

Zeitschrift: Trans : Publikationsreihe des Fachvereins der Studierenden am
Departement Architektur der ETH Zürich

Herausgeber: Departement Architektur der ETH Zürich

Band: - (2014)

Heft: 24

Artikel: Three monuments to the norm

Autor: Ockman, Joan

DOI: <https://doi.org/10.5169/seals-919437>

Nutzungsbedingungen

Die ETH-Bibliothek ist die Anbieterin der digitalisierten Zeitschriften auf E-Periodica. Sie besitzt keine Urheberrechte an den Zeitschriften und ist nicht verantwortlich für deren Inhalte. Die Rechte liegen in der Regel bei den Herausgebern beziehungsweise den externen Rechteinhabern. Das Veröffentlichen von Bildern in Print- und Online-Publikationen sowie auf Social Media-Kanälen oder Webseiten ist nur mit vorheriger Genehmigung der Rechteinhaber erlaubt. [Mehr erfahren](#)

Conditions d'utilisation

L'ETH Library est le fournisseur des revues numérisées. Elle ne détient aucun droit d'auteur sur les revues et n'est pas responsable de leur contenu. En règle générale, les droits sont détenus par les éditeurs ou les détenteurs de droits externes. La reproduction d'images dans des publications imprimées ou en ligne ainsi que sur des canaux de médias sociaux ou des sites web n'est autorisée qu'avec l'accord préalable des détenteurs des droits. [En savoir plus](#)

Terms of use

The ETH Library is the provider of the digitised journals. It does not own any copyrights to the journals and is not responsible for their content. The rights usually lie with the publishers or the external rights holders. Publishing images in print and online publications, as well as on social media channels or websites, is only permitted with the prior consent of the rights holders. [Find out more](#)

Download PDF: 27.03.2026

ETH-Bibliothek Zürich, E-Periodica, <https://www.e-periodica.ch>

Three Monuments to the Norm

Joan Ockman

As Paul Rabinow sums it up in his book *French Modern: Norms and Forms of the Social Environment* (1989), twentieth-century architecture and urbanism – and by no means just French – were marked by «a continuing search for more scientifically, spatially, and stylistically comprehensive means by which to represent and regulate a society devoted to efficiency, production, and the welfare of its population.»¹ An inheritance of the Enlightenment, which pervaded modern architectural culture from the German Werkbund to Le Corbusier and the Bauhaus, to CIAM and beyond, the application of rationalized norms to design promised to counteract the incoherent development of the metropolis and the disintegrative, individualistic tendencies of capitalism.

Faith in normative methodology is at the heart of Alexander Klein's *Gross-Siedlung Bad Dürrenberg* near Leipzig (1930), Auguste Perret's reconstruction of *Le Havre* (1945–55), and Max Bill's building complex for the *Hochschule für Gestaltung* in Ulm (1950–55). These projects, all realized (although not in full), are exemplary of modernism's totalizing logic of sofa-cushion-to-city.² At the same time, they stand out within the canon by virtue of the way they raise this logic to an aesthetic, and ultimately to a form of life. Yet their respective aesthetic and ideological premises are rather different.

BAD DÜRRENBERG

In the case of Alexander Klein (1879–1961), a normative approach to design emerges from both reformist and traditionalist impulses. A Russian-born architect trained in St. Petersburg before World War I, Klein emigrated to Weimar, Germany, in 1920–21. He is best known for his work in the late 1920s on the minimal dwelling, one of the ardent preoccupations of modern architectural culture at that date. His detailed functional, economic, and environmental analyses of existing problems in Germany's low-cost housing market, and his formulas for fixing them, were conducted under the auspices of the *Reichsforschungsgesellschaft für Wirtschaftlichkeit im Bau- und Wohnungswesen* (RFG). Founded in 1927, the state-sponsored research agency was set up for purposes of placing the production of German housing on a firmer economic and scientific footing. Klein's diagrams demonstrating optimal width-to-depth relationships in compact house plans of incrementally increasing floor area, based on the variable size of families and their living needs, were reproduced very widely. He also closely analyzed circulation patterns, programmatic relationships, and hygienic and ergonomic factors in the household, drawing on the methods of the American domestic efficiency expert Christine Frederick, a disciple of Frederick Taylor and his theory of scientific management, which were known in Germany from the early 1920s.³ Klein's quantitative findings on the «frictionless» house (as the concept was trans-

lated back into English by Catherine Bauer when she published his good-versus-bad plans in her 1934 book *Modern Housing*)⁴ involved statistical analysis and empirical research that he collated with an original scoring system.

