

Technology as Thought, Technology as Fact

Sep Ruf's Changing Architectural Expression, 1951–59

The centrality of technological expression in the stylistic and intellectual definition of Modern architecture, particularly that of the German Bauhaus school, is well known.¹ Its alignment with a celebratory attitude towards advances in machining, production, energy capture and on-demand resource availability locate it firmly within a teleological vision of human progress. Equally familiar in the primary and secondary literature of Modernism is the contention that the experience of the Second World War revised the faith which Modern architects placed in the ethics of progress, as expressed in technology². In post-war Germany, the reasons motivating this revisionist thinking were perhaps even more complex — and more visceral — than elsewhere. On the one hand, German industry as a whole had been entirely subsumed within the war machine: by 1945, little remained of the highly sophisticated and differentiated building product manufacturers, which before the war had provided architects with an unparalleled variety in all areas, even those as deceptively simple as window operation mechanisms (fig.1). On the other, the internationally-known Bauhaus heroes whose built work and publications had helped to position Germany as a birthplace of modern architecture had emigrated, many to the US, whose war-strong industrial prowess was redirected into construction at the war's end. Coming to terms both with the unavailability of construction technology, and the loss via emigration of the cultural legacy incubated within construction technology in pre-war Germany, meant that the relationship between Modern architecture and construction technology had to be redefined.

This paper will consider the ambivalence of Sep Ruf's attitude towards and his use of technology relative to both the desire to redefine technology as a basis for architectural expression and the material culture of post-war German Modern architecture.

1 Ulrich Conrad's seminal anthology *Programs and Manifestoes on 20th Century Architecture* (Cambridge: MIT Press, 1975) is only one of many documentations of the location of technology in early Modern architecture discourse.

2 See, for example, Eeva Liisa Pelkonen's discussion of Alvar Aalto's reception in *Alvar Aalto: Architecture, Modernity and Geopolitics* (New Haven: Yale University Press, 2009). This is also a common trope in comparing Le Corbusier's "humanist" post-war work with his earlier "white" Modernism.

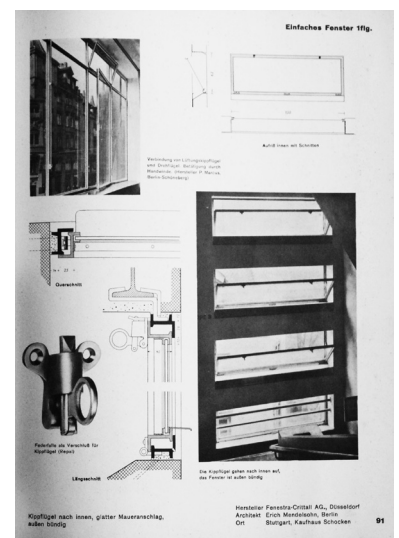


Fig. 1 Spread from Adolf G. Schneck's Volume 1 Windows of his Building Elements series, 1932.

Technology and Material Culture 1948–58

Sep Ruf (1908–82) was a prolific Munich practitioner and professor and a consistently Modern architect in conservative Bavaria. By 1948–9, he was already busy with housing, office and public buildings, all realized under his office's tight control—the extensive correspondence, invoices and construction drawings held in his office archive evidence just how tight that control was.³ His professional status continued to grow, reaching its apogee with the commissions for the German pavilion at the Brussels World's Fair in 1958, designed in collaboration with Egon Eiermann, and the design and realization of the Kanzlerbungalow in Bonn in 1963. Both projects ratified Ruf's version of Modern architecture as representative of the new German republic and its Wirtschaftswunder.

Ruf's remarkably exacting control over his projects' construction, and the fact that his archive is so intact, offer an excellent basis for studying the material culture of his architecture. As a proxy for the relationship between construction technology and architectural expression in post-war Germany, Ruf's buildings can help to describe both practically and stylistically the transforming location of technological expression in German Modern architecture from the late 1940s to the robust Wirtschaftswunder era.

