

<sup>7</sup> See: Ulrich Conrads, *Die Städte Himmeloffen Reden Und Reflexionen Über Den Wiederaufbau Des Untergegangenen Und Die Wiederkehr Des Neuen Bauens 1948/49*bid. (Basel: Birkhäuser, 2003).

<sup>8</sup> Ulrich Conrads in conversation with the author, January 2002.

<sup>9</sup> Sigfried Giedion, *Space, Time & Architecture: the growth of a new tradition*, (Cambridge: Harvard University Press, 1941)

<sup>10</sup> See F Neugass, "Die Neue Architektur: Amerika Besinnt Sich Auf Einen Eigenen, Zeitgemässigen Stil," *Sonntagsblatt Staats-Zeitung und Herold* (November 5, 1950).

<sup>11</sup> See: W. and I. Gropius, *Apollo in the Democracy: the Cultural Obligation of the Architect*. (New York: McGraw Hill, 1968)

<sup>12</sup> To choose among the myriad examples, see Michelangelo Sabatino, *Pride in Modesty : Modernist Architecture and the Vernacular Tradition in Italy* (Toronto: University of Toronto Press, 2010).

<sup>13</sup> Thomas Reuther, *Die Ambivalente Normalisierung : Deutschlanddiskurs Und Deutschlandbilder in Den USA, 1941-1955*, Transatlantische Historische Studien (Stuttgart: Franz Steiner, 2000). P. 340

<sup>14</sup> Adolf G. Scheck, *Die Bauelemente Band I und II: Fenster und Türen* (Stuttgart: Julius Hoffmann, 1932 and 1933)

<sup>15</sup> The façade manufacturer Josef Gartner in Gundelfingen is a paradigmatic example, which will be discussed in chapter xx.

<sup>16</sup> For example, many firms that bid on and/or delivered the steel windows, doors and doorframes for Sep Ruf’s Akademie der Künste are still extant. Among these are Brehm GmbH (originally a glazer, now a producer of windows), Klöckner Stahl- und Metallhandel (door frames), Vögel GmbH (steel doors; in its heyday, the firm had branches in other parts of Germany and in Beirut. See [http://de.wikipedia.org/wiki/Theodor\\_Vogel\\_\(Freimaurer\)](http://de.wikipedia.org/wiki/Theodor_Vogel_(Freimaurer)), accessed June 24, 2012) and Jucho (steel windows; later, a large-scale metalworking company which has now been transformed into a holding company). Many of these companies’ advertisements appear in architectural periodicals of the 1950s alongside editorial spreads on buildings in which their products were used.

<sup>17</sup> *Mensch Und Raum*, ed. Otto Bartning, Darmstädter Gespräch (Darmstadt: Neue Darmstädter Verlagsanstalt, 1951).

<sup>18</sup> Elisabeth and Notburga Ruf in conversation with the author, July 20, 2011. Although their collection of papers and records from Ruf’s office is near-comprehensive, there is no evidence of regular subscriptions to US magazines or journals. In 1963, Ruf visited the US for three weeks and met Mies van der Rohe. During that same trip, he and his daughter Notburga, who worked in his office as an architect, also visited the offices of SOM. He was also briefly in correspondence with Richard Neutra and hosted Neutra for a lecture in Munich.

<sup>19</sup> Elisabeth and Notburga Ruf in conversation with the author, July 20, 2011.

<sup>20</sup> According to the Deutsches Architekturmuseum in Frankfurt, where ABB’s archives are located. The following email on November 9, 2011, from Oliver Elser, curator, and the author describes the situation: “On Monday we had - after approx. 25 emails to the same person – the opportunity to have a look at the material from Apel in the ABB archive. Well, concerning all the early projects with HICOG and SOM: There is NOTHING left. They told us they had to give the Americans all plans photographs etc due to security reasons. So maybe you should start declassifying in some US archives? Though the ABB material is great stuff, of course. The question how the SOM connection influenced the ABB projects, is fascinating.”

<sup>21</sup> Harald Nethe in an email to the author, June 30, 2010. The full text of the email reads: “As long as the American Embassy was in Bonn (where I still live) it had what was called the Consulting Engineers Office. When I started working for that office (1984), Richard Neumann was the (German) boss. He was the head of that office for more than

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40 years. As far as I know, he worked for the group of architects I mentioned and later remained to continue working for the Americans. Mr. Neumann unfortunately died many years ago. The fact that he was a chain smoker finally caught up to him shortly after he retired. He would have been the man to talk to. The colleague I previously mentioned was a draftsman. He also kept the archive and taught me the ropes when I started. He would not have known the history you are researching, but I'm sure he would be able to confirm the stamp read Architektengemeinschaft Ruf [in a later email, Mr. Nethe corrected himself: the stamp read Architektengemeinschaft Apel]. I haven't spoken to or seen this man for more than 10 years – I hope he's still alive.

What I will now tell you will bring tears to your eyes. When Bonn was closed down, the question was what was to become of the drawings in the archive? Since I was being transferred to Frankfurt, I took the Frankfurt plans with me. The plans of Bonn and anything else we had were to remain where they were. We left them in our office and closed the door. I'm sure the new owner threw them all away.”

<sup>22</sup> See photos preserved in as-yet unnumbered binders, Hans Schwippert Archive, Germanisches Nationalmuseum, Nuremberg.

<sup>23</sup> Ulrich Conrads in conversation, February 3, 2004.

<sup>24</sup> See Michael Bender, Roland May, and Kunsthalle Darmstadt., *Architektur Der Fünfziger Jahre : Die Darmstädter Meisterbauten* (Stuttgart: K. Krämer, 1998), p.30.

<sup>25</sup> I have Ulrich Conrads to thank for my introduction to the *Darmstädter Gespräche*: he spoke about the event during the preparation of the volume of the journal Daidalos for which I served with Joseph Imorde as guest editor, 'Positions in Space.' Conrads referred us to the *Gespräche* for its decisive attempt to describe consciously the term “space” within the context of applied architectural theory. In conversation several years later, in February of 2004, he recalled the event and particularly the *Meisterbauten* as having “no effect on the postwar period,” and called the built work that emerged from the conference “enormously banal.”

<sup>26</sup> More recent histories (see for example Werner Durth and Paul Sigel, *Baukultur Spiegel Gesellschaftlichen Wandels*, 2. aktualisierte und ergänzte Aufl. 2010 ed. (Berlin: Jovis, 2010).) give the event its full due, but it remains lesser-known outside the German-speaking world.

<sup>27</sup> The topic was the primacy of representational and abstract art respectively, a topic of immense political importance in the late 40s and 50s as Abstract Expressionism became the dominant expression of American democracy. The political content of non-figural art in the 1940s is argued in: Serge Guilbaut, *How New York Stole the Idea of Modern Art : Abstract Expressionism, Freedom, and the Cold War* (Chicago: University of Chicago Press, 1983).

<sup>28</sup> See the articles by Otto Bartning and Hugo Häring, reprinted in: Conrads, *Die Städte Himmeloffen Reden Und Reflexionen Über Den Wiederaufbau Des Untergegangenen Und Die Wiederkehr Des Neuen Bauens 1948/49*.

<sup>29</sup> Greg Castillo, in conversation on April 21, 2005, kindly offered this information based upon his communications with Herwin Schaefer, a US administrator for cultural affairs who attended the Conversation on behalf of the US administration.

<sup>30</sup> Even in professional publications, coverage was limited. The magazine most inclined to comprehensive publication, *Baukunst und Werkform*, whose editorial board included several participants (Schwarz, Schweizer, Bartning, Mäckler, Steinbach, Krahn, Eiermann) in the *Gespräche*, covered the exhibition and presentations separately in the September and August issues respectively, both as brief dateline notices. The review of the exhibition, contributed by editor-in-chief Alfons Leidl, praised the historical portion of the exhibition and wondered aloud why its “unique content had not been captured in a large book” or contracted to be shown elsewhere. Of the *Meisterbauten* designs, only Scharoun's was discussed as “an attempt to understand education...as a spatial problem beyond the specific givens of the Darmstadt commission.” Franz Munier, the text editor, reviewed the *Gespräche* itself in a tone critical of its efficacy, in a way that presaged Ulrich Conrad's commentary some fifty years later: “It would be too optimistic, if one wanted to overlook the fact that such enormous investment as was shown in the first weekend of August in Darmstadt, in part invoked by strange emotions and psychologically shimmering coloration, to expect an intellectual rapprochement and even more so, an intellectual result. But one cannot say that the atmosphere was palpably influenced by it...It now seems that the active and passive participants in the *Darmstädter Gespräche* had hoped, despite the abstract topic, for something relevant and concrete whether in the form of assertion and conclusion, whether program or polemic. None of them got their money's worth.” *Baukunst und Werkform* v. 5, no. 8, pp. 3-4 and no. 9, pp. 3-4. An article entitled ‘We Build Because We Are Discontent’ in the popular weekly newspaper *Die Zeit* offered a more neutral evaluation, although it notes that “most of the participants belonged to the generation which, exactly half a century ago, were close to those who founded the Darmstadt artists' colony, and those who were addressed as ‘youthful’ already had grey hair.” *Die Zeit* August, 1951, no. 32. <http://www.zeit.de/1951/32/wir-bauen-wohl-wir-unzufrieden-sind> (Accessed January 2, 2015).

<sup>31</sup> *Mensch Und Raum: Das Darmstädter Gespräch 1951*. p.134.

<sup>32</sup> See *Die Bauhaus Debatte 1953 : Dokumente Einer Verdrängten Kontroverse*, ed. Ulrich Conrads, et al., Bauwelt Fundamente, (Braunschweig: Vieweg, 1994).

<sup>33</sup> *ibid*, p.33.

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<sup>34</sup> György Lukács, *The Theory of the Novel; a Historico-Philosophical Essay on the Forms of Great Epic Literature*, 1st MIT Press paperback ed. (Cambridge, Mass.: M.I.T. Press, 1973)., p. 41.

<sup>35</sup> See Chapter 4 of this book, 'Whose Modernism? German Transatlanticism.' See also Conrads, op. cit.

<sup>36</sup> Ulrich Conrads in conversation, February 3, 2004.

<sup>37</sup> One of the few publications to address directly the importance of women architects in Germany in the post-war is: Nadja Häupl, *Münchener Nachkriegsarchitektinnen - Bea Betz Und Edith Horny Sieben Beiträge Zu Leben Und Werk Nach Begegnungen Im Winter 2010* (München: Institut für Entwerfen Stadt und Landschaft (München) Lehrstuhl für Planen und Bauen im Ländlichen Raum, TUM, 2010).

<sup>38</sup> By Ulrich Conrads' account, no more than three hundred men had studied architecture during the war and survived. Half of his own graduating class (UC had studied art history) did not survive the war. Ulrich Conrads in conversation, February 3, 2004.

<sup>39</sup> In his book *Deutsche Architekten Biographische Verflechtungen 1900-1970*, Schriften Des Deutschen Architekturmuseums Zur Architekturgeschichte Und Architekturtheorie (Braunschweig Wiesbaden: Vieweg, 1986)., Werner Durth cites the examples of Gutschow in Hamburg, Wolters in Coesfeld, and Tamms in Lübeck, as well as the scandal surrounding the appointment of Julius Schulte-Frohlinde in Düsseldorf. Peter Grund, the Director of the Building Department in Darmstadt, had himself been "denazified" before taking on his post. (see Bender and May, eds., op. cit., p. 30).

<sup>40</sup> Of those involved actively in Darmstadt, Döcker, Schweizer and Bartning had not built during the Third Reich. The others had been active either in the office of Herbert Riempl in Berlin, designing industrial (modern) buildings or in the Lorraine area of occupied France, in a provincial office of Speer's administration. See Durth, op. cit., p. 326.

<sup>41</sup> Greg Castillo discussed the problem of the "retreat into industrial architecture" and the culpability of architects who practiced in Germany in the 1930s extensively in his presentation at Columbia University's Collins Kaufman Forum, April 21, 2005; there are numerous examples. This path was not limited to practicing architects: Alfons Leitl, editor of *Baukunst und Werkform*, had focused his journalistic work during the Third Reich on party-assimilated *Neues Bauen*, including Eiermann's design for "Gebt Mir Vier Jahren," *Wasmuths Monatshefte für Baukunst und Städtebau* 21 (1937). It is interesting that Leitl's article, which focused mostly on Hall 2 designed by Eiermann, chose to praise it above the exhibition halls designed by other architects on the basis of its materialization: "If one considers large photographs, exhibition objects, machines, airplanes, highway bridges, etc as the give material, then one can say that this particular celebratory exhibition is built in a manner true to its material. And this understanding of how to form an appealing exhibition from its own material, the uniqueness of its effect and the uniqueness of its material remains the goal of future undertakings." Leitl, p. 204.

<sup>42</sup> Durth, op. cit., p.212.

<sup>43</sup> Durth, op. cit., p. 326.

<sup>44</sup> Reproduced in Johannes Busmann, "Die Revidierte Moderne : Der Architekt Alfons Leitl 1909-1975" (Diss., Müller und Busmann, 1995)., p. 59

<sup>45</sup> Durth, op. cit., p. 59.

<sup>46</sup> ibid

<sup>47</sup> Bartning, ed., op. cit., pp. 33-48.

<sup>48</sup> As only one example, see *Baukunst und Werkform* No. 4 pp. 166-171, in which excerpts from various Van de Velde texts were reprinted.

<sup>49</sup> Bartning, ed., op. cit., pp. 33

<sup>50</sup> ibid, p. 39.

<sup>51</sup> ibid, pp. 37-38.

<sup>52</sup> ibid, frontispiece.

<sup>53</sup> ibid, p.40.

<sup>54</sup> ibid, p. 38.

<sup>55</sup> Bender and May, op. cit., p. 15.

<sup>56</sup> Hans Schwippert in his 1949 address at the opening of the *Bundeshaus*. Undated typescript, Germanisches Museum Nuremberg, unnumbered binder labeled 'Bundeshaus Adenauer Finanzierung'.

<sup>57</sup> The Notkirchen (emergency churches) were built by anchoring up-ended wooden trusses, originally intended for long-span multipurpose rooms or gymnasia, into rubble foundation walls. The trusses were donated by US aid agencies. Information provided during a visit to the Notkirche in Cologne, January, 2004.

<sup>58</sup> Ulrich Conrads in conversation, February 3, 2004.

<sup>59</sup> Durth, op. cit., p.361.

<sup>60</sup> 'Das Zelt in der Wüste' and 'Notkirche' [1948] in: Otto Bartning, *Spannweite; Aus Schriften Und Reden, Ausgewählt Und Eingeleitet Von Alfred Siemon*, *Baukunst Des 20 Jahrhunderts: Quellen Und Monographien, Forschungen Und Berichte* (Bramsche bei Osnabrück,: Rasch, 1958)., pp. 42 and 100. As cited in Joseph Imorde, "Otto Bartning : Spirituality and Modern Building." (unpublished manuscript).