Yet Klein's thinking, which increasingly extended to environmental issues like solar orientation and climate conditions, was rooted in his concern with psychophysiology and aesthetics as much as in maximizing efficiency. It went back to the ideas propounded in 1877 by the «statistical aesthetician» Hermann Maertens, who undertook in his book *Der optische Massstab, oder die Theorie und Praxis des ästhetischen Sehens in den bildenden Künsten* to apply Helmholtz's research on optics to design.⁵ For Klein, the shift from abstract rules of geometric proportion (like the golden section) to a scientifically «correct» system of dimensional relationships guaranteed a form of dwelling that was

fig. a
Bird's-eye view of a built portion of the *Siedlung*. Leo Adler (ed.), *Neuzeitliche Miethäuser und Siedlungen*, Berlin-Charlottenburg: Ernst Pollak Verlag 1931, p. 91.

fig. b
Overall plan of the *Siedlung*. Adler, 1931, p. 90.

fig. c
Three views of the housing. Adler, 1931, p. 92.

fig. d
View into dining room through kitchen pass-through. Adler, 1931, p. 95.

fig. e
Two plan types. Adler, 1931, p. 91.

1 Paul Rabinow, *French Modern: Norms and Forms of the Social Environment*, Cambridge / Massachusetts: MIT Press 1989, p. 13. According to Georges Canguilhem, the first use of the word «normalized» as a cognate of the Latin adjective «normal» dates to 1834; see Rabinow, *ibid.*, p. 10.

2 The phrase «vom Sofakissen zum Städtebau» was coined by Hermann Muthesius in his 1911 address to the German Werkbund, «Wo stehen wir?» and published in: *Die Durchgeistigung der deutschen Arbeit: Wege und Ziele in Zusammenhang von Industrie, Handwerk und Kunst*, *Jahrbuch des Deutschen Werkbundes*, Jena: Diederichs 1912, p. 16. Later on (someone should sort out exactly when and why!) the sofa cushion became a spoon.

3 Frederick's book *The New Housekeeping* (1913) was translated into German in 1922 as *Die rationelle Haushaltsführung*. Her mentor's ideas on scientific management and industrial organization began circulating in Europe before World War I, including in Russia, where the applicability of American management techniques to the new Soviet state was intensively debated in the aftermath of the Bolshevik revolution.

4 Catherine Bauer, *Modern Housing*, Cambridge / Massachusetts: Riverside Press 1934, p. 203. «Mr. Alexander Klein, Berlin architect and planner,» Bauer notes, «designs dwellings for real people to live in, and his plans result from careful study of people's necessary movements.»

5 In his book on «aesthetic seeing», Maertens used numerous diagrams and charts to explain the rationale for his determinations on the optimal distance – or what he called the «normalisierte Standpunkt» – for viewing different types and scales of built spaces. His work had an important influence on Camillo Sitte and other early twentieth-century urban theorists like Albert Brinckmann and Joseph Stübben. See George R. Collins and Christiane Crasemann Collins, *Camillo Sitte and the Birth of Modern City Planning*, New York: Random House 1965, pp. 30–32 and pp. 124–125; and especially Ákos Moravánsky, «The Optical Construction of Urban Space: Hermann Maertens, Camillo Sitte and the Theories of Aesthetic Perception,» *Journal of Architecture* 2012, vol. 17, no. 5, pp. 655–660.