That transformation was huge. Someone familiar with Sep Ruf's architecture from the Akademie der Künste in Nuremberg of 1950–54 (fig. 2) could readily be forgiven some surprise upon visiting the Hochschule für Verwaltungswissenschaft in Speyer, a project, which Ruf won via competition in 1956 (fig. 10, see page 11). The paper-thin eaves, attenuated white-painted exterior lally columns and pieced steel window frames characteristic of the Akademie der Künste have little in common with the heavy-seeming dark masonry walls and thicker, aluminum-coped roof planes of the Hochschule. Such differences might have any number of explanations. Architects' sensibilities can change over time to reflect their own development and general changes in stylistic movements. However, one need not be an architect to describe roughly what looks 'fifties' or 'sixties,' a stylistic shift that occurred, in Ruf's case, over only a few short years.

The speed with which Ruf adapted his architectural expression to this new idiom may well be related to one project in particular that was realized between the two academic buildings: the American Consulate in Munich, 1957–59. Although the project was much less in the public eye than the other two, its impact had real significance for construction technology and its expression. His work on this commission provided a singularly intense moment of tangency between Ruf's professional activity and the highly influential Consular/America House building program sponsored in Germany by the US High Command in Germany (HICOG)(1952–57) as realized by the New York office of Skidmore Owings and Merrill under partner Gordon Bunshaft (fig. 3). The HICOG program was influential not only

3 Ruf's daughters Elisabeth and Notburga Ruf have maintained Ruf's office archive in tact at their home, also designed by Ruf, in Gmund. Their kindness and generosity has been invaluable to this research.



Fig. 2 The Akademie der Künste in Nuremberg. Photo by author.



Fig. 3 Skidmore Owings and Merrill, US Consulate in Bremen, as published in *Bauen + Wohnen*, Vol 19, Issue 10, 1954.

because of its ability to evangelize the American post-war version of Modern architecture, both its technology and its expression. The interactions between SOM's construction specifications and the German draftsmen, architects, fabricators and installers who ultimately realized them was a point of knowledge transfer that has yet to be thoroughly quantified. After Ruf assumed the commission for the Munich building, from which SOM had withdrawn after conflict with the local building department, he gained access to the construction documents SOM had prepared for its German projects and to the fabricators and contractors who worked on them.

Technology as Discourse, 1951

Unlike other contemporaries, Ruf wrote little about his architectural ideas.⁴ For that reason, his participation in a 1951 event, organized by some of those more theoretically-inclined colleagues offers a unique opportunity to study his attitude towards technology as a driver of architectural expression. His comments were prepared for the Darmstädter Gespräch on 'The Human Being and Space,' where he was invited to speak by the moderator Hans Schwippert, architect of the recently completed Bundeshaus in Bonn. Although Schwippert and Ruf belonged to different immediate circles, it appears that Schwippert offered Ruf an important connection to the world of discourse: for example, they were the only two architects to attend the 1953 Gespräch 'The Individual and the Organization,' organized by Theodor Adorno, who recently returned from his American sojourn.⁵

Schwippert—who as head of the Deutscher Werkbund would, in 1954, involve Ruf in the preparation of the German pavilion at the World's Fair⁶—framed the discussion to address the plausibility of a Modern architecture that, in contrast to the prewar paradigm, was not dependent on the technologies and materials of its era. The content—and the context—of Ruf's response offer singular evidence of his thinking about the role of technology in architectural expression at that point in time.

The context was given by a set of postulates that may have been more immediate to Schwippert's close circle—concerned as they were with establishing an alternate lineage for Modern architecture independent of Bauhaus émigrés.⁷ In a move that distanced him from the canonical lock-step of technology, expression, and the spirit of the era, Schwippert interrogated the assumption that an era's most appropriate spatial and architectural expression would necessarily make exclusive use of materials and means endemic to that era, a central tenet in the philosophy of early Modern architecture:

The fact that our kind of spatial sensibility aligns with contemporary means of building is in fact only one possibility. Another, a second possibility could perhaps present itself to us tomorrow based on

⁴ Ruf's long-time teaching career in Nuremberg and Munich has yet to be comprehensively studied as an indicator of his thinking about architecture. Irene Meissner's excellent and comprehensively researched monograph offers an initial evaluation. See Irene Meissner, *Sep Ruf 1908–1982* (Berlin: Deutscher Kunstverlag, 2013).

⁵ Ruf and Schwippert appear in the registration list of the 1953 Darmstädter Gespräch, *Individuum und Organisation*, as the only repeat attendees from the 1951 and 52 events.