- <sup>61</sup> "Architecture History as the History of Spatial Experience," *Daidalos : Berlin architectural journal*, no. 67 (1998).
- <sup>62</sup> Friedrich Ratzel et al., "Der Lebensraum. Eine Biogeographische Studie," in *Festgaben Für Albert Schöffle Zur Siebsigen Wiederkehr Seines Geburtstages Am 24. Februar. 1901* (Tübingen: H. Laupp, 1901). Cited in: Woodruff D. Smith, "Friedrich Ratzel and the Origins of Lebensraum," *German studies review* 3, no. 1 (1980).
- <sup>63</sup> German History in Documents and Images, see <http://germanhistorydocs.ghi-dc.org/pdf/eng/English61.pdf> (accessed July 26, 2013).
- <sup>64</sup> Busmann, op. cit., photo on p. 34.
- <sup>65</sup> See Thomas Friedrich, *Hitler and Berlin : Abused City* (New Haven: Yale University Press, 2012). p. 416, footnote 119.
- <sup>66</sup> Like the term 'Lebensraum', the exhibition's name also had deeper historical associations: its use had initially been propagated by a homonymous 1926 novel by Hans Grimm set in German colonial Africa which enjoyed increasing popularity throughout the 1930s: Hans Grimm, *Volk Ohne Raum*, 326.-340. Tsd. ed. (München: Langen-Müller, 1926).
- <sup>67</sup> Bartning, ed., op. cit. p. 38.
- <sup>68</sup> Sigfried Giedion, *Space, Time and Architecture; the Growth of a New Tradition*, The Charles Eliot Norton Lectures for 1938-1939 (Cambridge, London,: The Harvard University Press; H. Milford, Oxford University Press, 1941).
- <sup>69</sup> "I would be happy to say a few fundamental things about the building arts and what I would have to say is conservative, that is, revolutionary....It is probable that my convictions are contrary to most of the things that one finds in literature and likely, to what Heidegger has to offer...Ten minutes will hardly suffice to put distance between myself and Heidegger." Letter to Otto Bartning from Rudolf Schwarz, June 4, 1951, quoted in: Thomas Hasler, *Architektur Als Ausdruck - Rudolf Schwarz*, Studien Und Texte Zur Geschichte Der Architekturtheorie (Zürich: gta Verlag, 2000). pp. 108-9.
- <sup>70</sup> Busmann, op. cit., p. 34.
- <sup>71</sup> *Baukunst und Werkform* No.1 (1947) p. 82 ff.
- <sup>72</sup> See Chapter 4 of this book.
- <sup>73</sup> Bartning, ed., op. cit., p. 63
- <sup>74</sup> *ibid*, p. 63
- <sup>75</sup> *ibid*, p. 63.
- <sup>76</sup> Rudolf Schwarz, 'Das Unplanbare' in: Conrads op. cit., pp. 91, 102, 104.
- <sup>77</sup> *ibid*, pp. 97-99.
- <sup>78</sup> Rudolf Schwarz, *Vom Bau Der Kirche*, 2 ed. (Heidelberg: L. Schneider, 1947).
- <sup>79</sup> *The Church Incarnate : The Sacred Function of Christian Architecture* (Chicago: H. Regnery Co., 1958).
- <sup>80</sup> Bartning, ed. op. cit. pp. 66-67.
- <sup>81</sup> "Building Dwelling Thinking," in *Basic Writings : From Being and Time (1927) to the Task of Thinking (1964)*, ed. David Farrell Krell (San Francisco: Harper San Francisco, 1993)., pp. 348-349.
- <sup>82</sup> *ibid*.
- <sup>83</sup> *ibid*, p. 353.
- <sup>84</sup> *ibid*, p. 349.
- <sup>85</sup> *ibid*, p. 356.
- <sup>86</sup> *Ibid*, p. 356.
- <sup>87</sup> *ibid*, p. 356.
- <sup>88</sup> *ibid*, p. 361.
- <sup>89</sup> Frederic J. Schwartz, "The Disappearing Bauhaus," in *Bauhaus Construct : Fashioning Identity, Discourse and Modernism*, ed. Jeffrey Saletnik and Robin Schuldenfrei (London ; New York: Routledge, 2009).
- <sup>90</sup> The conference organizers had foreseen a different foil to Heidegger, Jose Ortega y Gasset. It was Ortega y Gasset who seems to have captured the popular imagination: the archives of the *Darmstädter Gespräche*, now held by the City of Darmstadt, include at least five newspaper clippings dating from late fall of 1951 through the winter of 1952 documenting Ortega y Gasset's reprisal of his Darmstadt speech. The speech was reprinted in three different papers (*Der Mittag* from Düsseldorf, which also reprinted Heidegger's speech; the *Stuttgarter Zeitung*; and the *Süddeutsche Zeitung*). His critique of Heidegger during public speaking appearances in Düsseldorf and Kempton was covered in *Das freie Wort* and *Der Allgäuer* respectively in early 1952.
- <sup>91</sup> Agatha Buslei-Wuppermann, "Hans Schwippert 1899-1973 : Von Der Werkkunst Zum Design" (Zugl Wuppertal, Univ, Diss, 2006, Utz, 2007)., p. 43.
- <sup>92</sup> Conrads, Neitzke, ed., *Mensch und Raum: das Darmstädter Gespräche* (Braunschweig: Vieweg, 1991) p. 104-5.
- <sup>93</sup> Buslei-Wuppermann, op. cit., p.42.
- <sup>94</sup> *ibid*, p. 104-5
- <sup>95</sup> *ibid*, p. 106

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<sup>96</sup> Schwippert had received the commission to renovate the Palais Schaumberg, in which Adenauer resided. Adenauer hated all of Schwippert's interventions, comparing the new glass porte-cochere the gas station, for example. The restoration of the Palais Schaumberg, which was home to subsequent Presidents of West Germany, has raised problems of authenticity in direct relation to Schwippert's work on the Baroque building.

<sup>97</sup> Bartning, ed., op. cit. p. 88.

<sup>98</sup> Sep Ruf's archives, preserved by his daughters Notburga and Elisabeth Ruf, include documentation of Ruf's carefully studied construction details and constant presence on job sites during the construction process. See the following chapter in this book on Ruf's Akademie der Künste, Nuremberg.

<sup>99</sup> Conrads, Neitzke, op. cit., p. 107

<sup>100</sup> *ibid*, p. 107

<sup>101</sup> *ibid*, p. 107-8.

<sup>102</sup> Ruf's recent acceptance of a professorship at the Academy of Arts in Nuremberg in 1950, and his engagement with an architectural pedagogy in the context of an arts academy, may also have influenced his interest in architecture as an art form as represented in his statement.

<sup>103</sup> Bartning, ed., op. cit., p. 89.

<sup>104</sup> Conrads, Neitzke, op. cit., p. 127

<sup>105</sup> Durth, op. cit., pp. 115, 150-55.

<sup>106</sup> *ibid*, p. 270.

<sup>107</sup> Bartning, ed., op. cit., p.185.

<sup>108</sup> *ibid*, pp. 189, 184.

<sup>109</sup> *Ibid*, p. 189.

<sup>110</sup> Werner Dürth describes the first visit of Hentrich and Petschnigg to the US, and the way in which SOM's buildings became their models. Dürth, op. cit., p. 371.

<sup>111</sup> The conflict between Adenauer and Schwippert is legendary, and a standard element of the tour given of Adenauer's Bonn residence, the Palais Schaumberg, whose Schwippert-designed porte-cochere was compared to a gas station by the Chancellor. Their correspondence is preserved in the Schwippert Archive at the Germanisches Museum in Nuremberg.

<sup>112</sup> Agatha Buslei-Wuppermann and Andreas Zeising, *Das Bundeshaus Von Hans Schwippert in Bonn.*

*Architektonische Moderne Und Demokratischer Geist*, 1., Aufl. ed. (Düsseldorf: Grupello, 2009), p. 44.

<sup>113</sup> Hans Eckstein, "Ist Das Bonner Bundeshaus Zu Schlecht Gebaut? Zu Den Angriffen Gegen Die Schlichtheit Der Neuen Architektur," *Die neue Zeitung*, August 19, 1950.

<sup>114</sup> Schwippert Archive, Germanisches Museum Nuremberg, 14.1.1963 Brief von Wanderleb an Schwippert, unnumbered binder.

<sup>115</sup> Deborah Ascher Barnstone, *The Transparent State : Architecture and Politics in Postwar Germany* (London ; New York: Routledge, 2005), chapters 5 & 6.

<sup>116</sup> Typescript of Schwippert's speech at the *Bundeshaus'* inauguration, Schwippert Archive, Germanisches Museum, binder marked 'Bundeshaus Adenauer Finanzierung.'

<sup>117</sup> Ulrich Conrads and Peter Netzke, ed., *Mensch und Raum das Darmstädter Gespräche* (Braunschweig: Vieweg, 1991) p. 106.

<sup>118</sup> Buslei-Wuppermann, "Hans Schwippert 1899-1973 : Von Der Werkkunst Zum Design.", pp. 19, 37.

<sup>119</sup> Buslei-Wuppermann and Zeising, op. cit., p. 30.

<sup>120</sup> Hartmut Frank, "Dächerkrieg?," in *Das Schräge Dach Ein Architekturhandbuch*, ed. Barbara Burren, Martin Tschanz, and Christa Vogt (Sulgen: Niggli, 2008).

<sup>121</sup> Paul Schmitthenner, *Baugestaltung. Erste Folge, Das Deutsche Wohnhaus*, 3 (reprint) ed. (Stuttgart: Deutsche Verlags-Anstalt, 1984), p. 13.

<sup>122</sup> *Ibid.*, p. 9.

<sup>123</sup> *Ibid.*, p. 9.

<sup>124</sup> *Ibid.*, p. 11. The buildings Schmitthenner's office produced in the 1930s for the Reichspost are noteworthy for the use of high-precision technical solutions to facilitate monumentally scaled doors, gates and locks, indicating his investment in the contemporary means of construction (and a tangible refutation of the Modernist insistence that the technology of an era have only one possible expression).

<sup>125</sup> Buslei-Wuppermann, op. cit., p. 38.

<sup>126</sup> Kent Kleinman and Leslie Van Duzer, *Mies Van Der Rohe : The Krefeld Villas* (New York: Princeton Architectural Press, 2005).

<sup>127</sup> Hans Schwippert, *Neuer Hausrat* (Aachen: Kunstgewerbeschule, 1932) as cited in Buslei-Wuppermann, op. cit., p. 54-68.

<sup>128</sup> Gerda Breuer and et al., *Hans Schwippert 1899-1973 Moderation Des Wiederaufbaus* (Berlin: Jovis, 2010), p. 213.

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- <sup>129</sup> Buslei-Wuppermann, op. cit., p. 73.
- <sup>130</sup> Ibid, p. 79ff.
- <sup>131</sup> Breuer et al., op. cit. p.236
- <sup>132</sup> Breuer et al., op. cit., p. 239.
- <sup>133</sup> <http://www3.uni-bonn.de/einrichtungen/universitaetsverwaltung/organisationsplan/archiv/universitaetsgeschichte>, accessed July 3, 2014.
- <sup>134</sup> Christian George, "Studieren in Ruinen : Die Studenten Der Universität Bonn in Der Nachkriegszeit (1945-1955)" (Diss., Univ., Bonn, 2008-2009, V&R unipress, 2010), pp. 100-105. Hans Döllgast tells a similar story about the university in Munich. See Hans Döllgast, *Journal Retour* (Salzburg and Munich: Anton Pustet, 2003) v.1, p12-13
- <sup>135</sup> *Bonn Zwischen Kriegsende Und Währungsreform : Erinnerungsberichte Von Zeitzeugen*, Veröffentlichungen Des Stadtarchivs Bonn (Bonn: Bouvier, 1991), pp. 183-184.
- <sup>136</sup> The series can be viewed online at [http://de.wikipedia.org/wiki/Briefmarken-Jahrgang\\_1949\\_des\\_Saarprotektorats](http://de.wikipedia.org/wiki/Briefmarken-Jahrgang_1949_des_Saarprotektorats) accessed February 22, 2015.
- <sup>137</sup> [http://www.archive.nrw.de/LAV\\_NRW/jsp/bestand.jsp?archivNr=418&tektId=4](http://www.archive.nrw.de/LAV_NRW/jsp/bestand.jsp?archivNr=418&tektId=4), accessed July 5, 2014.
- <sup>138</sup> This wider-spread business strategy is true of Gartner and of the Georgsmarienhütte, later part of the Klöckner concern, which foresaw the sale of a "steel roof system" as the cornerstone of its new business. 1947-48 company annual report, cited in *Glückauf – Die Zeitung Für Freunde, Kunden Und Mitarbeiter Der Georgsmarienhütte Unternehmungsguppe*, Nr. 2, 2005, p. 13.
- <sup>139</sup> *Handelsblatt – die Technische Linie S. 1-2 Freitag*, 14 Juli 1950 Jahrgang 3, Nr. 13.
- <sup>140</sup> For example, Josef Gartner, which had focused on steelwork and steel hardware, began to offer aluminum facades in 1951, after completing work for the 1950 Stuttgart *Gartenschau*. See various scrapbooks with handwritten notes in the possession of Josef Gartner Facades, Gundelfingen.
- <sup>141</sup> Will Grohmann, "The Lightest Parliament in the World," *Die neue Zeitung*, March 4, 1951.
- <sup>142</sup> In a public lecture associated with the exhibition 'Kevin Roche: Architecture as Environment' at the Museum of the City of New York, Kevin Roche recalled his work in 1948 detailing the curtain wall for the UN Secretariat building: "There was no Sweet's Catalogue, but there were lots of Mom and Pop shops. You could get anything made that you wanted... The development from that to the curtain wall industry was natural, because someone in a backyard shop gets a commission to do a few window frames, sees the potential and then the real industry picks it up. Prefabrication and the factory-built take over." Kevin Roche, public discussion at The Museum of the City of New York, January 17, 2012.
- <sup>143</sup> Robert A. M. Stern, Thomas Mellins, and David Fishman, *New York 1960 : Architecture and Urbanism between the Second World War and the Bicentennial* (New York N.Y.: Monacelli Press, 1995), pp. 606-607.
- <sup>144</sup> Construction photographs and the original 1:50 drawings of the complex reveal its typical fireproof steel construction. The UN office of facilities management and construction granted access to these drawings in 2002 to facilitate the preparation of a competition by aarchitectur for the Swiss National Gift to the United Nations.
- <sup>145</sup> Dirk Dorsemagen, "Büro Und Geschäftshäuser Der 50er Jahre Konservatorische Probleme Am Beispiel West-Berlin" (Band I., Diss., Berlin Techn. Univ., 2004), p. 6.
- <sup>146</sup> *Bonn Zwischen Kriegsende Und Währungsreform : Erinnerungsberichte Von Zeitzeugen.*, pp. 117-118.
- <sup>147</sup> Ibid., p. 118.
- <sup>148</sup> Ibid., p. 119.
- <sup>149</sup> Buslei-Wuppermann and Zeising, op. cit., p. 29.
- <sup>150</sup> Ibid., p. 44; this sequence of events is also covered by Ascher Barnstone op. cit. and Durth op. cit.
- <sup>151</sup> Ibid., p. 52.
- <sup>152</sup> The plenary was to sit on the foundations of a former air raid shelter. Ibid., p. 48.
- <sup>153</sup> All drawings referenced are in the collection of the Architecture Museum of the Technical University of Munich.
- <sup>154</sup> Ibid, p. 48.
- <sup>155</sup> Conrads and Netzke, op. cit., p. 106-7.
- <sup>156</sup> Schwippert and Schwarz's collaboration extended beyond the date usually given of 1934: in December, 1949, they submitted an unsuccessful competition entry for the rebuilding of the Maria-Himmelfahrt Kirche in Wesel. Germanisches Museum, Schwippert Archive, Letters between Schwarz and Schwippert, 7-30.12.49-22.2.50, unnumbered binder.
- <sup>157</sup> Schwarz 1958, op. cit., p. 114.
- <sup>158</sup> Ibid., p. 39.
- <sup>159</sup> In a letter from 12.12.1962 to his consulting engineer Konrad Rühl, he wrote, "At that time, with your help... I tried to organize the assembly space of the new Bonn Bundestag in a circle, and to designate for the government a section of this circle, to avoid a dais and to allow all speakers of all types the opportunity to speak from their seats.... He [Adenauer] decided to my chagrin in favor of a traditional form... which confronted the parliamentarians on one side,

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the ruling party, government etc on the other in the “style of a school room” (my argument!).” Schwippert Archive, Germanisches Nationalmuseum, Nuremberg.

<sup>160</sup> Although a four page letter describing each page and the intended photos and layout from the designer is preserved in the Schwippert Archive, the letter is signed only “ch” with nothing else to indicate the designer’s identity.

<sup>161</sup> Address at the inauguration of the *Bundeshaus*, Germanisches Museum. Copy in the Schwippert Archive, Germanisches Nationalmuseum, Nuremberg

<sup>162</sup> Will Grohmann, "Das Hellste Parlament Der Welt," *Die neue Zeitung*, March 4, 1951.

<sup>163</sup> Paste-up with text. Document preserved in the Schwippert Archive, Germanisches Nationalmuseum Nuremberg.

<sup>164</sup> Only months after the completion of the *Bundeshaus*, articles had begun to appear that criticized the building as inadequate or as poorly built. Defenders of Schwippert’s building saw these as thinly disguised attacks on Modern architecture per se. As late as 1963, Schwippert was engaged in campaigns to defend the integrity and professionalism of this work on the *Bundeshaus*. See Eckstein op. cit. and letters from Gerstenmeier April 5, 1963 and 20.März, 1961 from the Deutscher Werkbund of Baden-Württemberg Dr. Heinrich König in the Schwippert Archive, Germanisches Nationalmuseum Nuremberg.