BAD DÜRRENBURG
ALEXANDER KLEIN

fig. a



fig. c

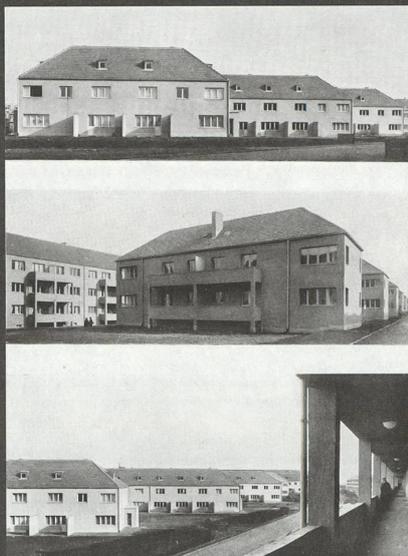


fig. e

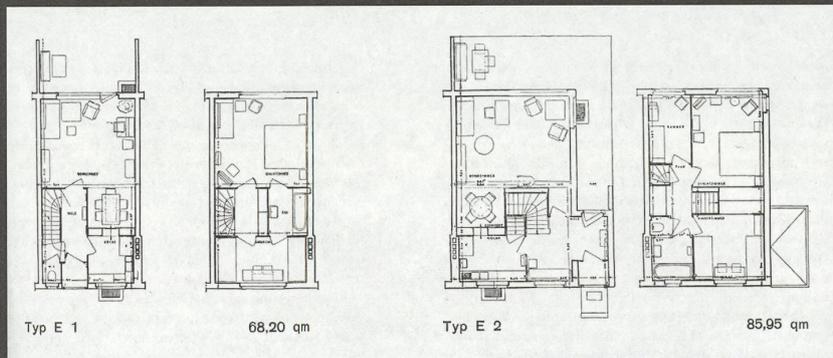
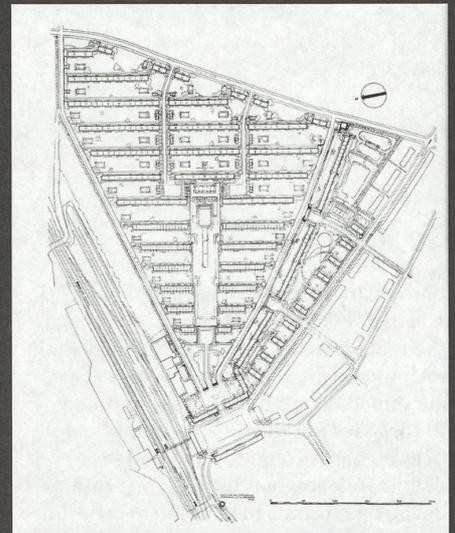


fig. b



«The question has to be posed of whether the desire on the part of a person for constant emotional stimulation – perhaps after being in a haphazard environment, or overexerting the nervous system – does not represent a certain deviation from the norm and require a «cure.» This automatically leads us to posit a certain analogy between such people and those addicted to narcotics, stimulating drinks, spices, etc. [...] On the basis of this analogy we may well assume that in order to avoid permanent and unproductive damage to the nervous system, dwellings should have a «soothing spatial effect. Such preservation and protection of our psychic energy is at least as important as the protection of the physical energy of the woman in her daily work in the kitchen – an operation that we are still striving today to organize according to scientifically researched principles of energy savings.

[...]

Once we recognize today the principles [of unity] that result in a «calm urban image» – something that has been recognized ever since the middle of the nineteenth century – architects will no longer have any reason to create «sensational» architecture, the kind that needs to be different from one's neighbor's house at any cost. [...] Today we are already at a stage where this issue urgently needs to be discussed in order to avoid the risk that our architecture will be in the same position as our ever more rambunctious advertising industry.»

Alexander Klein, «Beiträge zur Wohnfrage», in: Fritz Bloek (ed.), «Probleme des Bauens», Potsdam: Müller & Kiepenheuer 1928, pp. 123–124, p. 143. (trans. JO)

both aesthetically pleasing and therapeutic. A balm for factory workers returning from their labors in the hyperactive, energy-draining modern metropolis, the «ruhige Haus» combined Klein's practical commitment to social reform with an innate suspicion of avant-garde solutions. His designs were deliberately anti-spectacular and prosaic, owing their formal inspiration to the calm, simplified classicism of the contemporary architect Klein most admired, Heinrich Tessenow. At Bad Dürrenberg, where Klein functioned as chief architect (after Gropius, who had initially been involved in the project, withdrew), he had the opportunity to test out his ideas on the full gamut of spatial organization. His permutations of a finite number of plan types, cost-saving construction techniques, and attention to the smallest details of everyday life did not fail to honor Tessenow's injunction to the architect in an industrial age to be conscious of the virtues of «the most neutral familiar forms.»⁶

RECONSTRUCTION OF LE HAVRE

For Perret (1875–1954), the reconstruction of Le Havre was driven by a desire to restore a sense of historical continuity, dignity, and order to a port city that had suffered repeated aerial and naval attacks during World War II and been almost obliterated by Allied bombardments in September 1944. The Atelier Perret that began to constitute itself even before the war ended (eventually including sixty architects) looked to the venerated septua-

genarian architect for a guiding doctrine of design and construction.⁷ The collaboration with the master, beginning in 1945, resulted in a totally unified composition in which every aspect of the project was submitted to strictly rationalized criteria, even exceeding those imposed by the Ministry of Reconstruction throughout the rest of France.