⁶ <http://www.deutscherwerkbund-nw.de/index.php?id=466> on June 5, 2014; at Schwippert's request, Ruf also served on the Werkbund board during the time in which the Brussels pavilion was being negotiated and planned. (Schwippert Archive, Germanisches Nationalmuseum Nuremberg, Binder 32)

⁷ Indicative of the stakes in the German:German transatlantic relationship was Rudolf Schwarz's 1953 article in 'Baukunst und Werkform', and the vitriolic exchange that followed it.

very specific situations. If we had neither steel nor glass – speaking only to those two materials? Or only a portion of them? Or if certain things were to disappear forever or at least for a time, or were no longer desired or permitted for whatever reason – would then spatial building in the sense of the kind of dwelling we desire and require be forever at an end? [...] Is it not imaginable that someone could misuse the means of today, misuse concrete, steel and glass to make spaces that bear no relation to us? Is it not possible that someone believes that by merely using the means, he could automatically realize the dwelling we require?

8 Mensch und Raum: das Darmstädter Gespräch 1951, edited by Ulrich Conrads, Braunschweig: Vieweg, 1991: 104-6.

And so these three possibilities stand before us. The one entails the unity of material and spatial will – that is the first. In the second, the spatial will is correct but has no access to the material, which would in its essence be appropriate to it. In the third, the material is available and contemporary, but it does not serve the spatial will inherent to it and its era.⁸

By enumerating all imaginable ethical relationships between building technology and the spaces appropriate to an era, Schwippert implicitly referenced the recent history of German Modern architecture. His first scenario, the confluence of an era, its technology and architectural expression, corresponds to ideals espoused by interwar Modernism; his third, the application of modern technology to the eclectic, opportunistic architectural expression of the Third Reich. His second scenario, in which an era's spatial desire must be expressed despite a lack of appropriate contemporary technological means, described the situation of practicing architects in 1951 Germany. Those materials, which made Modern architecture possible, were scarce, but the putative desire for spatial transparency was great. Schwippert argues eloquently for the power of architectural expression to transcend technical limitations in expressing the will of an era; he had undertaken and accomplished exactly this mission in his 1949 Bundeshaus. The building was celebrated in the professional and lay press of the time for its transparency, symbolizing the new spirit of German democracy, despite the fact that, if one looked closely, it was the façade's gridded surface treatment which gave the appearance of curtain wall to the complex rather than an extensive use of glazing or large-scale openings. By positing and celebrating the independence of an era's spatial desire or will and its technological means and its architectural expression, Schwippert's line of questioning repositions a new German Modernism as a third ethical position, superseding both the Bauhaus' more simplistic assertions and the Third Reich's opportunistic deployment of multiple styles, from Classical to Heimatsstil to Modernist.

The affinities between Ruf's architecture of the late 1940s and early 50s, and the letter and spirit of Schwippert's Bundeshaus were underlined by the inclusion of Ruf's Bavarian State Bank (1950) and Nuremberg Academy

of Art (1950–54) in the exhibition that accompanied the Darmstadt conference. Furthermore, his construction detailing, a skillful bricollage of the few commonly available linear steel angles to great architectural effect, gives direct evidence that Schwippert was correct: material largess was not the only condition under which to realize the spirit of an era as a desire for openness. Nonetheless, in his response at the conference, Ruf evaded answering the questions Schwippert raised.

9 Ibid., 107.

He began by immediately requesting that he not be “compelled to speak about construction and its application.”⁹ Instead, he expressed 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.”¹⁰ 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. He 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

10 Ibid., 108.

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.¹¹

11 Ibid., 107.

His plea for architecture as art form might in part be a direct rebuttal of the idea of architecture as technically motivated.¹² However, it is important to understand that 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

12 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.

13 The terms 'Stimmung' and 'Atmosphäre' are common in the documents related to the German pavilion at the Brussels World's Fair. The term is also common in the reception of SOM's corporate work in Germany, as reflected in a 1957 book on Connecticut General Life published by the Schnelle brothers, founders of the Quickborn consulting group.

14 The building is usually dated 1951–54, but Ruf's office continued to work on the project punch list through the summer of 1956.



Fig. 4 Steel window, Akademie der Künste. Photo by author.

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.