<sup>165</sup> April 8, 1951 letter from the graphic designer to Schwippert, Germanisches Nationalmuseum Nuremberg.

<sup>166</sup> This excursion listed as a reimbursable travel cost on 26.2.49; Document preserved in the Schwippert Archive, Germanisches Nationalmuseum Nuremberg.

<sup>167</sup> [http://de.wikipedia.org/wiki/Internationale\\_Film-Union](http://de.wikipedia.org/wiki/Internationale_Film-Union), accessed July 10 2014.

<sup>168</sup> To appreciate Schwippert’s capacity to balance bespoke and standard elements in his architecture, a comparison with another contemporaneous acoustic ceiling is instructive. Paul Baumgarten’s Concert Hall for the Music Academy in Berlin, begun as a competition in 1949 and completed in early 1954, is quite similar in expression to Schwippert’s building, characterized by exposed structural members and clever assembly of very basic materials to achieve a light, modern architecture. Despite these similarities, the ceiling of the concert hall takes a completely different approach to the expression of its component elements. Baumgarten’s acoustic ceiling, suspended from a rough board shell by threaded rods and pieced together out of thin ash-veneered plywood, frosted wire glass, a piece of acoustic insulation and standard Osram spotlights. Its appearance in the end is completely specific to the hall, with no indication that its elements are standard industrial products. See n/a, "The Architects' Journal," in *Working Detail: Concert Hall in Berlin* (London: The Architectural Press Ltd., November 7, 1957)., pp. 25-58.

<sup>169</sup> Wolfgang Pehnt, ‘Die Würde des Werks. In Erinnerung an Hans Schwippert’ in Buslei-Wuppermann and Zeising op. cit., p. 8.

<sup>170</sup> Breuer et al., op. cit., p. 398.

<sup>171</sup> [http://www.historisches-lexikon-bayerns.de/artikel/artikel\\_45873#9](http://www.historisches-lexikon-bayerns.de/artikel/artikel_45873#9), accessed July 18, 2014.

<sup>172</sup> Irene Meissner, *Sep Ruf 1908-1982*, Kunstwissenschaftliche Studien (Berlin: Deutscher Kunstverlag, 2013)., p. 106.

<sup>173</sup> *Ibid.*, pp. 306-107.

<sup>174</sup> *Ibid.*, p. 91.

<sup>175</sup> Lynnette Widder, "Memory and Ruin: Hans Döllgast’s Reconceptation of the Alte Pinakothek, 1946-1957," in *Bridges to New Worlds* (SUNY Buffalo: The Theoretical Archeology Group, 2012).

<sup>176</sup> Meissner, op. cit., pp. 95-96.

<sup>177</sup> Alfons Leitl, "...Keine Zeit, Eine Verlorene Generation Zu Sein," *Baukunst und Werkform* 1958.

<sup>178</sup> Meissner, op. cit., p. 91.

<sup>179</sup> [http://de.wikipedia.org/wiki/Christkönig\\_\(München\)](http://de.wikipedia.org/wiki/Christkönig_(München)), accessed July 22, 2014 Wimmer would also contribute artworks to Schwippert’s St. Hedwig Cathedral.

<sup>180</sup> See Martin Heidegger, *Basic Writings* edited by David Farrell Krell (San Francisco: Harper Collins, 1977) pp. 139-212.

<sup>181</sup> <http://www.deutscherwerkbund-nw.de/index.php?id=466>, accessed on June 5, 2014.

<sup>182</sup> Meissner, op. cit., p. 92.

<sup>183</sup> *Ibid.*, p. 107.

<sup>184</sup> *Ibid.*, p. 107.

<sup>185</sup> *Ibid.*, p. 107.

<sup>186</sup> *Ibid.*, p. 107.

<sup>187</sup> *Ibid.*, pp. 126-127.

<sup>188</sup> *Ibid.*, p. 126.

<sup>189</sup> *Ibid.*, pp. 126-127.

<sup>190</sup> *Ibid.*, p. 127.

<sup>191</sup> *Ibid.*, pp. 127-129.

<sup>192</sup> Transcript of speech given at the Bundeshaus opening, Hans Schwippert Archive, Germanisches Nationalmuseum, unnumbered binder entitled ‘Bundeshaus Adenauer Finanzierung’.



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<sup>193</sup> 'Die Weihe des Hauses', *Der Spiegel*, September 8 1949., p. 5.

<sup>194</sup> Hans Schwippert in his 1949 address at the opening of the *Bundeshaus*. Undated typescript, Germanisches Museum Nuremberg, unnumbered binder labeled 'Bundeshaus Adenauer Finanzierung'.

<sup>195</sup> While working as an architect in Berlin on the renovation of the Archimbold Planetarium with Renzo Vallebuona in 1995-1996, I visited the cabinetry shop of Richard Fahnkow in Kreuzberg. Located in a building miraculously spared from bombs, the shop had reoccupied a space that had also been a cabinetry shop before the war. In the cellar were whole trees harvested in the late 19<sup>th</sup> century which had been set aside by the original shop for high precision work. Much of the wood used to repair the Planetarium was pine, a soft, fast-growing wood, which had rotted in the fifty years or so since its installation. The original wood window frames made of oak were largely still intact. The shop owner, a classically trained cabinet maker specialized in historic replacement windows for the City of Berlin preservation department, explained the difference in the longevity of post-war repairs to historic buildings as based almost entirely on the materials used, since the levels of know-how and craft was still given in the late 1940s and early 50s.

<sup>196</sup> Meissner, op. cit., p. 126.

<sup>197</sup> All references to the correspondence, brochures and other documents related to the building of the Academy in Nuremberg are derived from the collection of E. and N. Ruf, Gmund, unnumbered job books.

<sup>198</sup> "There was no Sweet's Catalogue, but there were lots of Mom and Pop shops. You could get anything made that you wanted... The development from that to the curtain wall industry was natural, because someone in a backyard shop gets a commission to do a few window frames, sees the potential and then the real industry picks it up. Prefabrication and the factory-built take over." Kevin Roche, recalling his work in 1948 detailing the curtain wall for the UN Secretariat building in a public discussion at The Museum of the City of New York, January 17, 2012.

<sup>199</sup> John Martin Kleeberg, "The Disconto-Gesellschaft and German Industrialization: A Critical Reexamination of the Career of a German Universal Bank, 1851-1914" (Diss., St. Catherine's College, Oxford, 1988)., p. 186, <http://books.google.com/books?id=NQgGAHGMDcQC&printsec=frontcover#v=onepage&q&f=false> accessed July 18, 2014.

<sup>200</sup> Leidl, op. cit., pp. 183-184.

<sup>201</sup> Ibid, p. 183.

<sup>202</sup> Patwant Singh, "Design in Deutschland," *Design*1960. p. 15.

<sup>203</sup> Jill E. Pearlman, *Inventing American Modernism : Joseph Hudnut, Walter Gropius, and the Bauhaus Legacy at Harvard* (Charlottesville: University of Virginia Press, 2007)., pp. 200-238.

<sup>204</sup> Gropius was only one of the "high class" architects that the Foreign Building Office appealed to in developing an idiom to represent America abroad who "turned out to be foreign-born." See Jane C. Loeffler, *The Architecture of Diplomacy : Building America's Embassies*, 1st ed. (New York: Princeton Architectural Press, 1998)., p. 69. Loeffler cites The House Appropriations Subcommittee, *Appropriations for 1955*, (1954), 305.

<sup>205</sup> Gropius was the president of the International Panel of Advisors, which included Ernesto Rogers, Lucio Costa, Sven Markelius and Eero Saarinen, appointed to assist in identifying an architect for the UNESCO headquarters in Paris. Despite his advocacy for Le Corbusier, obstructed by the American representative who objected to Le Corbusier's difficult personality and penchant for cost overruns, the team of Zehrfuss, Breuer and Nervi was appointed. This nomination could not have been too disappointing to Gropius, given his long-time collaboration and friendship with Breuer, and the fact that all three were CIAM members. See Barbara Shapiro Comte, "Portrait of Architects and Advisors of Unesco Headquarters," *Casabella* LXIII, no. 672 (1999)., found at <http://www.cca.qc.ca/en/collection/604-portrait-of-architects-and-advisors-of-unesco-headquarters>, accessed October 27, 2014.

<sup>206</sup> See Conrads Droste, Nerdinger, Strohl, eds. *Die Bauhausdebatte 1953 Dokumente einer verdrängten Kontroverse* (Braunschweig Wiesbaden: Vieweg, 1994), p. 60.

<sup>207</sup> Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.

<sup>208</sup> See Schwarz's article 'Neues Bauen,' originally published in *Die Schildgenossen* 1927, reprinted in: Rudolf Schwarz, *Wegweisung Der Technik Und Andere Schriften Zum Neuen Bauen, 1926-1961*, Bauwelt Fundamente (Braunschweig Wiesbaden: Vieweg, 1979)., pp. 121-131.

<sup>209</sup> Hermann Mäckler, "Praeceptor Germaniae Et Europae?," *Baukunst und werkform*, no. 2/3 (1953)., vol. 2/3, p. 65.

<sup>210</sup> Conrads et al., op cit., p. 20

<sup>211</sup> Ibid, p. 20

<sup>212</sup> Ibid., pp. 20-22.

<sup>213</sup> Ibid., pp. 37-38.

<sup>214</sup> Ibid., p. 20.

<sup>215</sup> Rudolf Schwarz, 'Bilde Künstler rede nicht,' in Conrads et al., eds., op. cit., p.38

<sup>216</sup> Werner Durth, *Deutsche Architekten Biographische Verflechtungen 1900-1970*, (Braunschweig Wiesbaden: Vieweg, 1986), p. 59.

- <sup>217</sup> Schwarz in Conrads et al., op. cit., p.44.
- <sup>218</sup> Conrads, p. 48
- <sup>219</sup> Ibid, p. 38
- <sup>220</sup> Ibid, p. 46
- <sup>221</sup> See Claire Zimmerman, *Photographic Architecture in the Twentieth Century* (Minneapolis: University of Minnesota Press, 2014). or Beatriz Colomina, *Privacy and Publicity : Modern Architecture as Mass Media* (Cambridge, Mass.: MIT Press, 1994).
- <sup>222</sup> See Werner Durth, "Architecture as a Political Medium," in *The United States and Germany in the Era of the Cold War, 1945-1990 : A Handbook*, ed. Detlef Junker, et al. (New York: Cambridge University Press, 2004). pp. 481-2.
- <sup>223</sup> Alfons Leitl, "Anmerkungen," *Baukunst und Werkform* 5, no. May (1951)., p.11
- <sup>224</sup> Schwarz in Conrads et al., op. cit., pp. 38-39.
- <sup>225</sup> See Alexander Henning Smolian, "Serie Oder Persönlichkeit – Zum Technikverständnis Von Rudolf Schwarz," *Wolkenkuckucksheim internationale Zeitschrift für Theorie und Wissenschaft der Architektur* 19, no. 33 (2014)., pp. 193-209, cloud-cuckoo.net/fileadmin/issues\_en/issue\_33/article\_smolian.pdf (Viewed December 29, 2014).
- <sup>226</sup> See Busmann, op. cit., pp. 11-12.
- <sup>227</sup> Schwarz in Conrads, Neitzke, ed., *Mensch und Raum: das Darmstädter Gespräche* (Braunschweig: Vieweg, 1991)., p. 46.
- <sup>228</sup> Rudolf Schwarz, "Was Dennoch Besprochen Werden Muss," *Baukunst und Werkform* 7, no. 4 (1953)., p. 194.
- <sup>229</sup> Schwarz in Conrads et al, *Die Bauhausdebatte*, op. cit., p. 41.
- <sup>230</sup> Ibid., pp. 41-43.
- <sup>231</sup> Walter Gropius, cited in *Baukunst und Werkform* (1953) v. 2/3, pp. 70-71.
- <sup>232</sup> Schwarz, op. cit., p. 39.
- <sup>233</sup> *Rudolf Schwarz, 1897-1961 Architekt Einer Anderen Moderne*, Bewohnte Bilder (Ostfildern-Ruit: Hatje Cantz, 1997)., p. 100ff describes Schwarz's work during the NS period.
- <sup>234</sup> Werner Durth, *Deutsche Architekten Biographische Verflechtungen 1900-1970*, [Neuausg.] ed. (Stuttgart: Krämer, 2001)., pp.423-424, footnote 145.
- <sup>235</sup> Schwarz, in Conrads et. al., *Die Bauhausdebatte* op. cit., p. 43.
- <sup>236</sup> Ibid, p. 40.
- <sup>237</sup> Ibid, p. 39; Schwarz explains that he intends "to backdate Year 1" to circa 1900, a familiar art historical shorthand for the Jugendstil.
- <sup>238</sup> Ibid., p. 46.
- <sup>239</sup> See Durth, *Deutsche Architekten*, op. cit.
- <sup>240</sup> Thomas Hasler, "Rudolf Schwarz and the Reconstruction of German Cities," in *Staufner & Hasler Architekten : Thesen, Methoden, Bauten*, ed. Gian-Marco Jenatsch, Astrid Staufner, and Thomas Hasler (Sulgen: Niggli, 2009)., presented at *Return Emigrations* January 24-25, 2008, Columbia University. Citation from unpublished manuscript.
- <sup>241</sup> Ulrich Conrads, "Materialrausch Und Spiel: Notizen Zur Situation Des Neuen Bauens," *Baukunst und Werkform* 7, no. 8 (1953)., pp.392-407.
- <sup>242</sup> Ibid, p. 407.
- <sup>243</sup> Paul Betts, "The Bauhaus as Cold-War Legend: West German Modernism Revisited," *German politics and society* 14, no. 2 (39) (Summer) (1996)., pp. 75-100.
- <sup>244</sup> Ibid, p. 78; Betts notes that although the "Bauhaus Debate" was reported in the popular press, other architecture periodicals made no report of it. He interprets this reaction as indicative of a relative disciplinary indifference to the Bauhaus legacy at that time.
- <sup>245</sup> Mäckler, op. cit., p. 65.
- <sup>246</sup> Ibid., p. 65.
- <sup>247</sup> Ibid., p. 65.
- <sup>248</sup> Ibid., p. 65.
- <sup>249</sup> Ibid., p. 65.
- <sup>250</sup> Ibid., p. 66.
- <sup>251</sup> See Zimmermann, op. cit., Chapter 7, 'Promise and Threat: American Photographs in Postwar Germany', esp. pp. 219-229.
- <sup>252</sup> Mäckler, op. cit., p. 65.
- <sup>253</sup> Schwarz, Op. Cit., p. 46-47
- <sup>254</sup> Alfons Leitl in *Baukunst und Werkform* (1953) v. 2/3, p. 59.
- <sup>255</sup> Conrads et al., eds. *Die Bauhausdebatte* op. cit., p. 59; also letter from Gropius to Döcker dated 14.3.1953 Series III, file 646, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>256</sup> Gropius to Leitl, 29.5.1953, in Conrads et al., eds. op. cit., p. 186.
- <sup>257</sup> Conrads et al., eds. op. cit., p. 59; also Gropius to Döcker op. cit.