The architects commenced by laying down an orthogonal grid on virtually the entirety of the rubble-cleared site, then located three monumental ensembles within this tabula rasa; these were linked axially by broad avenues. A 6.24-square-meter module governed all dimensional decisions. The punctuation of the new urban skyline with two vertical foci – the 100-meter tall faceted spire of Church of Saint-Joseph and the boxy seventeen-story tower of city hall – plus a handful of other high-rises played the compositional role of exceptions that proved the rule. At the same time, the architects managed to wring a surprising number of tectonic variations out of their universal system. Perret described his modular discipline as conferring not just consistency on the project but musicality.

Perret's long experience with building in reinforced concrete also enabled major cost savings through precise organization of the prefabrication process and economies of scale. Adherence to academic principles harking back to Viollet-le-Duc, Choisy, and Anatole de Baudot did not contradict the up-to-date technical, functional, and hygienic

innovations that the architect and his team introduced into their uniform blocks. Grand finale to Perret's half-century career, Le Havre joined a lineage of French technocratic proposals to systematize the city in the name of practical land use and efficient circulation, taking inspiration in part from a visionary scheme for «future cities» that Eugène Hénard had put forward in the first decade of the century.⁸ Thus the hybrid identity of historicist aesthetics and innovative technical-administrative rationalism forged at Le Havre projected an unmistakably «French» vision of urbanity and posed a credible alternative

fig. a Plan signed by Auguste Perret and designated definitive, January 1946. As published in *Art Présent*, 1946.

fig. b Preliminary plan proposed by Perret in September 1945, with buildings and circulation elevated on a podium 3.5 meters above the ground plane. Source: Archives Municipales Le Havre, Fonds Tournant.

fig. c View of avenue Foch at porte Océane. © CNAM/SIAF/CAPA, Archives d'architecture du XXe siècle/Auguste Perret/UFSE/SAIF.

fig. d View of city hall under construction. © CNAM/SIAF/CAPA, Archives d'architecture du XXe siècle/Auguste Perret/UFSE/SAIF.

fig. e Installation of a concrete window-wall panel produced using the Camus prefabrication system. As published in *Le Havre libre*, December 1952.

fig. f Characteristic apartment plans showing their conformity to the overall grid. As published in *Techniques et architecture*, November 1952.

6 On Klein's appreciation of Tessenow, see his «Beiträge zur Wohnfrage» in Fritz Block (ed.), *Probleme des Bauens*, Potsdam: Müller & Kiepenheuer Verlag 1928, 117ff. The phrase «most neutral familiar forms» comes from Tessenow's «Hausbau und dergleichen» (1916), trans. as «Housebuilding and Such Things,» in Richard Burdett and Wilfried Wang (eds.), *On Rigor*, Cambridge / Massachusetts: MIT Press 1989, p. 23. Klein, a Jew, would leave Germany in 1933, settling in Palestine after a brief stay in France. In the later phase of his career, he focused his research especially on environmental factors such as proper sunlight orientation, wind angles, and traffic flow. Interestingly from the present standpoint, Klein's project for a large new town in an agricultural settlement on Israel's Mediterranean coast (near Haifa) is featured in the same issue of Auguste Perret's magazine *Techniques et Architecture* (1945, no. 7–8, pp. 75–77) as a report by the latter on the progress of

reconstruction work at Le Havre. Klein's intellectual trajectory bears some resemblance to that of Ludwig Hilberseimer, who was also active in the RFG in the late 1920s. After emigrating to the United States in the 1930s, Hilberseimer likewise turned to environmental issues in the context of his new concern with decentralized regional planning. Ironically, although not surprisingly, Klein's rationalized approach to housing research was also picked up by architects in the Third Reich. Among those who built upon his work was Siegfried Stratemann, an employee in Robert Ley's Department of Planning and Construction; in the postwar period Stratemann went on to publish a series of primers on functional and environmental house design.