“Atmosphere” describes the impact of an architectural environment upon its user, focusing on effect rather than on the architectural object. In its evolving usage throughout the 1950s into the 60s, the concept in both its German language synonyms *Stimmung* and *Atmosphäre* would be used to encompass not only the architectural work, but its interior and exterior environment – the contribution of design objects, landscaping, and subjectivity. This definition of space as atmospheric would gain currency through the 50s: Ruf's usage at Darmstadt presaged the discourse around “die gute Form” and the *Deutscher Werkbund*, especially in preparation for the German Pavilion at the Brussels World's Fair.¹³ His inclination to base the architect's ability to calibrate space and expression not upon technological or historic imperatives, but upon a specific kind of subjective response was an answer to Schwippert's question for which none of the participants at Darmstadt seemed prepared. It can also begin to explain his affinity for the emerging High Modernist idiom exemplified by American firms abroad in the early to mid or late 1950s, and to complete the story told by a study of the material culture of his construction practices in those transitional years.

Akademie der Künste, 1950–54.

The extant construction documents for Sep Ruf's 1950–54¹⁴ Akademie der Künste in Nuremberg provide an invaluable benchmark for his construction practice in the immediate post-war period. Prior to this project, Ruf had collaborated intermittently with others, including Otto Apel on housing and master planning projects for the US High Command in Germany (HICOG), but his focus was on his own independent practice in Bavaria. The Academy was built in a park on the city's edge, and comprises a series of courtyard plan pavilions threaded along an axis that intersects the main building at a right angle. Both spatial organization and architectural expression evoke continuity between interior and exterior spaces. A thin, deeply cantilevered roof eave shades the steel and glass façade, insuring its transparency; the repetition of the same materials on either side of the full-height glazing underscores the spatial continuity.

Great care is evident in the buildings' construction. Ruf, for example, meticulously corrected gardeners' invoices and painters' time sheets, evidence of his presence at the job site. The glass façade is detailed with equal intensity: every element of the frame is a simple rolled steel L-section, cleverly pieced together to create the thinnest possible sight lines (fig. 4). The fact that the windows were laid up specifically for this project is born out by correspondence between Ruf and the window manufacturer, Jucho, which

complained to him about money lost when fulfilling an order for more windows after the first shipment. The staging for the windows was, apparently, ad hoc since the later order required the manufacturer to re-tool without the earlier economies of scale. The Academy's glazing elements are not building products; they are large-run bespoke elements. The detailing at the exterior wall of the cafeteria reveals the interplay of standardized and bespoke methods at the German construction site in the early 1950s. For example, the perfect symmetry of the floorboards around a structural column could only be achieved in a construction environment, which allowed for millimeter tolerances even in floorboards (fig. 5). The building's elegance comes by virtue of—or perhaps in spite of—its simple finish materials and bricolage details.

While Ruf and his office were cultivating their remarkable resourcefulness in construction details, Ruf's erstwhile collaborator Apel was assisting HICOG in realizing their projects in Germany. The detailing of SOM's German projects, drawn and specified by Apel's employees in the Bad Godesberg office under SOM's supervision, presaged the construction technology environment in which Ruf, and other German architects, would increasingly work.

Out of Area: SOM in Germany 1952–55

Within 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: Bremen (1952–53), Düsseldorf (1953), Frankfurt (1954–55) and Stuttgart (1954–55). A fifth consulate project had been planned in Munich, but after conflict with the city's building administration, the project was threatened with failure. Ruf, whose relations with both Munich bureaucracy and American administration were good, salvaged the situation and received the commission directly in October of 1954 and was granted access to SOM's documents and buildings in the following spring. 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 and closed the office altogether after the completion of the Stuttgart consulate in spring, 1955.¹⁵

SOM's reception in Germany corresponded to the corporate image SOM cultivated, in part through its international projects. Although small in comparison to such contemporary commissions as Lever House (1950–52) or Connecticut General Life (1954–57), the German projects were treated by SOM as prestigious. Run through the New York office, the projects' design team was led by Gordon Bunschaft, who was sent to Germany at least twice a year—Natalie de Blois, Bunschaft's protégée, spent a full year in residence there in 1952–3. Images of the Bad Godesberg office, opened in collaboration with SOM's exclusive contact architect Otto Apel in 1951



Fig. 5 Floorboards and steel column, Akademie der Künste, Photo by author.