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- <sup>258</sup> Gropius to Döcker, Series III, file 646, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>259</sup> Letter from Fritz Hesse to Gropius dated 14.2.1946, Series III, file 876, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>260</sup> Gropius to Hesse, Series III, file 876, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>261</sup> Edith Aujume, in conversation at Columbia University Graduate School of Architecture, Spring, 1999.
- <sup>262</sup> Gropius to Heuss, 1951, Series III, file 877, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>263</sup> The arguments made in Gilbaut, op. cit. is one particularly spectacular interpretation focused on French architectural production. Gilbaut looks closely at the *Partisan Review* to support his claims about the apotheosis of American high cultural production after World War II. It is equally relevant to use the periodical to study German-American exchanges in that period.
- <sup>264</sup> *Partisan Review* 19, May-June 1952, p. 283-84.
- <sup>265</sup> Ludwig Marcuse, 'European Anti-Americanism', *Partisan Review* May-June 1953, p.317
- <sup>266</sup> Ibid, p.317-320.
- <sup>267</sup> Marcuse quoted in Alexander Stephan, "*Communazis*": *Fbi Surveillance of German Émigré Writers* (New Haven, CT: Yale University Press, 2000)., p.48.
- <sup>268</sup> Letter from Döcker to Gropius dated 26.1.1937, Series III, file 646, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>269</sup> Letter from Döcker to Gropius dated 1.9.1948, Series III, file 646, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>270</sup> Letters between Gropius and Döcker dated 1934-53, Series III, file 646, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University and Durth, Op. Cit., p. 341-351.
- <sup>271</sup> Letter from Otto Bartning to Walter Gropius dated 9.VIII.47, Series III, file 416, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>272</sup> Letter from Richard Döcker to Walter Gropius dated 19.11.47, Series III, file 646, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>273</sup> Hermann Mäckler, carbon copy of letter dated 21.7.1950, Series III, file 1153, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>274</sup> Letters between Gropius and Döcker dated 2.11.48 and 11.7.48, Series III, file 646, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>275</sup> "Professor Gropius Gibt Gute Ratschläge," *Baumeister*1947., pp. 389-391.
- <sup>276</sup> Ibid, p. 389
- <sup>277</sup> Ibid, p. 390
- <sup>278</sup> In a letter dated 11.7.48 to Döcker, Gropius is specific: it is Neufert's "arbitrary" norms he is criticizing.
- <sup>279</sup> See for example Karl Bonatz, "Anmerkungen Zu Den Presseinterviews Mit Professor Gropius Und Zu Seinem Vortrag Im Titania-Palast Am 22. August 1947," *Neue Bauwelt*1947., p. 550.
- <sup>280</sup> Durth 2001, op. cit., p. 312-22.
- <sup>281</sup> Hillebrecht's professional success, and its meaning for his reputation, were clear by 1959, when he would grace the cover of *Der Spiegel*, celebrating the "miracle of Hanover." See "Das Wunder Von Hannover," *Der Spiegel*, June 3 1959., pp 56-69.
- <sup>282</sup> *Baumeister* op. cit., pp. 389-391.
- <sup>283</sup> As per papers presented by Sandrine Kott and Michele Alacevich at The Heyman Center for the Humanity's Disciplines Series: The Idea of Development -Development and Underdevelopment in Postwar Europe, October 10, 2014, Columbia University. The complexity of resource flows and monetary policy at the end of World War II is also described in Timothy Mitchell, *Carbon Democracy : Political Power in the Age of Oil* (London ; New York: Verso Books, 2011).
- <sup>284</sup> Walter Gropius, "Apollo in the Democracy," in *Apollo in the Democracy : The Cultural Obligation of the Architect* (New York,: McGraw-Hill, 1968)., pp.3-4
- <sup>285</sup> Ibid, p. 6.
- <sup>286</sup> Letter from Mäckler to Gropius dated 21.7.1950, Walter Gropius Papers, 1925-1969 (MS Ger 208). Houghton Library, Harvard University.
- <sup>287</sup> ibid
- <sup>288</sup> Durth 2001, op. cit., p. 322.
- <sup>289</sup> Ibid, pp.322-323.
- <sup>290</sup> Gropius, op. cit., p. 4
- <sup>291</sup> Gropius, op. cit. pp. 3-4.

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- <sup>292</sup> Loeffler, *The Architecture of Diplomacy : Building America's Embassies*.
- <sup>293</sup> Serge Guilbaut, *How New York stole the idea of modern art : abstract expressionism, freedom, and the cold war* (Chicago: University of Chicago Press, 1983).
- <sup>294</sup> Nathaniel Owings, "A Radically New Conception of Tomorrow's Office Building," *National Real Estate and Building Journal*, no. January (1948). cited in Hyun Tae Jung, "Organization and Abstraction: The Architecture of Skidmore, Owings & Merrill from 1936 to 1956" (Diss., Columbia University, 2011)., pp. 152-153.
- <sup>295</sup> Interspersed in 1951 Progressive Architecture publication of Oak Ridge was an advertisement for Sloan Flush Valves, one of the manufacturers whose products had been used in the project. The advertisement offers evidence of just one such industry collaboration, without which the quick construction of such a large project during wartime would have been impossible. Jung op. cit., p.134.
- <sup>296</sup> See Jung, op. cit., pp. 102-139 for an in depth description of this phase in SOM's history.
- <sup>297</sup> Charles O. Jackson and Charles W. Johnson, "The Urbane Frontier: The Army and the Community of Oak Ridge, Tennessee, 1942-47," *Military Affairs* 41, no. 1 (1977)., p. 10.
- <sup>298</sup> See <http://jbpierce.org/about-us/> accessed July 25, 2014.
- <sup>299</sup> Hyōng-min Pae, *The Portfolio and the Diagram : Architecture, Discourse, and Modernity in America* (Cambridge, Mass.: MIT Press, 2002)., pp. 151-152.
- <sup>300</sup> Jung, op. cit., p. 145.
- <sup>301</sup> Archibald MacLeish, "Five Questions...and a Striking Answer," *Fortune*1932., p. 61.
- <sup>302</sup> Alfred Bruce and Harold Sandbank, *A History of Prefabrication*, 2nd ed., Technology and Society (New York: Arno Press, 1972)., p. 7. The John B. Pierce Foundation published the first edition of this book in January 1944.
- <sup>303</sup> George J. Bergdolt Jr. and Norman J. Lindner, "The Celotex Corporation," (Columbia Engineering School, 1947).
- <sup>304</sup> "The Cemesto Future," *Time*1943., p. 82.
- <sup>305</sup> Bror Dahlberg and J.F. O'Brien, "A Vital Contribution," (Chicago: The Celotex Corporation, 1941)., cited in Jung, op. cit., p. 98 ff.
- <sup>306</sup> Ibid.
- <sup>307</sup> Walter Gropius, *Bauhausbauten Dessau*, Bauhausbücher (München: Albert Langen Verlag, 1930).
- <sup>308</sup> <http://www.milwaukeeetool.com/company/milwaukee-story/history-of-milwaukee>, accessed August 4, 2014.
- <sup>309</sup> A 1955 study by the Princeton School of Architecture on stainless steel curtain walls is one example of this approach. See Jung, op. cit., p. 148.
- <sup>310</sup> Jung, op. cit., pp. 116-117.
- <sup>311</sup> The breakneck speed at which the master plan was prepared meant that any precedents or references drawn upon were those already somewhere in the architects' minds: there was no time for academic research. As Walter Metschke, charged by the firm to run the team that produced the plan, recalled: "We were given four days and nights to prepare a site plan, including floor plans for the units, town center plans, neighborhood shopping center plans, and elementary and high school plans. Nat [Owings] asked me what I needed to meet this schedule. I said, 'I need ten of the best men you have.' At that time, SOM had an office in Chicago and one in New York with about twelve people in each. Ten men were assigned to me. We worked for four days and nights.... All I had with which to do the site plan was an aerial contour map with twenty-foot interval existing contour lines, trees and soil borings indicating heavy rock formation—not even a north point on the contour map. This indicated a similarity to conditions I might find in Arkansas or Tennessee, where I'd worked previously. At the end of the four days the complete preliminary plans were ready for submittal to the New York district for review. I told Mr. Skidmore that since I hadn't seen my family in six months, I'd like to leave immediately by train to Nebraska via Chicago. I would be ready to return if and when the plans might be accepted. When I arrived in Chicago and got off the train, Pete Schumavon from the Chicago office was racing down the platform with tickets in hand for me to go back to New York immediately. The plans had been approved and Skidmore, Owings and Merrill had signed a contract to proceed immediately." Walter G. Metschke, "Memoirs of Walter G. Metschke / Compiled under the Auspices of the Chicago Architects Oral History Project, the Ernest R. Graham Study Center for Architectural Drawings, Department of Architecture, the Art Institute of Chicago.," in *Chicago Architects Oral History Project* (Chicago: The Art Institute of Chicago, 1998)., p. 40.
- <sup>312</sup> For a fuller description of the town's evolving administrative structure, see Jackson and Johnson, op. cit., pp. 8-15.
- <sup>313</sup> Ibid., p. 9.
- <sup>314</sup> "National Register of Historic Places Multiple Property Documentation Form," ed. National Park Service US Department of the Interior (1991)., p. 12.
- <sup>315</sup> Turner Construction Company, *A Record of War Activities* (New York: Turner Construction Co., 1918).
- <sup>316</sup> <http://www.y12.doe.gov/sites/default/files/pdf/history/articles/2013-08-30.pdf>, accessed August 5, 2014.
- <sup>317</sup> Metschke, op. cit., pp. 46-47.
- <sup>318</sup> Metschke notes that all SOM employees were subject to relocation at the company's will. Metschke, op. cit., p. 41.
- <sup>319</sup> <http://www.lawrenceburg-in.com/pdf/WalkingTour.pdf>, accessed August 5, 2014.

- <sup>320</sup> The first commercially produced particle board was made in Germany in 1887, when an inventor named Hubbard made "artificial wood" using wood flour and egg white-based glue. Roger M. Rowell, *Handbook of Wood Chemistry and Wood Composites*, 2nd ed. (Boca Raton: CRC Press, 2013), p. 399.
- <sup>321</sup> Carol S. Gould, et al., 'Fiberboard,' in *Twentieth-Century Building Materials : History and Conservation*, ed. Thomas C. Jester (New York: McGraw-Hill, 1995), p. 123.
- <sup>322</sup> Andrew McNall and David C. Fischetti, 'Glued Laminated Timber,' in Jester, op. cit., pp. 137-138.
- <sup>323</sup> Michael J. Scheffler, James D. Connolly, 'Building Sealants,' in Jester, op. cit., pp. 272-274.
- <sup>324</sup> Frank Frybergh, "Materials," *Journal of Architectural Education (1947-1974)* 16, no. 2 (1961), pp. 33-34.
- <sup>325</sup> Fritz Neugass, 'Die neue Architektur: Amerika besinnt sich auf einen eigenen, zeitgemässen Stil' in *Sonntagsblatt Staats-Zeitung und Herald*, November 5, 1960, p. 5c
- <sup>326</sup> Neugass worked in France until 1941, when he emigrated to the US. He was a frequent contributor to the American publications *Aufbau*, *New Yorker*, *New Yorker Staats-Zeitung und Herald*, and *Art News*, and to various German art and culture magazines. source: <http://library.albany.edu/speccoll/findaids/ger007.htm#history>, accessed August 6, 2014.
- <sup>327</sup> Herbert Hoover memorandum to President Truman from April 15, 1947 after visiting Germany, cited in Reuther, op. cit., p. 191.
- <sup>328</sup> Reuther, op. cit., p. 189.
- <sup>329</sup> Neugass, op. cit., p. 5.
- <sup>330</sup> "Skidmore, Owings & Merrill," *The Bulletin of the Museum of Modern Art* 18, no. 1 (1950).
- <sup>331</sup> <http://www.nytimes.com/1994/08/20/obituaries/theodore-conrad-84-modeler-and-architecture-preservationist.html>, accessed August 7, 2014.
- <sup>332</sup> "Skidmore, Owings & Merrill.", p. 5.
- <sup>333</sup> Ibid., p. 5.
- <sup>334</sup> Reinhold Martin, "The Bunshaft Tapes: A Preliminary Report," *Journal of Architectural Education (1984-)* 54, no. 2 (2000), pp. 80-87.
- <sup>335</sup> *MoMA Bulletin*, op. cit., p. 6.
- <sup>336</sup> Neugass, op. cit., p. 5.
- <sup>337</sup> Ibid.
- <sup>338</sup> Ibid.
- <sup>339</sup> Ibid.
- <sup>340</sup> Ibid.
- <sup>341</sup> Hermann Schäfer, "Kulturelle Wiederbelebung. Ausstellungen in Westdeutschland Von Kriegsende 1945 Bis in Die 1960er Jahre," in *Geschichtswissenschaft Und Zeiterkenntnis Von Der Aufklärung Bis Zur Gegenwart Festschrift Zum 65. Geburtstag Von Horst Möller*, ed. Klaus Hildebrand, et al. (München: Oldenbourg, 2008), p. 645.
- <sup>342</sup> Carola Hein, "The New York Museum of Modern Art: Engagement in Housing, Planning and Neighbourhood Design," in *Exhibitions and the Development of Modern Planning Culture*, ed. Robert Freestone and Marco Amati (Surrey, England; Burlington, VT: Ashgate Publishing, 2014), p. 254.
- <sup>343</sup> Karl-Ernst Bungenstab, "Entstehung, Bedeutungs- Und Funktionswandel Der Amerika-Häuser. Ein Beitrag Zur Geschichte Der Amerikanischen Auslandsinformaiton Nach Dem 2. Weltkrieg.," *Jahrbuch für Amerikastudien* 16 (1971), p. 189.
- <sup>344</sup> Ibid., p. 192.
- <sup>345</sup> Ibid., p. 192.
- <sup>346</sup> Ibid., p. 195.
- <sup>347</sup> Ibid., p. 198.
- <sup>348</sup> Schäfer, op. cit., p. 645.
- <sup>349</sup> See Bruno Taut, *Die Neue Wohnung Die Frau Als Schöpferin*, 2nd ed. (Leipzig: Klinkhardt & Biermann, 1924). or Gropius 1930, op. cit.
- <sup>350</sup> Reinhold Wagnleitner, "Propagating the American Dream: Cultural Policies as Means of Integration," *American Studies International* 24, no. 1 (1986), p. 75.
- <sup>351</sup> Greg Castillo, "Domesticating the Cold War: Household Consumption as Propaganda in Marshall Plan Germany," *Journal of Contemporary History* 40, no. 2 (2005).
- <sup>352</sup> Sonja Schöttler, *Funktionale Eloquenz : Das Kölner Amerika-Haus Und Die Kulturinstitute Der Vereinigten Staaten Von Amerika in Deutschland* (Worms: Wernersche Verlagsgesellschaft, 2011), p. 9.
- <sup>353</sup> Imma von Guenther, "Wie Lebt Mr. Average in Amerika?," *Die Zeit*, April 9 1953., see <http://www.zeit.de/1953/15/wie-lebt-mr-average-in-amerika>, accessed February 15, 2015.
- <sup>354</sup> .., pp. 63-67; see <http://images.library.wisc.edu/History/EFacs/GerRecon/omg1949Dec/reference/history.omg1949dec.i0028.pdf>, accessed February 15, 2015.