7 The initial group issued a collective manifesto in 1944, which may also be taken as a manifesto for normative architecture: «The letters of the alphabet, the spelling of words, their mean-

ing, their pronunciation, and the principles of their combinations are normalized [«normalisés»] and the same for everyone – but each individual's way of expressing his thoughts remains perfectly free and always new... Likewise, norms of size and of quality exist for materials and elements of construction and architectural equipment; rules exist for building practice and also for composition: the architect has no need to reinvent architecture and discover a style with every new realization. And it is because he will speak a common language with purity ... that he will be able to unleash his own personality freely and clearly». The authors of this ten-page mimeographed document signed themselves the «Perret Group.» See Joseph Abram, «Le Havre: reconstruire une ville rasée,» in: Jean-Louis Cohen, Joseph Abram, and Guy Lambert (eds.), *Encyclopédie Perret*, Paris: Moniteur 2002, p. 236. (trans. JO)

RECONSTRUCTION OF LE HAVRE
ATELIER AUGUSTE PERRET

fig. a

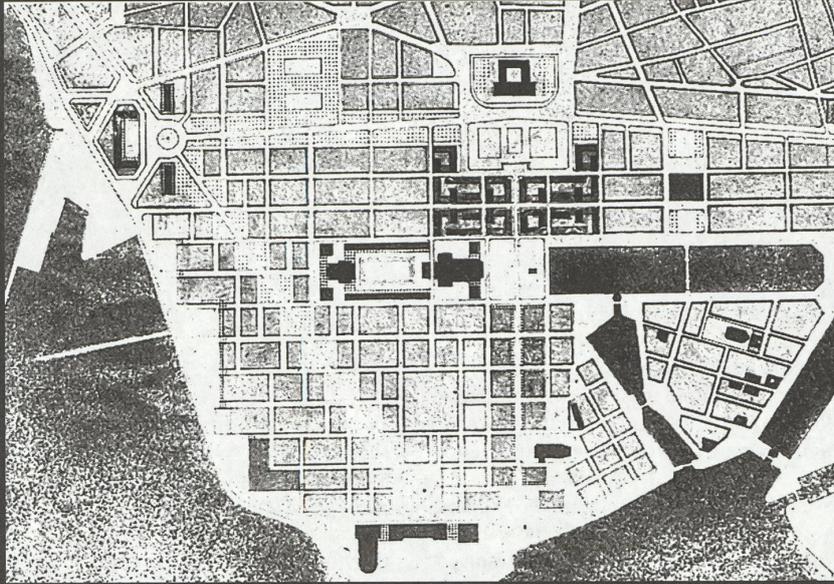


fig. b

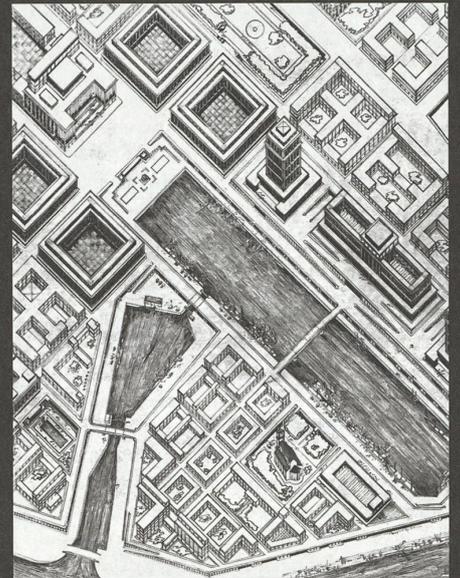


fig. c



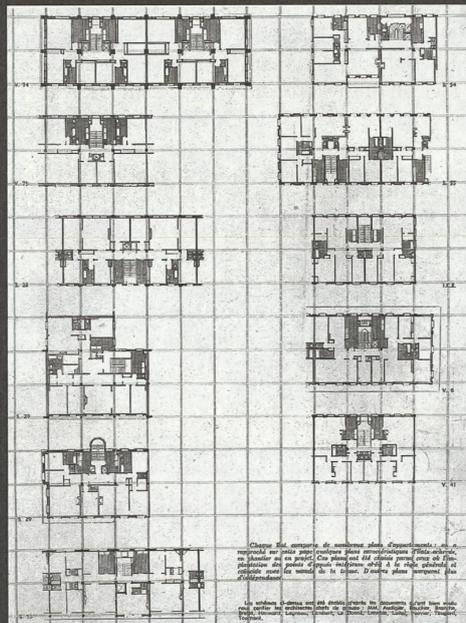
fig. d



fig. e



fig. f



«The heart of the new Le Havre, centered on Avenue Foch, is a synthesis of the ideas of Choisy and Hénard. A single module [...] determined the norms and dimensions of not only the pre-fabricated elements of structures and details but also – which matters more – the entire urban configuration. What was built was an entire portion of the city in which low apartment blocks alternate with tall blocks in an attempt to demonstrate total continuity between architecture and urbanism. The reconstructed Le Havre of Perret is thus constituted like a fixed modular unit which, however, can be repeated to infinity. If in some respects it anticipated certain large-scale layouts in cities under communist regimes, it is exactly contrary to the whole notion of laying down once and forever an urbanistic structure indifferent to changes of time and history such as was to be propounded by the new protagonists of the international debate. In any case, none of this prevented Perret from introducing exceptions into his unified «monument to the norm,» notably in the Hôtel de Ville, but even more so in the Church of St. Joseph, where he strove for a Gothicizing reunification of the miracle of light and the miracles of modern technology.»

Manfredo Tafuri, Francesco Dal Co, *Modern Architecture*, trans. Robert Erich Wolf, New York: Harry N. Abrams 1971, pp. 330–331.

to the dominant image of the American cityscape at this date. As Perret himself declared of the reconstructed port, «It will embody the idea of France in the eyes of foreigners. It will offer a noble and monumental image.»⁹

HOCHSCHULE FÜR GESTALTUNG, ULM