15 The closing of SOM's German office was not announced on the SOM newsletter's primary pages, which had otherwise proudly reported upon its German commissions. 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 by the mid-late 1950s: Paul Pippin, Edward Petrazio, Sherwood Smith, Carl Bitter, David Hughes and Natalie de Blois.

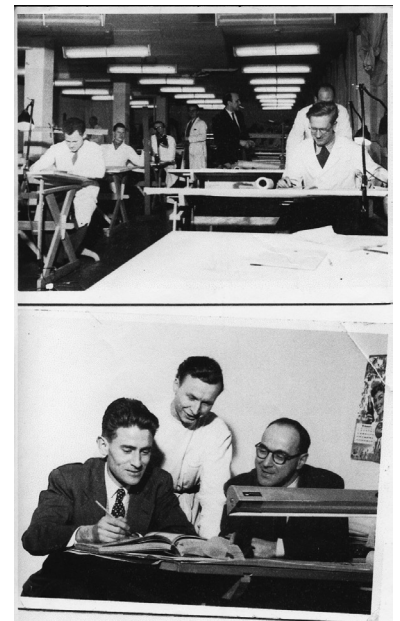


Fig. 6 Snapshots of SOM's office in Bad Godesberg in the 1950s. Courtesy of Natalie de Blois.

17 Natalie de Blois in conversation with the author, June 21, 2010

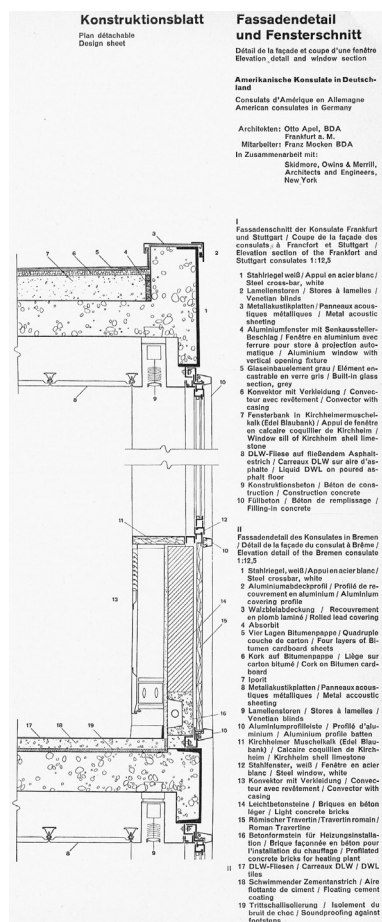


Fig. 7 Published façade section of SOM's Bremen façade, as published in *Bauen + Wohnen*, Vol 19, Issue 10, 1954.

to oversee the detailing and construction of the Bremen Consular Housing and Consulate, show rows of desks occupied by white coat-clad German draftsmen, overseen by American architects in smart suits (fig. 6). Not only was the Bad Goedesberg office one of the largest in Germany at the time, its organizational structure reflected the SOM corporate philosophy described in a 1950 article by German ex-patriot art historian Fritz Neugass in the German-language American newspaper *Sonntagsblatt Staats-Zeitung und Herold*: “So it is that today in America, large buildings are not designed by individuals but instead by an entire staff of specialists.”¹⁶

In their architectural expression and materialization, the German projects use the idiom developed by SOM internationally at that time: the façades are 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. Despite the material shortages and manufacturing devastation in post war Germany, all the building components were sourced locally.¹⁷

US Consulate in Bremen, 1952.

The façade details for the Bremen consulate, drafted in Bad Goedesberg in July of 1952 just as Ruf's office was detailing the arts academy in Nuremberg, are predicated on different assumptions about materials and construction technologies. SOM's details deploy highly specific storefront glazing systems and components (fig. 7). 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 concrete frame. In the horizontal, slotted tabs welded to the steel façade fascia are bolted through to hold to an L-angle 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 thin-gauge, braked aluminum 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 indicate the availability of

much more sophisticated, function-specific façade elements; they specify large quantities of sheet aluminum, among one of the more rare commodities on the post-war construction market. Unlike the 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. 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 that was missing from the Nuremberg glazing.