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- <sup>355</sup> Hein, op. cit., p. 255.
- <sup>356</sup> "Architektur Der USA Seit 1947 Exhibition Catalogue," (Stuttgart: Dr. Cantz-sche Druckerei, 1950 (?)), p. 5.
- <sup>357</sup> Ibid., p. 6.
- <sup>358</sup> Leland King, quoted in Loeffler, op. cit., p. 88.
- <sup>359</sup> Schöttler, op. cit., p. 9.
- <sup>360</sup> See Annabel Jane Wharton, *Building the Cold War : Hilton International Hotels and Modern Architecture* (Chicago, IL: University of Chicago, 2001), pp. 77-87 on Berlin Hilton.
- <sup>361</sup> See also Mitchell, op. cit., on how this arrangement was also used to establish and fund the petrodollar.
- <sup>362</sup> See images at <http://www.spiegel.de/fotostrecke/stars-im-hotel-fotostrecke-109482-22.html>, accessed January 25, 2015.
- <sup>363</sup> 'Hotels / Berlin : Hilton will nur pachten', in *Der Spiegel* 27(1955) p. 15-16.
- <sup>364</sup> Ibid.
- <sup>365</sup> Ibid, p. 15.
- <sup>366</sup> Ibid.
- <sup>367</sup> Berlin's America House, for example, was built in 1957 on the opposite side of the Zoo Station from the Hilton by the Berlin architect Bruno Grimmek, also the architect of Cologne's America House. Ironically, Grimmek is yet another example of an architect who had spent the war in Albert Speer's ministry but thereafter enjoyed a prolific career building in a Modern architectural idiom. Schottler, op. cit, pp. 21-22 and [http://de.wikipedia.org/wiki/Bruno\\_Grimmek](http://de.wikipedia.org/wiki/Bruno_Grimmek), accessed January 25, 2015.
- <sup>368</sup> Dorsemagen, Dirk, *Büro- und Geschäftshausfassaden der 50er Jahre: konservatorische Probleme*, (Berlin: Techn. Univ., Diss., 2004), p. 111. Dorsemagen notes that the use of a gridded façade and matte glass cladding might be "extended to almost all of Schwebes' work" but the façade composition and plasticity of the Hilton is unlike any of Schwebes' other projects.
- <sup>369</sup> Ibid, see catalogue pp. 247-393. This dissertation includes period construction details and a thorough inventory of the major tall buildings built in the 1950s in Berlin.
- <sup>370</sup> Ibid, p. 49 and appendix.
- <sup>371</sup> Claus William Hess, *Bürobau Mit Blick in Die Zukunft: Bericht Über Connecticut Life Insurance Co., Bloomfield, Conn. USA* (Barmstedt: Schnelle, 1959), p. 18.
- <sup>372</sup> Ibid, p. 52.
- <sup>373</sup> Ibid, p. 9.
- <sup>374</sup> Ibid, p. 10.
- <sup>375</sup> Benno Kroll, "Aufstieg Und Fall Der Gebrüder Schnelle," *Manager Magazin* 1972., pp. 67-69.
- <sup>376</sup> *The New York Times*, cited ibid., p. 68.
- <sup>377</sup> <http://www.sfgate.com/bayarea/article/Leland-King-backer-of-modernist-embassies-2762155.php>, accessed October 3, 2012. King was responsible for giving the commissions for the US embassies in Rio and Havana to Harrison Abramovitz. He served in the FBO from 1938-1953.
- <sup>378</sup> , in *SOM News* (Skidmore, Owings & Merrill, 1953).
- <sup>379</sup> Nathalie De Blois in conversation with the author, June 21, 2010.
- <sup>380</sup> Ibid.
- <sup>381</sup> Ibid.
- <sup>382</sup> Gordon Bunshaft, "Gordon Bunshaft Architectural Drawings and Papers, 1909-1990 (Bulk 1950-1979)." Series VII: Publications-*SOM News*
- <sup>383</sup> "Amerikanische Generalkonsulate in Bremen, Düsseldorf, Frankfurt Und Stuttgart = Consulats Généraux D'amérique À Brème, Düsseldorf, Francfort Et Stuttgart = American Consulates in Bremen, Düsseldorf, Frankfurt and Stuttgart," *Bauen + Wohnen = Construction + habitation = Building + home : internationale Zeitschrift* 10, no. 4 (1956).
- <sup>384</sup> Item under "notes", in *SOM News* (Skidmore, Owings & Merrill, 1954).
- <sup>385</sup> Item under "notes", in *SOM News* (Skidmore, Owings & Merrill, 1955).
- <sup>386</sup> See Durth, *Deutsche Architekten* (2001) pp. 357-358 and Dorsemagen op. cit., pp. 72-73.
- <sup>387</sup> Walther Schmidt, "Rasteritis," *Bauen + Wohnen = Construction + habitation = Building + home : internationale Zeitschrift* 2 (1947). pp. 290-292.
- <sup>388</sup> <http://www.baunet-info.com/research-networking/artists-groups-topics/hubert-hoffmann/> accessed July 26, 2015.
- <sup>389</sup> *Neue Deutsche Architektur*, (Stuttgart: Verlag Gerd Hatje, 1956), p. 5.
- <sup>390</sup> Ernst Alberts, "Der Gute Raster," *Bauwelt*, no. 17 (1956), p. 400.
- <sup>391</sup> Dorsemagen, D. (2004). *Büro- und Geschäftshäuser der 50er Jahre: Konservatorische Probleme am Beispiel West-Berlin*. Dissertation, Fakultät VII Architektur-Umwelt-Gesellschaft der Technischen Universität Berlin. pp. 72-73.
- <sup>392</sup> Schmidt, op. cit., p. 290.
- <sup>393</sup> Dorsemagen, op. cit., pp. 52-53.

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- <sup>394</sup> Roman Hillmann, *Die Erste Nachkriegsmoderne Ästhetik Und Wahrnehmung Der Westdeutschen Architektur 1945-63* (Petersburg: Michael Imhof Verlag, 2011), pp. 126-127.
- <sup>395</sup> Dorsemann, Cat. 31.
- <sup>396</sup> See Dorsemagen, op. cit., p. 56, and Hillmann, op. cit., p. 126.
- <sup>397</sup> Dorsemagen, op. cit., p. 56.
- <sup>398</sup> <http://www.tu-cottbus.de/projekte/en/great-engineers/ingenieure/leonhardt-fritz-1909-1999/erfindungen.html> accessed July 9, 2015.
- <sup>399</sup> Fritz Leonhardt, "Schüttbauweise in Stahlschalung," *Bauen + Wohnen = Construction + habitation = Building + home : internationale Zeitschrift* 2 (1947), p. 292.
- <sup>400</sup> Dorsemann, figure 61.
- <sup>401</sup> Schmidt, op. cit., p. 290.
- <sup>402</sup> Ibid., p. 290.
- <sup>403</sup> Ibid., p. 292.
- <sup>404</sup> <http://eng.archinform.net/arch/2995.htm> accessed July 13, 2015.
- <sup>405</sup> See Durth, *Deutsche Architekten* (2001) op. cit., p. 356.
- <sup>406</sup> Dorsemagen, op. cit., p. 72. Dorsemagen cites no fewer than four publications from 1956 which diagnose and critique "rasteritis" in contemporaneous architecture.
- <sup>407</sup> Ibid., p. 72, citing Gustav Lampmann, "Rasterfassade Und Skelettbau. Versuch Einer Fördernden Klärung.," *Baumeister* 54, no. 9., p. 653.
- <sup>408</sup> Hart cited in ibid., p. 72.
- <sup>409</sup> Ernst Alberts, "Letter to the Editor," *Bauwelt*, no. 17 (1956), p. 400.
- <sup>410</sup> Bartning, ed., op. cit., p. 33.
- <sup>411</sup> Hoffmann, op. cit., p. VII.
- <sup>412</sup> Ibid., p. VIII.
- <sup>413</sup> Ibid., p. VII.
- <sup>414</sup> Ibid., p. X.
- <sup>415</sup> Ibid., p. XI.
- <sup>416</sup> Ibid., pp. VIII, XII.
- <sup>417</sup> Ibid., p. VIII.
- <sup>418</sup> Ibid., pp. VIII-IX.
- <sup>419</sup> Ibid., p. XII.
- <sup>420</sup> Ibid., p. XII.
- <sup>421</sup> *Bauwelt*, no. 11 (1956), pp. 44-45, 48-49, 50-51, 68, 75.
- <sup>422</sup> Durth, *Deutsche Architekten* (2001) op. cit., p. 60.
- <sup>423</sup> <http://www.abg-fh.com/unternehmen/wir-ueber-uns/historie/> accessed July 15, 2015.
- <sup>424</sup> Teresa Fankhänel, 'How Frankfurt became Mainhattan', Deutsches Architekturmuseum, 20.01.2015, <http://www.terpentin.org/en/how-frankfurt-became-mainhattan> accessed July 15, 2015.
- <sup>425</sup> Two exceptions are Jürgen Joedicke, *Geschichte Der Modernen Architektur; Synthese Aus Form, Funktion Und Konstruktion* (Stuttgart: G. Hatje, 1958), which includes Apel's 1954-55 mixed use apartment building in Frankfurt, the same building selected by Hatje, Hoffmann and Kaspar; and Wolfgang Pehnt, *Neue Deutsche Architektur Band 3* (Stuttgart 1970), which footnotes the firm he founded in 1952, ABB.
- <sup>426</sup> E-mail exchange with Michael Beye of Bille Beye Scheid, the successor firm to ABB, co founded by Apel in 1961. In an email from July 15, 2015, Beye states "The collaboration among Gordon Bunshaft, SOM and us was extremely influential both stylistically and in method, inasmuch as our projects from the time before and after the consulates...were more strongly determined by the International Style than by the German design concepts of the postwar period."
- <sup>427</sup> Alberts, op. cit., p. 400 and "Letter (Carbon Copy) to Otto Haupt, October 19, 1956," (Germanisches Nationalmuseum Nürnberg, Deutsches Kunstarchiv, 1956), cover. The cover apparently reads, "Rastern? – dann bitte gut wie hier" although it was no longer preserved in the library I consulted.
- <sup>428</sup> *Bauwelt* ibid., p. 245.
- <sup>429</sup> Ibid., p. 245. The Bad Godesberg office in which the collaboration actually occurred is never cited in any of the publication. The *Bauwelt* attributions conflict with those made elsewhere: the first page attributes all the consulates to Apel in collaboration with SOM. Captions on the photographs, however, mention only Apel for the Bremen consulates, Apel with SOM for the Stuttgart consulate and Apel and Franz Mocken for the Frankfurt consulate. The Dusseldorf consulate is not depicted. SOM lists all four consulates as their own projects, in collaboration with *Architektengemeinschaft Apel*.
- <sup>430</sup> Ibid., p. 245.

- <sup>431</sup> Werner Lorenz, *Konstruktion Als Kunstwerk : Bauen Mit Eisen in Berlin Und Potsdam 1797-1850*, Die Bauwerke Und Kunstdenkmäler Von Berlin Beiheft (Berlin: Gebr. Mann Verlag, 1995)., cited in Dorsemagen, op. cit., p. 52.
- <sup>432</sup> Dorsemagen, op. cit., p. 52.
- <sup>433</sup> See for example <http://www.zum.de/whkmla/sp/1112/jcw/jcw2.html#iv4> accessed July 16, 2015.
- <sup>434</sup> Many German companies that began as steel bridge and structure builders were to become façade specialists in the postwar period, at least in West Germany. See chapters 2 and 3.
- <sup>435</sup> See Werner Bühner, *Ruhrstahl Und Europa : Die Wirtschaftsvereinigung Eisen- Und Stahlindustrie Und Die Anfänge Der Europäischen Integration, 1945-1952*, Schriftenreihe Der Vierteljahrshefte Für Zeitgeschichte (München: R. Oldenbourg, 1986)., especially Part III; and Durth, *Deutsche Architekten* (2001) op. cit., p. 258 ff.
- <sup>436</sup> Harry Truman, 'Program for U.S. Aid for European Recovery, December 19, 1947,' reprinted in: "In Der Vergangenheit Nach Zukunftsperspektive Ausschau Halten: Die Vereinigten Staaten Von Amerika Und Deutschland 1945-1950 Und Danach," *Zeitschrift für Kulturaustausch* 1987., p. 362.
- <sup>437</sup> Tamás Vonyó, "The Wartime Origins of the Wirtschaftswunder: The Growth of West German Industry, 1938-55," *Jahrbuch für Wirtschaftsgeschichte* 55, no. 2 (2014)., table 2.
- <sup>438</sup> Information from Josef Gartner GmbH provided to the author by Monika Niklaser via email on July 12, 2010.
- <sup>439</sup> Ibid.
- <sup>440</sup> , *Donau Zeitung*, November 10, 1951 1951., special issue (unpaginated).
- <sup>441</sup> Information and project list from Niklaser, op. cit.
- <sup>442</sup> <http://www.bilderbuch-koeln.de/Denkmale/6549> accessed July 17, 2015.
- <sup>443</sup> , *Bauen + Wohnen = Construction + habitation = Building + home : internationale Zeitschrift* 9, no. 4 (1955)., p. 252.
- <sup>444</sup> Ibid.
- <sup>445</sup> Frybergh op. cit., pp. 33-34.
- <sup>446</sup> Information and project list from Niklaser op. cit.
- <sup>447</sup> Friedrich Tamms, "Düsseldorf, Eine Neue Stadt," *Der Architekt BDA IV* (1955)., pp. 421-425.
- <sup>448</sup> Völkel, Hellmuth, 'Mantelwände bei Skelettbauten', in: (1958). *Bauwelt* 16 (366-7).
- <sup>449</sup> ibid, p. 367
- <sup>450</sup> ibid.
- <sup>451</sup> ibid.
- <sup>452</sup> *Donau Zeitung*, op. cit.
- <sup>453</sup> "Zum Fünfzigjährigen Bestehen Der Firma C.H. Jucho in Dortmund," *Die Bautechnik* 5, no. 31 (1927).
- <sup>454</sup> Jucho, C.H. (1931). Jucho-Kupferstahl-Fenster für Büro-, Geschäfts- und Wohnhäuser und Siedlungsbauten, Dortmund (industry pamphlet)
- <sup>455</sup> *Der Architekt BDA* vol III, No 4, advertising supplement
- <sup>456</sup> Speer cited in Durth, *Deutsche Architekten* (2001) op. cit., p. 308.
- <sup>457</sup> Roman Hillmann includes the *Trinkaus* Bank in his list of *Rasterbauten* of the 1950s, although he does note the building's "heavy tectonic form." Hillmann, op. cit., p.122.
- <sup>458</sup> , *Bauen + Wohnen = Construction + habitation = Building + home : internationale Zeitschrift* 8, no. 2 (1954).
- <sup>459</sup> , *Bauen + Wohnen = Construction + habitation = Building + home : internationale Zeitschrift* 10, no. 4 (1956).
- <sup>460</sup> Manfred Knauer, "A Difficult New Beginning. The Race of the German Aluminium Industry to Catch up with the Competition in the 1950s and 1960s," *Cahiers d'histoire de l'aluminium* 2, no. 51 (2013)., p. 76.
- <sup>461</sup> *Bauen und Wohnen* April, 1956 unpaginated advertising section.
- <sup>462</sup> Hoffmann, op. cit., p. VIII.
- <sup>463</sup> Ernst Zietzschmann, ""Team-Work" : Eine Architekturfirma Mit 322 Mitarbeitern = "Team-Work" : Une Entreprise D'architecture À 322 Collaborateurs = Teamwork : An Architect's Firm with 322 Collaborators," *Bauen + Wohnen = Construction + habitation = Building + home : internationale Zeitschrift* 6, no. 3 (1952)., pp. 139-145. The second article to appear was in October, 1952 in the same periodical. It included a three-page spread on a small drive-up Laundromat in California completed in collaboration with Gardner Dailey. See "Wäscherei in Kalifornien = Blanchisserie En Californie = Laundry in California," ibid., no. 5., pp. 264-267. Thereafter, a two-year hiatus followed before *Werk* published an article on Lever House in 1954; see "Das Lever House in New York," (*Das Werk* 41, no. 2 (February 1954)., pp. 49-54.
- <sup>464</sup> *Bauen + Wohnen* 6(3) op. cit., cover.
- <sup>465</sup> Information on Zietzschmann is fragmentary. See <http://www.deutscherwerkbund-nw.de/index.php?id=469>, <http://archivdatenbank-online.ethz.ch/ReportViewer.aspx?obj=6db0b262b3704ed3ba5995f6511e4ea2&format=PDF>, and [https://de.wikipedia.org/wiki/Kunstgewerbeschule\\_Hannover](https://de.wikipedia.org/wiki/Kunstgewerbeschule_Hannover), all accessed July 25, 2015.
- <sup>466</sup> Zietzschmann, *Bauen + Wohnen* 6(3) op. cit., pp. 139-140.
- <sup>467</sup> See Loeffler, op. cit, p. 96: According to Loeffler's research, SOM did not contact anyone in the city building administration prior to submitting the final project.



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<sup>468</sup> The closing of SOM's German office was not announced on the newsletter's primary pages. The only notice appears in the August 15, 1955 issue, under 'Here and There': "Edward G. Petrazio has been assigned to the Chicago office after two and one half years in Germany. With the completion in June of the remaining consulates in Stuttgart and Frankfurt, the SOM office in Frankfurt has been closed." It is interesting that many of the architects who had worked in the German office were made associates in the mid-late 1950s: Paul Pippin, Edward Petrazio, Sherwood Smith, Carl Bitter, David Hughes and Natalie de Blois.

<sup>469</sup> Zietzschmann, *Bauen + Wohnen* 6(3) op. cit., p. 139.

<sup>470</sup> See Chapter 3.

<sup>471</sup> The glazier, Brehm, still exists as a window manufacturer; and Schuster Schmitt, which had provided steel doorframes, became a manufacturer and installer of prefabricated buildings.

<sup>472</sup> As per the dated signature on the microfilm-preserved drawings found in the collection of Skidmore, Owings and Merrill, New York City.

<sup>473</sup> [https://en.wikipedia.org/wiki/Dropped\\_ceiling](https://en.wikipedia.org/wiki/Dropped_ceiling) accessed July 26, 2015.

<sup>474</sup> SOM News, April 15, 1954, unpaginated.

<sup>475</sup> See drawing A007 in the Frankfurt Consulate set or A 005 in the Stuttgart set, SOM Collection, New York City.

<sup>476</sup> Annotations on working drawings for both consulates show that *Ytong* prefabricated aerated concrete elements were used for some vertical elements and for spanning floor elements.

<sup>477</sup> <http://www.xella.com/de/content/geschichte.php> accessed July 27, 2015.