At the Hochschule für Gestaltung (HfG) in Ulm, normativity carried still other meanings. The spartan rigor of Max Bill's modular geometry and concrete construction, reinforced by the complex's absolute hermeticism, embodied an explicit refusal both of the commercialism of a burgeoning West German consumer culture in the throes of the «economic miracle» and of the irrationalism of the Nazi past. The Swiss Bill (1908–94) fully assimilated the radical lessons of functionalism he had learned under Hannes Meyer as a student at the Bauhaus in the late 1920s. Yet in striving to redeem enlightened reason and science for postwar German democracy, the HfG paradoxically turned its back on the surrounding world and its new realities.

Even more than the Bauhaus, the school was conceived as an elite, introverted community. Here, without noisome intrusions, in a place that saw itself as both laboratory and sanctuary, the new monks of post-industrial society were to become adepts of the glass bead game of «die gute Form.» Notwithstanding the deliberately low-slung, anti-monumental massing and studied informality, Bill's decision to locate the hillside complex in direct eyeshot of Ulm's great Gothic cathedral was laden with symbolism. In the original site plan – which also bears more than a little

resemblance to an unbuilt project of 1939 by Gropius and Breuer for Black Mountain College in Asheville, North Carolina – the school's central workshop, classrooms, and communal spaces link «organically» to a series of five-story dormitories punctually disposed along a bent circulation spine. Yet the dialectic of freedom and order was clearly resolved in favor of the latter. The 3:4 proportion of the window configuration – henceforth the «Ulm window» – provided a leitmotif that re-echoed in every element down to the famous stool – the «Ulmer Hocker» – on which Bill collaborated with Hans Gugelot, which was designed to be functionally flexible but also not to be excessively comfortable.

«A characteristic of our time is the enormous diversity of our environment,» Bill stated. «This is the result of an economy which is based on competition. In coalition with industrialization an economy based on competition aims at the conquest of the sellers' market by «being different,» by the characteristic of individuality within mass production. But this diversity,» he continued, «in itself desirable, is unfortunately at the same time a diversity of the mediocre; for only with mediocrity is it possible to be different, and yet to be in profusion. Thereby the standard is lowered to a medium level, devoid of risks, and has, as an ultimate aim, to conquer the market.»¹⁰ Formal perfectionism, in other words, demanded uncompromising distancing from the taint of the marketplace – something that neither systems thinking nor stoicism could ultimately deliver at Ulm, as the school's divisive internal debates and financial troubles would bring home over the next decade.