The advantages of a systematic, products-based approach were definitely not lost on fabricators, who had actively sought economies of scale in high-precision construction-scale metal work before and even during the war. The path to success in the building product industry seems to have pointed towards product rather than trade-based specialization: many of the construction and building product firms that contributed to the Akademie der Künste flourished, using that strategy. Jucho, for example, which had delivered only unglazed steel window frames to the Academy, was offering a full series of steel and aluminum windows by early 1954¹⁸ (fig. 8). 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 working on storefront façades: the more didactic expression of each element within the 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 a marked departure from the filigree style of the early 50s. Ruf's American Consulate in Munich, begun in the year of the Academy's official completion,¹⁹ attests to this stylistic turn.

The American Consulate in Munich

In February, 1954, Munich's building administration, who found SOM "arrogant" and uncooperative,²⁰ had tried to put an end to the project, already fully detailed by SOM's German office, for a new consulate.²¹ Ruf was able to persuade the HICOG that he could salvage the project, and was granted the commission directly in October of 1954. In April of 1955, he received a set of the SOM drawings for both the Munich project and for the Frankfurt consulate, nearly complete at the time, directly from the HICOG's agent; he also visited the Bremen consulate.²² Ruf had sent an initial project with at least three variations to Jack Gensemer, who was his contact at HICOG, in March of 1954, almost immediately after SOM had been removed from the project. The building proposed by SOM had been sited on Briennerstrasse, the formal boulevard laid out by Leo von Klenze; Ruf developed schemes for that site and a less visible (and therefore more strategic) location on the edge of Munich's public park, the English Garden, where the building was ultimately built. By November of that year, Ruf

18 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.



Fig. 8 Advertisement for Jucho façade systems. *Bauen + Wohnen*, Vol. 10, Issue 4, 1955.

19 Ruf sent his initial project with at least three variations to Jack Gensemer in March of 1954.

20 See Jane Loeffler, *The Architecture of Diplomacy: Building America's Embassies*. (New York: Princeton Architectural Press, 2010) p. 96: According to Loeffler's research, SOM did not contact anyone in the city building administration prior to submitting the final project.

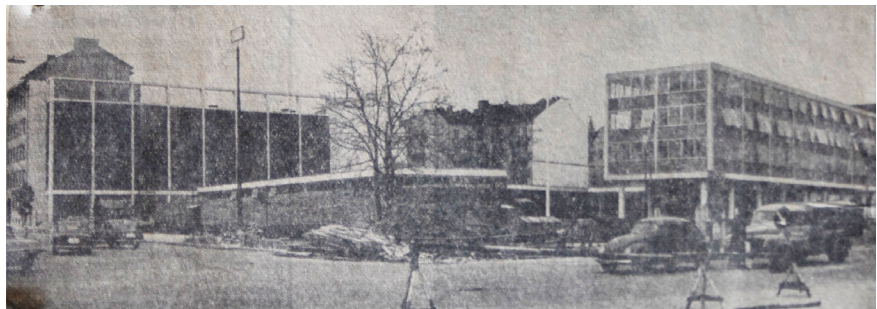
21 „Der Stadtrat sagte NEIN zu dieser Fassade," *Abendzeitung*, March 4 1954. Ruf's job book for the consulate included a clipping from an article on the building commission's negative response to SOM's design. A document dated March 13, 1954, also from Ruf's archive, describes a new massing and façade 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.

22 In a letter 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." The April 15, 1954 issue of SOM News notes that the Munich consulate had "reached the stage of working drawings."

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 design approval. Ruf received SOM's detail drawings for the Frankfurt embassy in April, 1955, after visiting the Bremen embassy, but did not have FBO (Foreign Building Office) approval to proceed until the end of August, when Gensemer encouraged him to start on working drawings. The city of Munich approved Ruf's project in early October 1955, and construction commenced soon thereafter.

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 might indicate the need to streamline detailing and to rely on existing building techniques and products that had proved effective. Certainly the building's appearance is radically different from that of the Academy: rather than the tapered horizontal roof and the transparent, filigree glazing behind attenuated white columns, the consulate is stolidly prismatic; its windows, part of a aluminum-gridded plane, are set in very low relief against the stone-clad structural skeleton (fig. 9).

Fig. 9 Clipping from the *Süddeutsche Zeitung*, April 17, 1958, showing the American consulate in Munich by Sep Ruf.