<sup>478</sup> SOM News, No. 3, December 15, 1953.

<sup>479</sup> Both drawings are signed by Gensemer and stamped approved with this date noted.

<sup>480</sup> SOM News, April 15, 1954, op. cit.

<sup>481</sup> n/a (1954). *Der Stadtrat sagte NEIN zu dieser Fassade*. *Abendzeitung*. Munich. Ruf's job book for the consulate included a clipping from an article on the building commission's negative response to SOM's design. A document dated March 13, 1954, also from Ruf's archive, describes a new massing and façade strategy for the same site. A reference to "greater emphasis" on the vertical rather than the horizontal allows this unsigned document to be identified as Ruf's own proposal, to which Jack Gensemer refers in a later letter. Clearly, Ruf was fast to react to the SOM debacle. In October of 1954, he received a letter from a real estate lawyer reporting that the site for which SOM's proposed building had been refused was still foreseen for the consulate, and that "no other American architect" will be commissioned as a basis for negotiations between the HICOG and the city of Munich.

<sup>482</sup> See Meissner, op. cit., p. 136 for a thorough account of the site planning issues.

<sup>483</sup> *Ibid*, p. 128 ff.

<sup>484</sup> In a letter to Ruf dated October 21, 1954 from Ernst Werner, the agent retained by the US to negotiate with the Munich Commission on Rebuilding (Wiederaufbaureferat), assurances are given that "no other American architect will be commissioned but instead, that exclusively Prof. Ruf working together with the state official Director Gensemer... will execute the architectural direction." On April 4, 1955, Gensemer wrote to Ruf: "I am very glad you were able to find an opportunity to visit the completed American consulate in Bremen.... I am sending you under separate cover a set of working drawings of the Frankfurt consulate in order that you may see the type of complete drawings and details which were made for our projects." Correspondence, courtesy of Notburga and Elisabeth Ruf. The April 15, 1954 issue of SOM News notes that the Munich consulate had "reached the stage of working drawings."

<sup>485</sup> There are no US journals in the extensive office archive maintained by Ruf's daughters. Later correspondence with Gropius, Mies and Neutra begins in the 1960s. Ruf collaborated with Egon Eiermann for the famous German pavilion at the Brussels World's Fair of 1958, which has been described relative to Mies' influence on German architecture; but the projects in question here predate that collaboration.

<sup>486</sup> Correspondence, courtesy of Notburga and Elisabeth Ruf.

<sup>487</sup> In a letter dated 21.10.1954 from Ernst Werner, the agent retained by the US to negotiate with the Munich Commission on Rebuilding (Wiederaufbaureferat), assurances are given that "no other American architect will be commissioned but instead, that exclusively Prof. Ruf working together with the state official Director Gensemer... will execute the architectural direction." On April 4, 1955, Gensemer wrote to Ruf: "I am very glad you were able to find an opportunity to visit the completed American consulate in Bremen.... I am sending you under separate cover a set of working drawings of the Frankfurt consulate in order that you may see the type of complete drawings and details which were made for our projects." The April 15, 1954 issue of SOM News notes that the Munich consulate had "reached the stage of working drawings."

<sup>488</sup> According to Harold Nethe, in an email to the author from June 30, 2010, all the State Department drawings were abandoned when the Bonn embassy was closed. See footnote 21.

<sup>489</sup> Chapter 1 and Bartning, ed., op. cit., p. 107.

<sup>490</sup> The Neue Maxburg (1954-7, Ruf and Pabst) also utilizes decoratively clad round columns in parts of its facades and public spaces; but these are clearly related to the repetitive bearing structure elsewhere in the building, and are not expressed to the same degree as free-standing sculptural elements.

- <sup>491</sup> Building description by Ruf, courtesy of Notburga and Elisabeth Ruf.
- <sup>492</sup> Meissner periodizes the work from 1954-1958 as "international" in terms both of location and of importance. She includes here the German pavilion at the 1956 World's Fair. Meissner, op. cit., p. 228-55.
- <sup>493</sup> In reflecting on the Brussels World's Fair, Hans Schwippert wrote, "For some hundred years, our World's Fairs were manifestations of an enormous faith in progress. We have this – behind us. The Eiffel Tower, the fast locomotive, the highest skyscraper, the best new soap – a dark shadow has fallen on this unbridled enthusiasm." Undated typescript including handwritten notes and paste-ups from other documents, Hans Schwippert, "Undated Typescript Including Handwritten Notes and Paste-Ups from Other Documents." (Germanisches Nationalmuseum Nürnberg, Deutsches Kunstarchiv), p. 2.
- <sup>494</sup> "La Dernière Heure" (Brussels) dated May 2, 1958. Cited in: Deutschlands Beitrag zur Weltausstellung Brüssel 1958, a report issued by Generalkommissar der Bundesrepublik Deutschland bei der Weltausstellung Brüssel 1958, edited by Wend Fischer and G. B. von Hartmann, Düsseldorf, 1958. Cited in: Christopher Oestereich, "Umstrittene Selbstdarstellung: Der Deutsche Beitrag Zur Weltausstellung in Brüssel 1958," *Vierteljahrshefte für Zeitgeschichte* 48, no. 1 (2000).
- <sup>495</sup> Expressions of concern for the way in which the physical world registered 'spiritual' needs were frequent in the wake of World War II. While this in itself is the topic of significant scholarship, I will note here only the statement produced by the 1947 CIAM VI meeting in Bridgewater, UK, which resounds in the Belgian invitation: "We must combine social idealism, scientific planning and the fullest use of available building techniques. In doing so we must enlarge and enrich the aesthetic language of architecture in order to provide a contemporary means whereby people's emotional needs can find expression in the design of their environment." Cited on p. 203 in: John R. Gold, *The Experience of Modernism : Modern Architects and the Future City 1928-53* (London, England: E & FN Spon, 1997).
- <sup>496</sup> Ibid.
- <sup>497</sup> Schwippert, "Undated Typescript Including Handwritten Notes and Paste-Ups from Other Documents.", p. 2.
- <sup>498</sup> Schwippert, H. (October 14, 1955). *Notizen zur deutschen Beteiligung an der Weltausstellung Brüssel 1958*, BA Koblenz. p. 1.
- <sup>499</sup> Schwippert, H. (October 14, 1955). *Notizen zur deutschen Beteiligung an der Weltausstellung Brüssel 1958*, BA Koblenz. Cited in Oestereich, op. cit.
- <sup>500</sup> Schwippert, H., undated typescript op.cit., pp. 5 and 8. Emphasis original.
- <sup>501</sup> See Chapter 1.
- <sup>502</sup> See Chapter 1.
- <sup>503</sup> Durth and Sigel, *Baukultur Spiegel Gesellschaftlichen Wandels.*, p. 530.
- <sup>504</sup> Ibid, pp. 528-529.
- <sup>505</sup> Ibid, p. 530. The decision was made on March 17, 1956 to follow only Schwippert's proposal.
- <sup>506</sup> Schwippert used both phrases ("...die Wohnwelt des sogenannten kleinen Mannes in Deutschland..." and "...das Leben der sogenannten Masse...") in October, 1955, prior to the first meeting of the *Inhaltskommission* in December, 1955. See Hans Schwippert, "Notizen Zur Deutschen Beteiligung an Der Weltausstellung Brüssel 1958," (BA Koblenz, 14.10.1955).
- <sup>507</sup> Ibid
- <sup>508</sup> Ibid
- <sup>509</sup> In a protocol of the November, 1956 meeting of the *Werkbund*, Schwippert reported that "a competition foreseen by the Director of Federal Building could be hindered, because and as long as the intellectual concept for the exhibition was still not decided. After a resolution by the cabinet, the Director of Federal Building asked Rossig, Eiermann and Ruf to develop preliminary projects. The two projects showed adequate similarities so that a collaboration between the two architects was resolved, so as to secure the right form for the buildings." Rossig's name does not appear as an author of the project thereafter "Typescript of the Protocol of the Deutscher Werkbund Ag Meeting on November 17, 1956," (Germanisches Nationalmuseum Nürnberg, Deutsches Kunstarchiv, 1956).
- <sup>510</sup> Hans Schwippert, *Notizen zur deutschen Beteiligung an der Weltausstellung zu Brüssel 1958*, 14. 10. 1955, p. 1, in: BA Koblenz, B 102/37723.
- <sup>511</sup> Ibid, p.2.
- <sup>512</sup> Schwippert said: " We are trying consciously to avoid all sensational fireworks as they are common at conventions or fairs. What should, and will, make an impression is what we have to show in a sober and upstanding way: our efforts and achievements which aim to make the life and work of everyone in Germany more meaningful and more beautiful." Hans Schwippert, "Typescript of a Meeting on July 17, 1957 on the Topic of Whether the German Pavilion at the Brussels World's Fair Would Be Spectacular Enough," (Germanisches Nationalmuseum Nürnberg, Deutsches Kunstarchiv, 1957).
- <sup>513</sup> "Notizen Zur Deutschen Beteiligung an Der Weltausstellung Brüssel 1958.", p. 1.
- <sup>514</sup> Ibid. Emphasis in original.
- <sup>515</sup> Ibid, pp. 1-2.

- <sup>516</sup> Ibid, p. 2. Emphasis original.
- <sup>517</sup> Greg Castillo has described the use of domestic goods as proxies by both Germany and the Superpowers. See both: Castillo, "Domesticating the Cold War: Household Consumption as Propaganda in Marshall Plan Germany.;" "Making a Spectacle of Restraint: The Deutschland Pavilion at the 1958 Brussels Exposition," *Journal of Contemporary History* 47, no. 1 (2011). See also David Crowley, "From Homelessness to Homelessness," in *Atomic Dwelling : Anxiety, Domesticity, and Postwar Architecture*, ed. Robin Schuldenfrei (Abingdon, Oxon ; New York: Routledge, 2012).
- <sup>518</sup> Scheerbart is referenced by Schwippert, H., *Notizen zur deutschen* p. 2.
- <sup>519</sup> *Mensch Und Raum Das Darmstädter Gespräch 1951*, ed. Ulrich Conrads and Peter Neitzke, Bauwelt Fundamente (Braunschweig: Vieweg, 1991).
- <sup>520</sup> Schwippert, H., *Notizen zur deutschen* p. 2.
- <sup>521</sup> Ibid, p. 2-3
- <sup>522</sup> Ibid.
- <sup>523</sup> Ibid.
- <sup>524</sup> <http://de.statista.com/statistik/daten/studie/249754/umfrage/sektarale-anteile-am-export-von-ausgewaehlten-laender-1955/> accessed January 30, 2016.
- <sup>525</sup> [https://www.destatis.de/DE/ZahlenFakten/GesamtwirtschaftUmwelt/Aussenhandel/Gesamtentwicklung/Tabellen/GesamtentwicklungAussenhandel.pdf?\\_\\_blob=publicationFile](https://www.destatis.de/DE/ZahlenFakten/GesamtwirtschaftUmwelt/Aussenhandel/Gesamtentwicklung/Tabellen/GesamtentwicklungAussenhandel.pdf?__blob=publicationFile) accessed January 30, 2016.
- <sup>526</sup> Schwippert, H., *Notizen zur deutschen* in Oestereich, op. cit., pp. 2-3.
- <sup>527</sup> Ibid, p. 3.
- <sup>528</sup> Borrowed from the title of the 1976 Ramones song, this portion describes how the consumer goods developed initially to satisfy a domestic market quickly became a strategy for economic stabilization through export of value added goods, not only raw materials as had been the case in the late 1940s and early 1950s. For fun, the Ramones song goes: "I'm a shock trooper in a stupor /Yes I am./I'm a Nazi schatze/Y'know I fight for fatherland/Little German boy/Being pushed around/Little German boy/In a German town/Today your love, tomorrow the world."
- <sup>529</sup> Paul Betts, *The Authority of Everyday Objects : A Cultural History of West German Industrial Design*, Weimar and Now (Berkeley: University of California Press, 2004)., p. 181.
- <sup>530</sup> Ibid, pp. 182-183.
- <sup>531</sup> "Typescript of the Protocol from a December 15, 1956 Meeting of the Rat Für Formgebung in Bonn," (Germanisches Nationalmuseum Nürnberg, Deutsches Kunstarchiv, 1956).
- <sup>532</sup> Gerda Breuer, "Hfg Ulm Und Werkbund," in *Das gute Leben der Deutsche Werkbund nach 1945* (Bergische Universität Wuppertal 2006)., p. 7.
- <sup>533</sup> Max Braun, "Letter from Max Braun to Hans Schwippert, December 18, 1956," (Germanisches Nationalmuseum Nürnberg, Deutsches Kunstarchiv, 1956).
- <sup>534</sup> "Letter from Max Braun to Hans Schwippert, December 17, 1956," (Germanisches Nationalmuseum Nürnberg, Deutsches Kunstarchiv, 1956).
- <sup>535</sup> Open letter from Max Braun dated December 18, 1956. Germanisches Nationalmuseum Nuremberg, Deutsches Kunstarchiv, NL Schwippert, Hans, 231b. "Open Letter from Max Braun to Werner Aebli and the Members of Werkbund, December 18, 1956," (Germanisches Nationalmuseum Nürnberg, Deutsches Kunstarchiv, 1956).
- <sup>536</sup> Ibid.
- <sup>537</sup> For an interview with Rams on the product and its development, see <https://www.youtube.com/watch?v=2dXJFV-2JhM> accessed January 24, 2016.
- <sup>538</sup> <http://www.braun.com/us/world-of-braun/braun-design/design-evolution.html> and <http://www.moma.org/collection/works/2649?locale=en> both accessed January 24, 2016.
- <sup>539</sup> Schwippert, "Letter (Carbon Copy) to Otto Haupt, October 19, 1956."
- <sup>540</sup> "Letter (Carbon Copy) to Otto Haupt, October 27, 1956," (Germanisches Nationalmuseum Nürnberg, Deutsches Kunstarchiv, 1956).
- <sup>541</sup> Murrey Marder, "Brussels Exhibition... Spirit of a People Is Reflected in Its Architecture," *The Washington Post and Times Herald*, May 26, 1958 1958.
- <sup>542</sup> Howard Taubman, "Windows to the Souls of Nations; the Cultural Offerings at Brussels, a Critic Finds, Reveal More Than the Sponsors Intended," *The New York Times*, September 7, 1958 1958.
- <sup>543</sup> Ibid.
- <sup>544</sup> The comparison between the 1958 pavilion and Mies has assumed axiomatic status. Greg Castillo mentions Hartmut Frank and Immo Boyken in Castillo (2011), op. cit., p. 116. This interpretation continues to the present, as in the juxtaposition of images in a detailing primer: Alexander Reichel and Henning Baumann, *Tragen Und Materialisieren Stützen, Wände, Decken*, Scale (Basel: Birkhäuser, 2013), Elektronische Daten., p. 51; or in

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Alexandra Staub, *Conflicted Identities : Housing and the Politics of Cultural Representation*, Routledge Research in Architecture (New York: Routledge, Taylor & Francis Group, 2016)., caption 4.4 on p. 113.

<sup>545</sup> Schwippert, "Notizen Zur Deutschen Beteiligung an Der Weltausstellung Brüssel 1958."

<sup>546</sup> Immo Boyken, "Ludwig Mies Van Der Rohe and Egon Eiermann: The Dictate of Order," *Journal of the Society of Architectural Historian* 49, no. 2 (1990).

<sup>547</sup> Ibid.

<sup>548</sup> Marder, op. cit.

<sup>549</sup> Taubman, op. cit.

<sup>550</sup> Boyken, "Ludwig Mies Van Der Rohe and Egon Eiermann: The Dictate of Order."

<sup>551</sup> Henry Russell Hitchcock and Philip Johnson, *The International Style: Architecture since 1922*, 1st ed. (New York,: W. W. Norton & company, 1932)., p. 43.

<sup>552</sup> Henry-Russell Hitchcock, "The Evolution of Wright, Mies & Le Corbusier," *Perspecta* 1 (1952)., p. 9.

<sup>553</sup> Ibid, p. 12.

<sup>554</sup> "Museum to Show Model of First All Glass and Steel Apartment House," news release, 1950.

<sup>555</sup> There is no little irony in the fact that this "perfection" would ultimately frustrate Johnson. See Dietrich Neumann and Juergen Schulz, "Johnson's Grid," *AA files: annals of the Architectural Association School of Architecture* 70, no. Spring (2015).