WHEN NORMS BECOME FORMS

Despite the significant differences among these three projects, and the difficulties of assigning to any of them a ready place on the ideological spectrum of modernism, what they share is a moral imperative to hypostatize norms into forms. For each, rationalized rules of design, rigorously applied, were essential to the construction of a regenerative form of life. A beautiful system, they wagered, would produce beautiful objects and a beautiful world. If, as the Enlightenment thinkers prophesied, a hallmark of modernity is the passage «from the government of men to the administration of things,»¹¹ projects such as these are stations of the cross.

fig. a
General plan HfG Ulm, design from Max Bill, 1953/54 (not fully realized), © HfG-Archiv, Ulmer Museum, Ulm.

fig. b
View of part of complex from roof of canteen. Photo: Hans G. Conrad 1955/56, © René Spitz, Köln.

fig. c
Interior of classroom building. Margit Staber, «Una documentazione sulla Hochschule für Gestaltung,» in: *Casabella* 1962, no. 259.

fig. d
«Ulmer Hocker» designed by Max Bill, Hans Gugelot and Paul Hildinger, 1954. Photo: Ernst Hahn, 1955, © HfG-Archiv, Ulmer Museum, Ulm.

fig. e
Plaster shop. Staber 259/1962.

fig. f
Window proportions. Staber 259/1962.

8 For Hénard's scheme, see «Les Villes de l'Avenir,» in: *The Transactions of the Royal Institute of British Architects Town Planning Conference*, London, 10–15 October 1910 (1911), London: Routledge 2011, pp. 345–357; English translation, pp. 358–367. Like Hénard, Perret initially proposed to elevate the new city of Le Havre on a podium, relegating parking and other functional infrastructures to the space below. Much to Perret's disappointment, this idea had to be abandoned because of money and material shortages.

9 Quoted by Roberto Gargiani, «La Città di Auguste Perret / Au-

guste Perret's City,» *Abitare* 1992, July–August, no. 309, p. 186.

10 Max Bill, «The Beginning of a New Epoch in Architecture,» in: *Architectural Design* 1955, vol. 11, p. 335.

11 This statement, often attributed to Saint-Simon, was actually first made by Auguste Comte in 1822 in a prospectus for his «Plan des travaux scientifiques nécessaires pour réorganiser la société.» For an interesting discussion, see Ben Kafka, «The Administration of Things: A Genealogy,» 1912, <http://www.west86th.bgc.bard.edu/articles/the-administration-of-things.html>.

Joan Ockman, born in 1952, is an architectural historian and critic. She is currently the Distinguished Senior Fellow at the University of Pennsylvania School of Design. Her most recent book is «Architecture School: Three Centuries of Educating Architects in North America,» MIT Press 2012.