Ruf's office archives hold no construction documents from this project, and the job book contains only preliminary correspondence with building product suppliers and contractors, perhaps because of strict security stipulations imposed by the HICOG. Any drawings retained by the US occupying forces were lost after German reunification, by which time, all consulates except for the one in Munich were no longer owned or occupied by the US government. In the case of the Munich embassy, its similarity in appearance to the other US consulates suggests that SOM's detailing style may serve as a template for Ruf. This assumption, and the transformation in construction and expressive idiom it implies, can be tested against a project whose history overlaps both the Akademie in Nuremberg and the consulate in Munich.

Turning Point: Hochschule für Verwaltung Speyer, 1956–59

While the desire to standardize the American consulates in Germany may partially explain the idiomatic differences between the arts academy

in Nuremberg and the Munich consulate, changes in Ruf's approach to materialization and expression was more far-reaching, as evidenced by Ruf's College of Administrative Sciences in Speyer for which construction records also are preserved. After winning the project competition, Ruf's office began work on final drawings in 1956, and the building was occupied in 1960. Ruf chose to organize the academic complex around exterior spaces emphasizing interior–exterior continuity, much as he had in Nuremberg. Here, however, the component program pieces are subsumed in a compact volume, conFig.ured around the central courtyard. Unlike the Academy's informal, conjoined courtyards, the courtyard in the Speyer college, framed by a lecture hall at one end and the library on the other, is formally landscaped; one end is occupied by a fountain spanned by irregular, rough hewn stones, a counterpoint to the geometricized plantings and repetitive facades (fig. 10). This staged juxtaposition of 'geometric' façade and 'organic' landscaping recalls the collaboration between SOM and Isamu Noguchi at the Lever House (1951–52) or Connecticut General Life (1955–57). Its "atmosphere of the spirit" is formal and locates the public administrators in training at the school firmly in the world of International High Modernism.



Fig. 10 Courtyard of the Hochschule für Verwaltung, Speyer. Photo by author.

The façade construction is heterogeneous, with different construction typologies ascribed to different parts of the building: aluminum fixed glazing, operable steel windows and some glazed wood-framed door and windows, all of which are thickly dimensioned. Aluminum fixed glazing flanks the courtyard, running between lecture hall and library. It comprises heavy, 80 mm aluminum box sections into which double-glazing has been mounted using 15mm aluminum glass stops. 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. Detailed almost perfectly in plane, the steel frame is a hefty 150 mm at the horizontal between door and hopper and 80 mm at the



Fig. 11 View to the courtyard of the Hochschule für Verwaltung, Speyer, just after opening. Courtesy of Prof. Dr. Stefan Fisch.

23 Hans Schwippert and the architectural ideas he had developed in his public presentation at the Darmstädter Gespräch of 1951 and in his work as president of the Deutscher Werkbund and committee chair for the German pavilion at the 1958 Brussels World's Fair correspond to the period in which Ruf and Schwippert were in closest contact. Their work together for the Werkbund also can be taken to indicate Ruf's loyalty to a set of specific German Modernist architectural precepts as developed by Schwippert. In context, Ruf's stylistic turn must be understood as more complexly, rather than as a simple trading off from his earlier idiom to his later one.

24 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.

jamb and sill. By contrast, the steel windows for the Nuremberg Academy were 38 mm in height, and were offset 15 mm from the 40 mm fixed frame to appear even more slender (fig. 11). At Speyer, the attention to detailing and the skill dedicated to the facades is no less intensive than at Nuremberg; but the elements of construction have been industrially optimized, and their appearance shows an affinity for High Modernist tendencies.

Conclusion

There are, of course, always multiple factors at play when any architect breaks with his or her earlier idiom. In Ruf's case, however, the shift from the Nuremberg Akademie der Künste to the Speyer Hochschule für Verwaltungswirtschaft within a few short years begs the question of what motivated his decisions, and how this change was enacted.²³ I would assert that the impulses deriving from construction practice, in part encountered through his assumption of SOM's Munich consulate commission, resonated in Ruf's case with the idea of atmosphere as an overall environment, for which SOM's work and the way it was represented in German publications may well have been one precedent. 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,²⁴ 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, while his interest in architecture as atmosphere may also have resonated with the expression created by that same building technology. His particular engagement of building technology offers occasion to rethink the German experience of the American Century in its architectural and technological permutations.

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