<sup>556</sup> Schwippert, undated typescript, op. cit., p. 3.

<sup>557</sup> See Werner Blaser, "Mies Van Der Rohe, Chicago School, 1938-56," *Bauen + Wohnen = Construction + habitation = Building + home : internationale Zeitschrift* 10, no. 7 (1956).and Sigfried Giedion, "Der Moralischer Einfluss Der Architektur Mies Van Der Rohe," *ibid*.

<sup>558</sup> Blaser, op. cit., pp. 217-218.

<sup>559</sup> Ibid.

<sup>560</sup> Ibid, p. 217.

<sup>561</sup> See Durth and Sigel, *Baukultur Spiegel Gesellschaftlichen Wandels*.,p. 530.

<sup>562</sup> Rico Cedro, "Restoring Mies Van Der Rohe's 860-880 Lake Shore Drive: When Less Is Not Enough," *CTBUH Journal*, no. 1 (2009).

<sup>563</sup> The Boyken and Castillo texts cited here represent the two poles of this later reception of the Brussels pavilion as 'Miesian'.

<sup>564</sup> The "overly showy façade" refers to an article in the German magazine *Der Spiegel* from March 14, 1951, which described a decision by the Marshall Plan organization in Paris to consider blocking credit to Germany "as long as it lived above its means." The magazine offered statistics on "non-essential imports," including \$210,000 for rum; \$155,000 for cognac; \$511,000 for cosmetics; and \$136,000 for lobster. Citing problems with the liberalization of the German economy, for which Ludwig Erhard was in part responsible, the magazine claimed, "the current reconfiguration of German liberalization will tear down some facades that are overly showy for Germany." See "Zu Protzige Fassade," *Der Spiegel*, March 14, 1951 1951.

<sup>565</sup> Schwippert, undated typescript, op. cit., p. 4.

<sup>566</sup> Durth and Sigel, op. cit., p. 531.

<sup>567</sup> See Immo Boyken and Heinrich Heidersberger, *Egon Eiermann / Sep Ruf: Deutsche Pavillons, Brüssel 1958*, Opus (Stuttgart: Edition Axel Menges, 2007)., verso, p. 55.

<sup>568</sup> Wend Fischer, "Weltausstellung Brüssel 1958: Deutschland," ed. Generalkommissar der Bundesrepublik Deutschland bei der Weltausstellung Brüssel 1958 (Düsseldorf: A. Bagel, 1958).

<sup>569</sup> Johannes Paulmann, "Representation without Emulation: German Cultural Diplomacy in Search of Integration and Self-Assurance During the Adenauer Era," *German Politics and Society* 25, no. 2 (2007)., p. 173.

<sup>570</sup> Ibid, p. 189.

<sup>571</sup> Ibid, pp. 188-190. Paulmann describes the juxtaposition of the canoe to the USSR's neo-liturgical presentation of the Sputnik as a stroke of genius in demonstrating how the oft-invoked "Haltung der Zurückhaltung" was an appropriate and powerful position for West Germany to assume relative both to its immediate past and its current position in the Cold War.

<sup>572</sup> Narration of a British newsreel.

"Brussels. The World on Show.," in *The World on Show* (British Pathé, 1958)., accessed January 25, 2016.

<sup>573</sup> Compare the drawings in: Fischer, "Weltausstellung Brüssel 1958: Deutschland."; Boyken and Heidersberger, *Egon Eiermann / Sep Ruf: Deutsche Pavillons, Brüssel 1958*.

<sup>574</sup> The term, first used by Ernst Johan in his review of the pavilion in *Ernst Johan, "Haltung Der Zurückhaltung," Werk und Zeit*, no. June (1958)., is cited throughout the literature which describes the West German ambitions for a redefined national identity in the Adenauer period. See Paulmann op. cit., and Castillo, *'Making a Spectacle of Restraint'*.

<sup>575</sup> Schwippert, undated typescript, op. cit. Emphasis original.

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<sup>576</sup> See, for example, 'Flooded at the Farnsworth House' on the erasure of the welds required for the Farnsworth House's sockel. Mike Cadwell, *Strange Details*, Writing Architecture (Cambridge, Mass.: MIT Press, 2007).

<sup>577</sup> Stefan Fisch, "50 Jahre Sep-Ruf-Bau Der Dhv Speyer," (Speyer: Deutsche Hochschule für Verwaltungswissenschaften, 2010). Slide 55.

<sup>578</sup> Rudolf Morsey, "50 Jahre Hochschule Für Verwaltungswissenschaften (1947-1997)," in *Staat Und Verwaltung. Fünfzig Jahre Hochschule Für Verwaltungswissenschaften Speyer*, ed. Klaus Lüder, Schriftenreihe Der Hochschule Speyer (Berlin: Duncker & Humblot, 1997). p. 16-17.

<sup>579</sup> Letter from Dean Bulla to Dupprè of the city administration, July 30, 1956. Cited in: Fisch, "50 Jahre Sep-Ruf-Bau Der Dhv Speyer." p. 17

<sup>580</sup> Meeting notes by Dean Bulla, December 11, 1956, DHV archive. Ibid.

<sup>581</sup> Jury report, February 28, 1957, pp. 4, 6. Typescript, Collection of E. and N. Ruf, Gmund.

<sup>582</sup> Letters from Dr. W. Schmitt of the Ministry for Finance and Reconstruction, Rhineland Pfalz from March 1, 1957, informing Ruf that he had received the commission; and a carbon copy of Ruf's bill, accompanied by a precise accounting of the construction costs associated with the building, which by then had been reduced in size and scope. Typescript, Collection of E. and N Ruf, Gmund.

<sup>583</sup> Letter from the Speyer Department of Building to Ruf, dated October 16, 1959. Typescript Collection of E. and N. Ruf, Gmund.

<sup>584</sup> Letter from the Speyer Department of Building to Ruf, dated October 16, 1959. Typescript, Collection of E. and N. Ruf, Gmund.

<sup>585</sup> Fisch, op. cit., p 28.

<sup>586</sup> The library and lecture hall, intended as higher volumes to frame the courtyard, were reduced to the height of the rest of the building, and the library stacks were resized to accommodate a larger collection. See *ibid*, pp.34-45.

<sup>587</sup> Letter to the City Administration dated November 11, 1958. *Ibid.*, p. 50.

<sup>588</sup> 'Betondecke in Verwaltungshochschule-Neubau eingestürzt', in: *Die Rheinpfalz*, August 1, 1959. Cited in *ibid.*, p.

58.

<sup>589</sup> Morsey, op. cit., pp. 14-15.

<sup>590</sup> *Ibid.*, p. 17.

<sup>591</sup> *Ibid.*

<sup>592</sup> *Ibid.*, pp. 3-9.

<sup>593</sup> *Ibid*, p. 10.

<sup>594</sup> Hermann Haußmann, the German commissioned by the French to oversee educational reform in Germany, quoted in: *Ibid*, p. 6.

<sup>595</sup> Typescript of competition brief, Collection of E. and N. Ruf, Gmund.

<sup>596</sup> Nowhere in the available documentation of meetings between architect and clients is mention made of the aesthetic attributes of the building. The only minor exception was consternation expressed by the dean of the library at a proposal which, to save money, would have resulted in a lower ceiling height for the reading room. One document laconically noted "optimal reasons" for the omission of certain doorways between offices, if not functionally required. See Fisch, op. cit., p. 53.

<sup>597</sup> *Speyer Tagepost* September 23, 1958, cited in: *ibid*, p. 30.

<sup>598</sup> Boyken et al., op. cit., p. 13. Greg Castillo cites Peter Blundell Jones as having provided a similar opinion, which Castillo also seems to accept. Castillo (2011), op. cit., p. 102.

<sup>599</sup> Drawing . . . ., Saarinen Archive, Yale University

<sup>600</sup> See Chapter 6 and Hans Schwippert, "Notizen Zur Deutschen Beteiligung an Der Weltausstellung Brüssel 1958," (BA Koblenz, October 14, 1955).

<sup>601</sup> See article in *Die Rheinpfalz* March 21, 1957 cited in Fisch, op. cit., p.29.

<sup>602</sup> *Ibid.* and competition jury report, cited in Fisch, op. cit., pp. 25 and 29.

<sup>603</sup> Alison Smithson, "How to Recognize and Read Mat-Building: Mainstream Architecture as It Has Developed Towards the Mat-Muilding," *Architectural Design* 44, no. 9 (1974).

<sup>604</sup> Ministry of Finance to architects, July 16, 1956, Construction planning archive in Fisch, op. cit., p. 13.

<sup>605</sup> Jury report, February 28, 1957, *ibid*, p. 23.

<sup>606</sup> "Das Lever House in New York." , and Ernst Zietzschmann, "Neubau Der Manufacturers Trust Company, New York = Nouveau Bâtiment De La Manufacturers Trust Company, New York = New Construction of the Manufacturers Trust Co., New York," *Bauen + Wohnen = Construction + habitation = Building + home : internationale Zeitschrift* 10, no. 2 (1956).

<sup>607</sup> The admiration expressed by the German purveyors of the *Bürolandschaft* has already been discussed in Chapter 5. See Hess, *Bürobau Mit Blick in Die Zukunft: Bericht Über Connecticut Life Insurance Co., Bloomfield, Conn. USA.* The connotations of the American corporate campus and the decision to move top management away from the inner city skyscraper included both quotidian and conceptual aspects. Although most of the women who worked at

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Connecticut General Life were unmarried, the more general trend towards suburban living made sense in the relocation. The campus, with its references to higher learning, also represented a new corporate managerial structure based on a transparent meritocracy. Finally, the landscape tradition tied into the American and English Garden City and its legacy, which understood the landscape as a tool of social change. See Louise A. Mozingo, *Pastoral Capitalism: A History of Suburban Corporate Landscapes, Urban and Industrial Environments* (Cambridge, Mass.: MIT Press, 2011).

<sup>608</sup> See <http://www.landschaftsarchitektur-heute.de/themen/berliner-kulturlandschaften/gaerten-der-museen-galerien/details/47>, accessed March 15, 2016; and Winfried Richard, "Immer Einen Schritt Voraus: Walter Rossow," *Garten + Landschaft* 113, no. 3 (2003).

<sup>609</sup> For his Chase Manhattan Bank courtyard (1961-1964), Noguchi traveled to Japan to find the perfect stone. After the bank delayed its decision, he discovered that the stone had already been sold and "had been shipped to the other end of Japan by somebody who had purchased it. I used every kind of pull I had to get it back." See p. 61 in Martin Friedman, "Noguchi's Imaginary Landscapes," *Design Quarterly*, no. 106/107 (1978).. The idiom of the landscape garden was quickly appropriated for the new corporate campus. Kaneji Domoto, another Japanese American who had been interned during WWII, spent the second half of his architectural career in Westchester writing about Bonsai and positioning enormous rocks on the campuses of corporations.

<sup>610</sup> See p. 50, "Symposium in Symbolic Setting: Fine New Building Meets Challenge of City Crisis," *Life* October 21, 1957.

<sup>611</sup> As evidenced in project files and in conversation with his daughter, Notburga Ruf, who worked in his office in the 1970s. NR in conversation with the author, July 22, 2012.

<sup>612</sup> Hans Schwippert, Lecture given to students at the Düsseldorf Academy of Art, 1965; courtesy of Horst Peter.

<sup>613</sup> Hans Schwippert, "Bericht Über Die Architektenarbeit in Skt. Hedwig Berlin Mai 1960 Bis Heute," (November 15, 1961)., p. 1.

<sup>614</sup> From 1994-1995, the author was project architect for Renzo Vallebuona on the renovation of the Archenhold Planetarium in East Berlin, commissioned by the city of Berlin. The project involved the restoration of windows, roofing, exterior stairs and interior woodwork on the building, which had been the site of Einstein's first public lecture on the theory of relativity. Damaged during the war by the Russian ground offensive, the building had been patched using materials available: pine instead of oak for window restoration, thin aluminum sheeting as a moisture barrier, slag instead of roof insulation. In conversations with the various craftsmen, an account emerged of post-war building construction in East Germany as dependent upon a secondary market of salvaged materials and clever reuse (misuse) of what was available. The only alternatives were black market materials.

<sup>615</sup> Blümel died in 1965, after the consecration ceremony but before the project's ultimate completion. See Schwippert (1969) op. cit., p.2.

<sup>616</sup> In one of the last letters written by Poller to Blümel, which Poller was certain to note as personal, he reports on the arrival at the site of Blümel's replacement after Blümel's long illness. Poller explains in detail how he had cleaned up Blümel's desk and adds that he had taken his ball point pen home, since he needed one there, but would be glad to return it. He adds in a postscript that the replacement is only there "on an hourly basis and...to bridge the gap." Poller's dedication to Blümel is apparent in the letter, both on a professional and personal basis. Horst Poller, "Letter to Theodor Blümel," (November 19, 1962).

<sup>617</sup> Schwippert's speech given to 70 guests of the Archbishop of Berlin after the Blessing of the Cathedral. See Schwippert (1969), op. cit., p. 27.

<sup>618</sup> Ibid.

<sup>619</sup> Theodor Blümel, "Wiederaufbau Der St.-Hedwigs-Kathedrale," *Bauplanung und Bautechnik: technisch-wissenschaftliche Zeitung für das Bauingenieurwesen* 8, no. 2 (February, 1954)., photo caption, p. 65.

<sup>620</sup> See list at [https://en.wikipedia.org/wiki/List\\_of\\_Roman\\_Catholic\\_dioceses\\_in\\_Germany\\_between\\_1821\\_and\\_1993](https://en.wikipedia.org/wiki/List_of_Roman_Catholic_dioceses_in_Germany_between_1821_and_1993) accessed March 28, 2016.

<sup>621</sup> The addresses are given on two letters from Schwippert preserved in the St.-Hedwig-Kathedrale archive, one from December 14, 1961 to Endres and the other from August 7, 1962, written to Blümel in care of the Archbishopric. Blümel lived at Kuglerstrasse 31, Prenzlauer Berg, in East Berlin. A later letter, dated October 17, 1962, is addressed to Blümel in Reinickendorf, in West Berlin. This was following Blümel's illness, which Schwippert refers to as "sepsis."

<sup>622</sup> Blümel (1954) op. cit., p. 64.

<sup>623</sup> Christine Hannemann, *Die Platte Industrialisierter Wohnungsbau in Der Ddr, 2.*, durchges. und erw. Aufl. ed., Architext (Berlin: Schelzky & Jeep, 2000)., p. 62.

<sup>624</sup> Leonhard Küppers, "Letter from Studentenpfarrer Dr. Leonhard Küppers, Düsseldorf Academy of Art, to Monseigneur Heinz Endres," (Berlin: Sankt-Hedwigs-Kathedrale archives, May 18, 1955).

<sup>625</sup> Ronald Rother, "Hinter Der Katholischen Kirche': Zur Bedeutung Von St. Hedwig," *Das Münster* 67, no. 2 (2014). , p. 91.