HOCHSCHULE FÜR GESTALTUNG, ULM
MAX BILL

fig. a

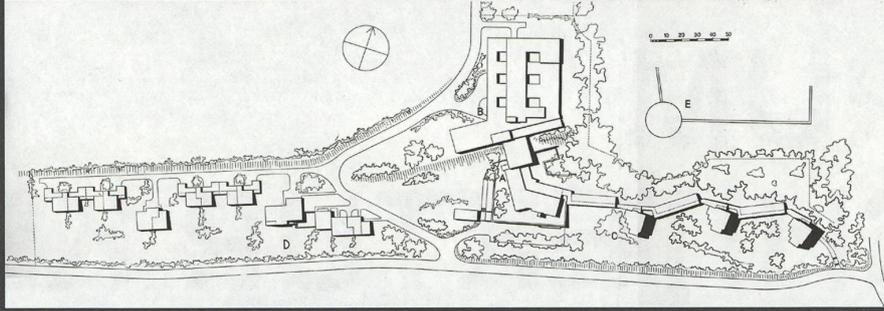


fig. b

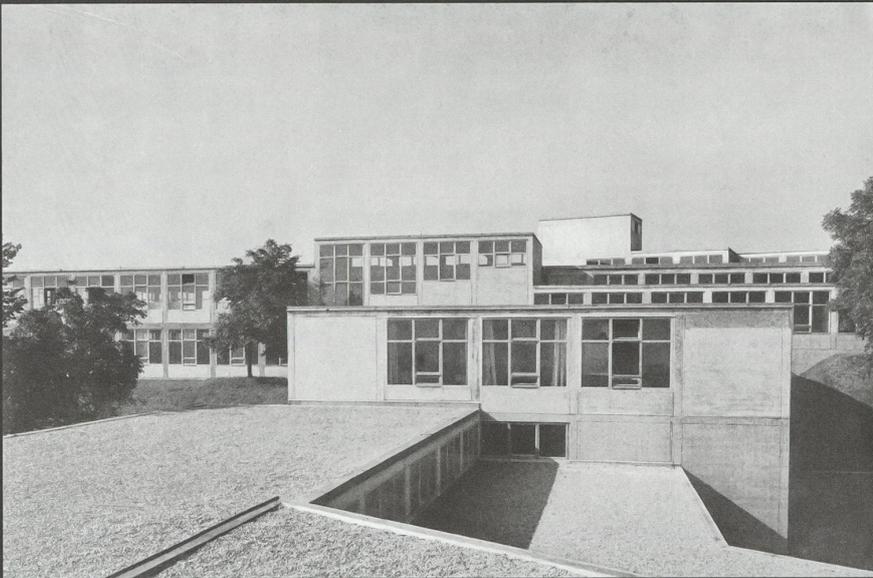


fig. c

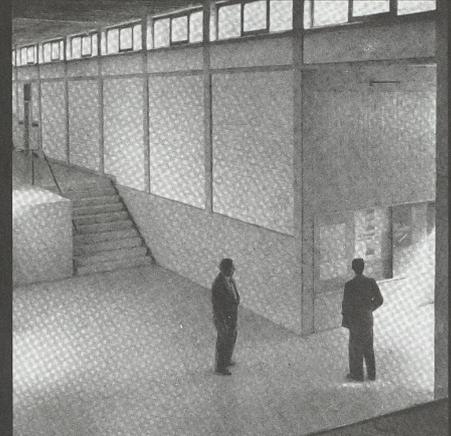


fig. d

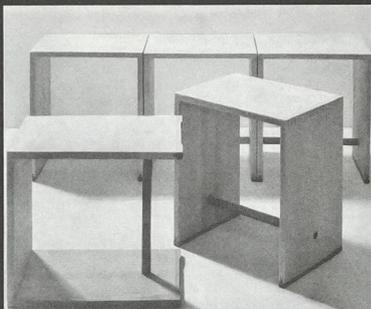
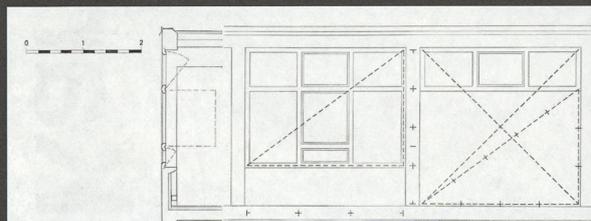


fig. e



fig. f



«Science played a decisive role in the Ulm Institute's larger conception of redemptive modernization. First, the recuperation of scientific rationality was regarded by the school's founders as the best means of countering the dark patrimony of Nazi irrationalism. For them, Nazism was primarily characterized by an anti-intellectual emotionalism and monumentalist pathos. In part, this is why the Ulmers – perhaps best illustrated by the school's hyper-rationalist architecture, which one observer at the time called a 'Cartesian cloister' – saw the rehabilitation of the so-called 'Enlightenment tradition' of improving society through reason and science as badly needed post-Nazi reform. Secondly, the primacy of scientific rationality also was embraced as a needed defense against the worrisome commercialization of postwar design. What is often overlooked is that the Ulmers expressed an evident aversion toward liberal capitalism and the commodity culture of the 'economic miracle.' [...] Bill viewed the school as essentially dedicated to the task of re-enchanting the forms of everyday life in a kind of grandiose 'Gesamtkunstwerk' which recognized no difference between fine arts and regional planning. In his grand aestheticizing project to 'turn life into a work of art,' Bill collapsed the distinction among moral renewal, aesthetic production, and social reform, gathering them all into the lofty idealism of 'good form' design.»

Paul Betts, 'Science, Semiotics and Society: The Ulm Institute of Design in Retrospect,' in: 'Design Issues' 1998, vol. 14, no. 2, p. 71.