- <sup>626</sup> Agatha Buslei-Wuppermann, "Hans Schwippert Als Architekt: Seine Pläne Zur Umgestaltung Der St. Hedwig-Kathedrale in Berlin," *ibid.*, p. 117.
- <sup>627</sup> <http://hpd.de/node/655>, accessed March 29, 2016.
- <sup>628</sup> Leonhard Küppers, "Letter from Studentenpfarrer Dr. Leonhard Küppers, Düsseldorf Academy of Art, to Monseigneur Heinz Endres," (Berlin: Sankt-Hedwigs-Kathedrale archives, September 10, 1954).
- <sup>629</sup> [https://de.wikipedia.org/wiki/Leonhard\\_Küppers](https://de.wikipedia.org/wiki/Leonhard_Küppers), accessed March 30, 2016.
- <sup>630</sup> Joseph Hoster, *Vom Bauen, Bilden Und Bewahren Festschrift Für Willy Weyres Zur Vollendung Seines 60. Lebensjahres* (Köln: Greven, 1964).
- <sup>631</sup> Küppers, L. (September, 1954) *op. cit.*
- <sup>632</sup> *Ibid.*
- <sup>633</sup> *Die St. Hedwigs-Kathedrale Zu Berlin*, ed. Christine Goetz and Victor H. Elbern (Regensburg: Schnell + Steiner, 2000), p. 70.
- <sup>634</sup> Heinz Endres, *Die St. Hedwigs-Kathedrale in Berlin. Baugeschichte Und Wiederaufbau* (Berlin (east): Morus-Verlag, 1963), p. 28.
- <sup>635</sup> Schwippert (1969), *op. cit.*;
- [http://www.corbusierhaus.org/die\\_geschichte/planung\\_und\\_bau/bauherr\\_und\\_planungsteam.htm](http://www.corbusierhaus.org/die_geschichte/planung_und_bau/bauherr_und_planungsteam.htm), accessed March 30, 2016; and *Bauten Theo Kellner Und Felix H. Hinssen*, (Berlin: Gebr. Mann, 2000; reprint 1930; repr., 2000).
- <sup>636</sup> Leonhard Küppers, "Letter from Studentenpfarrer Dr. Leonhard Küppers, Düsseldorf Academy of Art, to Monseigneur Heinz Endres," (Berlin: Sankt-Hedwigs-Kathedrale archives, December 10, 1954).
- <sup>637</sup> "Letter from Studentenpfarrer Dr. Leonhard Küppers, Düsseldorf Academy of Art, to Monseigneur Heinz Endres."
- <sup>638</sup> *Ibid.*
- <sup>639</sup> Konstantin Mathey, "Die Umgestaltung Der St. Hedwigs-Kirche Zur Kathedrale Des Bistums Berlin (1930-1932) Nach Einem Entwurf Von Prof. Clemens Holzmeister (1886-1983) Unter Mitarbeit Des Diözesanbauamtes Cal Kühn (1973-1942)," *Das Münster* 67, no. 2 (2014).
- <sup>640</sup> Holzmeister's report was delivered on July 3, 1957. Two other critical reviews of Schwippert's design were submitted by the art historian Prof. Hubertus Lossow on May 10, 1957 and by Building Inspector Schädel on August 10, 1957. The reports were sent by Holzmeister's advocate Dr. Georg Banasch, who had been charged with the day-to-day overseeing of the renovation, to Vice Bishop Tkotsch on October 8, 1957. The controversy around Schwippert's design and the internal strife it caused is one reason for the long delay on the project. When Banasch died in 1960, much of the resistance could be set aside. (Berlin: Sankt-Hedwigs-Kathedrale archives)
- <sup>641</sup> Küppers learned only of Wagner's selection after he had been left out of a series of meetings on the church. He refers to Wagner as "vain...because he believes that only he knows what is definitive." Küppers' displeasure at his removal from the project is a topic for a series of letters between February and May, 1956. See Leonhard Küppers, "Letter from Studentenpfarrer Dr. Leonhard Küppers, Düsseldorf Academy of Art, to Monseigneur Heinz Endres," (Berlin: Sankt-Hedwigs-Kathedrale archives, February 23, 1956).
- <sup>642</sup> See <http://web2py.dli-info.net/dli/hp/artikel?id=683&schlagwort=Deutsches%20Liturgisches%20Institut>, accessed April 4, 2016.
- <sup>643</sup> Buslei-Wuppermann, "Hans Schwippert 1899-1973 : Von Der Werkkunst Zum Design."
- <sup>644</sup> Leonhard Küppers, "Die Hedwigs-Kathedrale in Berlin," *Das Münster* 10 (1957).
- <sup>645</sup> *Ibid.*
- <sup>646</sup> Schwippert (1969), *op. cit.*, p. 10.
- <sup>647</sup> *Ibid.* p. 2.
- <sup>648</sup> See, for example, <http://www.monumente-online.de/de/ausgaben/2014/6/die-st-hedwig-kathedrale.php#.VxFi-aug7PA>, accessed April 15, 2016.
- <sup>649</sup> A decision on whether to renovate or completely replace Schwippert's interior is expected later in 2016. See Claudia Keller, "Sorge Um St. Hedwig," *Der Tagesspiegel* September 2, 2014., Giuseppe Pitronaci, "Kirche Zwischen Ost Und West: Der Geplante Umbau Der Hedwigskathedrale Wirft Fragen Auf," *Herder Korrespondenz*, May 2014 2014., and Claudia Keller, "Gott in Der Arena," *Der Tagesspiegel* July 2, 2014..
- <sup>650</sup> Schwarz had developed several architectural strategies around the problem of the wartime ruin as *memento mori*, from the use of rubble in St. Anna in Düren (1951-1956) to rebuild the new church to the literal retention of ruins as part of the Gürzenich complex (1949-1955) in Cologne. His many lesser-known projects throughout western Germany for the partial reconstruction of church roofs, clerestories, windows and portals offers a catalogue of formal and material methods for juxtaposing restoration, remnant and new construction.
- <sup>651</sup> Schwippert (1969) *op. cit.*, p. 27.
- <sup>652</sup> *Ibid.*, p. 4.
- <sup>653</sup> *ibid.*, p. 7.
- <sup>654</sup> *Ibid.*, p. 8.
- <sup>655</sup> *Ibid.*, p. 10.

- <sup>656</sup> Georg Banasch, *Die Sankt-Hedwigs-Kathedrale in Berlin Nach Ihrer Baulichen Und Künstlerischen Neugestaltung Im Jahre 1932 Ein Führer* (Berlin: Germania, 1933).
- <sup>657</sup> Hubertus Lossow, "Report on the Renovation of the St. Hedwig's Cathedral for Dr. Georg Banasch," (May 10, 1957).
- <sup>658</sup> Ibid, pp. 1-2.
- <sup>659</sup> Schwippert (1969), op. cit., p. 11.
- <sup>660</sup> Ibid.
- <sup>661</sup> Leonhard Küppers, "Liturgie Und Kirchenbau," (January 28, 1955)., p. 1.
- <sup>662</sup> Ibid, p. 1.
- <sup>663</sup> Ibid, p. 1.
- <sup>664</sup> Ibid, p. 2.
- <sup>665</sup> Leonhard Küppers, *Südliche Stadt. Das Erlebnis Von Pisa, Assisi Und Florenz*. (Düsseldorf: Bastion Verlag, 1946).
- <sup>666</sup> Schwippert (1969), op. cit., p. 8.
- <sup>667</sup> Küppers, "Letter from Studentenpfarrer Dr. Leonhard Küppers, Düsseldorf Academy of Art, to Monseigneur Heinz Endres." (May 18, 1955).
- <sup>668</sup> Georg Banasch, "Letter to Bishop Paul Tkotsch," (October 8, 1957).
- <sup>669</sup> Lossow (1957), op. cit., p. 2.
- <sup>670</sup> Kuppers (January 28, 1955), op. cit., p. 2.
- <sup>671</sup> Leonhard Küppers, "Moderne Kunst Im Kirchenraum," (Berlin: Sankt-Hedwigs-Kathedrale, February 25, 1955);  
ibid., p. 1.
- <sup>672</sup> Ibid, p. 1.
- <sup>673</sup> Ibid, p. 2.
- <sup>674</sup> Ibid, p. 2.
- <sup>675</sup> *Kirche Und Kunst in Zeitgenössischen Dokumenten*, ed. J. and Storz Walterscheid, H., vol. 5, Religiöse  
Quellschriften (Düsseldorf: Patmos Verlag, 1955)., p. 18.
- <sup>676</sup> Hans Schwippert, "Die St. Hedwigs Kathedrale in Berlin Information," (Germanisches Nationalmuseum Schwippert  
Archive, St. Hedwig's Files, November 1, 1963).
- <sup>677</sup> Schwippert (December 14, 1961), op. cit.
- <sup>678</sup> Küppers (February 25, 1955), op. cit.
- <sup>679</sup> Küppers, *Kirche Und Kunst in Zeitgenössischen Dokumenten*, 5. p. 18.
- <sup>680</sup> See Chapter 1.
- <sup>681</sup> *Mensch Und Raum Das Darmstädter Gespräch 1951.*, pp. 104-105.
- <sup>682</sup> Heinz Endres, "Letter to Fritz Kohlmann," (November 27, 1962)., Horst Poller, "Letter to Theodor Blümel,"  
(November 27, 1962)., Theodor Blümel, "Letter to Horst Poller," (November 29, 1962).
- <sup>683</sup> "Letter to Theodor Blümel from Versorgungskontor Für Maschinenbauerzeugnisse, Fachgebiet Heizungstechnik,"  
(Berlin: Sankt-Hedwigs-Kathedrale Archive, December 5, 1961).; "Letter to Versorgungskontor Für  
Maschinenbauerzeugnisse, Fachgebiet Heizungstechnik," (Berlin: Sankt-Hedwigs-Kathedrale Archive, December 10,  
1961).
- <sup>684</sup> See Chapter 2.
- <sup>685</sup> Sabine Schulte, "Die St.-Hedwigs-Kathedrale Als Symbolraum Des Aufbruchs," (Berlin: Architekten- und Ingenieur-  
Verein zu Berlin, September 8, 2015).
- <sup>686</sup> "St. Hedwig Berlin – Treppenwangen (Drawing)," (Berlin: Sankt-Hedwigs-Kathedrale archives, June 14, 1963).
- <sup>687</sup> Endres, *Die St. Hedwigs-Kathedrale in Berlin. Baugeschichte Und Wiederaufbau*.
- <sup>688</sup> "St. Hedwig Berlin – Die Innentüren (Drawing)," (Berlin: Sankt-Hedwigs-Kathedrale archive, October 22, 1962).,  
scale noted as 1:50, 1:1. The initials KO indicate that Kohlmann may have authored this drawing.
- <sup>689</sup> Fritz Kohlmann, "Letter to Heinz Endres," (Berlin: Sankt-Hedwigs-Kathedrale archives, June 18, 1963).
- <sup>690</sup> See, for example: Heinz Endres, "Letter to Kohlmann, Caritas Help for Walnut Transport to East Berlin," (Berlin:  
Sankt-Hedwigs-Kathedrale Archive, August 21, 1963).; Ernst Kayser, "Calculation of Walnut Wood's Weight for  
Shipping to St. Hedwig's," (July 23, 1963).; Heinz Endres, "Zur Klärung Der Lage' Walnuß," (Berlin: Sankt-Hedwigs-  
Kathedrale Archive, July 29, 1963). All, Sankt-Hedwig-Kathedrale Archives.
- <sup>691</sup> Horst Poller, "Letter to Theodor Blümel," (Berlin: Sankt-Hedwigs-Kathedrale Archives, October 2, 1962).
- <sup>692</sup> Rothkegel, "Request for Permission to Import Steel Scaffolding," (Berlin July 28, 1959).
- <sup>693</sup> Ibid.
- <sup>694</sup> Ibid.
- <sup>695</sup> Jan and Kaneko Krieger, Yuima Oliver, "St. Hedwig-Kathedrale, Bebelplatz, Berlin-Mitte: Gutachten Zur  
Baugeschichte Und Denkmalsubstranzfassung," (Berlin: Erzbisum Berlin, Erzbischöfliches Ordinariat, July, 2013).  
p. 82-3.



<sup>696</sup> The church was not cleared of rubble until 1949-1950, and then, only by members of the congregation. See Krieger, op. cit., p. 74.

<sup>697</sup> Endres (*Baugeschichte und Wiederaufbau*, 1963), op. cit., p. 22.

<sup>698</sup> Ibid., p. 32.

<sup>699</sup> Kuppers (1957), op. cit., illustrations on p. 430.

<sup>700</sup> Endres (*Baugeschichte und Wiederaufbau*, 1963), op. cit., p. 32.

<sup>701</sup> Ibid., p. 36.

<sup>702</sup> Hans Schwippert, "Letter to Heinz Endres and Theodor Blümel Attached to 'Notizen Zur Ausstattung'," (Berlin: Sankt-Hedwigs-Kathedrale Archives, June 19, 1961), p. 1.

<sup>703</sup> Ibid.

<sup>704</sup> Ibid, unnumbered page titled 'Fenster Unterkirche.'

<sup>705</sup> Ibid, unnumbered page titled 'Fenster Oberkirche.'

<sup>706</sup> Annemarie Richter, "Gottfried Heinersdorff (1883 - 1941) Ein Reformator Der Deutschen Glasbildkunst" (Berlin, Techn Univ, Diss, 1983, 1983), p. 134.

<sup>707</sup> Hans Schwippert, "Letter to Heinz Endres and Theodor Blümel," (August 7, 1962).

<sup>708</sup> Heinz Endres, "Letter to Fritz Kohlmann," (October 9, 1962).

<sup>709</sup> Schwippert (August 7, 1962), op. cit.,

<sup>710</sup> Endres (*Baugeschichte und Wiederaufbau*, 1963), p. 42.

<sup>711</sup> Fritz Kohlmann, "Letter to Heinz Endres," (February 13, 1964).

<sup>712</sup> Buslei-Wuppermann (2014), op. cit., p. 120.

<sup>713</sup> Schwippert (June 19, 1961), op. cit.

<sup>714</sup> Endres (*Baugeschichte und Wiederaufbau*, 1963), op. cit., pp. 36-39.

<sup>715</sup> Schwippert (Bericht über die Architektenarbeit, 1961), op. cit., p. 2.

<sup>716</sup> Ibid.

<sup>717</sup> Theodor Blümel, "Für Die Besprechung Am 23. Und 24.5.1961 Bei Herrn Prof. Schwippert, Düsseldorf," (Berlin: Sankt-Hedwigs-Kathedrale Archives, May 20, 1961).

<sup>718</sup> Schwippert (Bericht über die Architektenarbeit, 1961), op. cit., p. 3.

<sup>719</sup> Hans Schwippert, "Letter to Dean of the Cathedral Weber," (Berlin: Sankt-Hedwigs-Kathedrale Archives, November 17, 1961).

<sup>720</sup> *Mensch Und Raum.*, p. 250.

<sup>721</sup> This quotation is taken from a clipping in the Schwippert archive in the Germanisches Nationalmuseum's Deutsche Künstler Archiv (DKA); no page number is recorded. Dieter Hildebrandt, "Damals Wie Heute Ein Kirchenpolitischer Akt," *Frankfurter Allgemeine* November 1, 1963.

<sup>722</sup> Endres (*Baugeschichte und Wiederaufbau*, 1963), op. cit., p. 44.

<sup>723</sup> Meissner, *Sep Ruf 1908-1982*.

<sup>724</sup> Breuer and al., *Hans Schwippert 1899-1973 Moderation Des Wiederaufbaus*.

<sup>725</sup> Savvas and Lehnerer Ciriacidis, Alex, eds., *Bungalow Germania* (Stuttgart: Hatje Cantz, 2014).

<sup>726</sup> Beginning in my very first course in architecture with Prof. Susannah Torre at Barnard College in 1983, I was taught that architecture should be read through the perspective of its author's intentions and its user's reception. This particular kind of immanent critique has led to all kinds of excesses of ahistoricity, imprecision and esoterica. On the other hand, first-hand knowledge with the process of realizing buildings, from client relations to product specification to working drawings to site supervision, allows for immanent critique of a more productive kind. This is the approach I have tried to apply throughout.

<sup>727</sup> John Hejduk, 'Veins of Marble' in: Leslie Van Duzer, Adolf Loos, and Kent Kleinman, *Villa Müller : A Work of Adolf Loos* (New York: Princeton University Press, 1994). Hejduk's text exemplifies the empathetic understanding of architecture so popular in my generation, but which I have been at pains to avoid.

<sup>728</sup> The work of the advocacy group Docomomo on the preservation of modern architecture is one rare example of an exception to this blind spot. See also Theodore H. M. Prudon, *Preservation of Modern Architecture* (Hoboken, N.J.: Wiley, 2008).

<sup>729</sup> Bruno Latour and Steve Woolgar, *Laboratory Life : The Construction of Scientific Facts* (Princeton, N.J.: Princeton University Press, 1986). Latour's approach is paradigmatic of what can be derived from looking at the interplay between work produced and so-called backstory.

<sup>730</sup> Betts, *The Authority of Everyday Objects : A Cultural History of West German Industrial Design*.

<sup>731</sup> Durth, *Deutsche Architekten Biographische Verflechtungen 1900-1970*.

<sup>732</sup> Frederic J. Schwartz, *Blind Spots : Critical Theory and the History of Art in Twentieth-Century Germany* (New Haven, Conn.: Yale University Press, 2005).

<sup>733</sup> I owe a huge debt of gratitude to Werner Durth, who made time to see me in Darmstadt on the hot afternoon of July 23 2012 and helped me to clarify the structure of my undertaking by suggesting the choice of case study buildings with

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which to anchor my comparisons. While I have to bear the sole responsibility for the choices made, his suggestion – or at least my understanding of it – cut to the chase.