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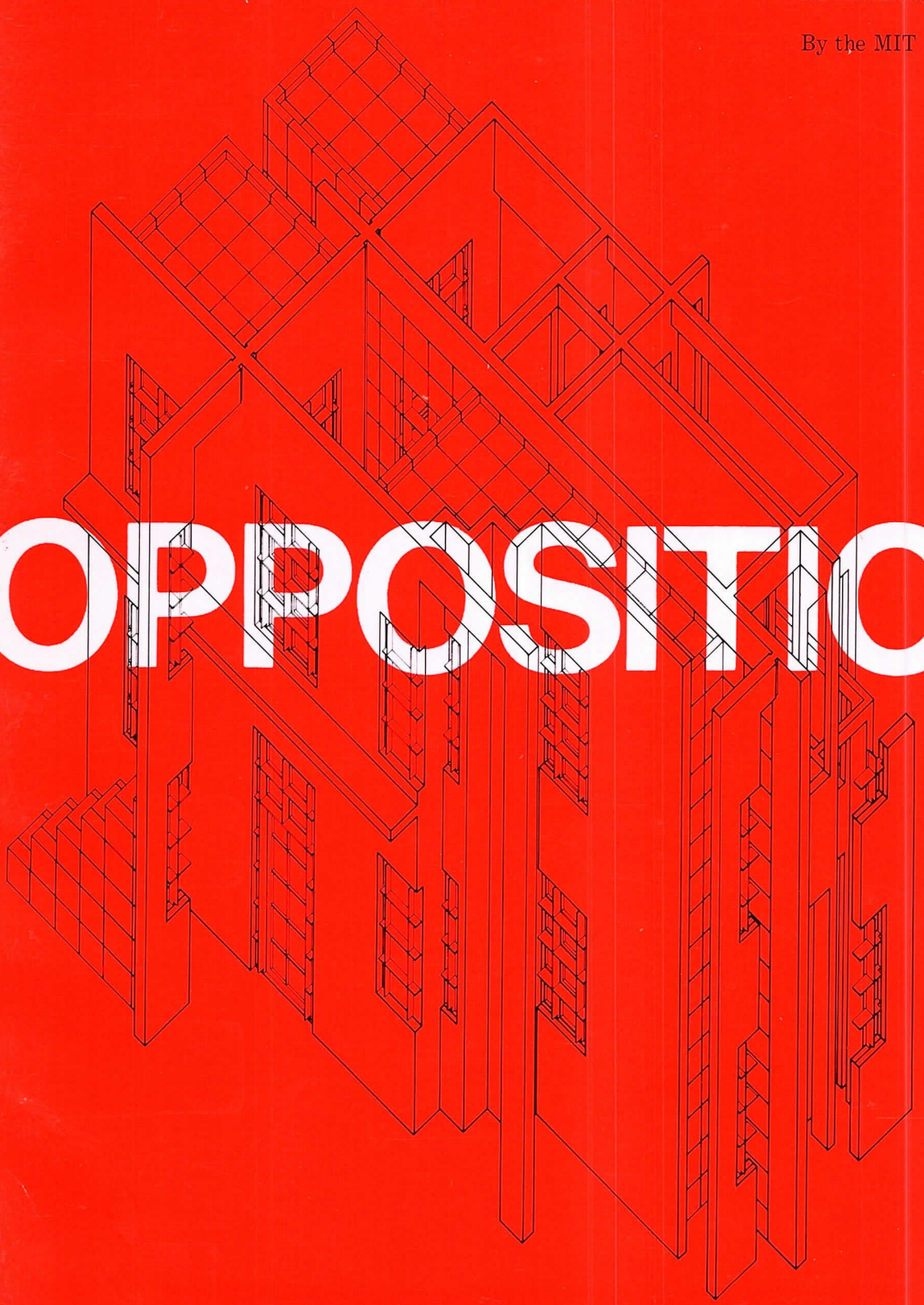

OPPOSITIONS

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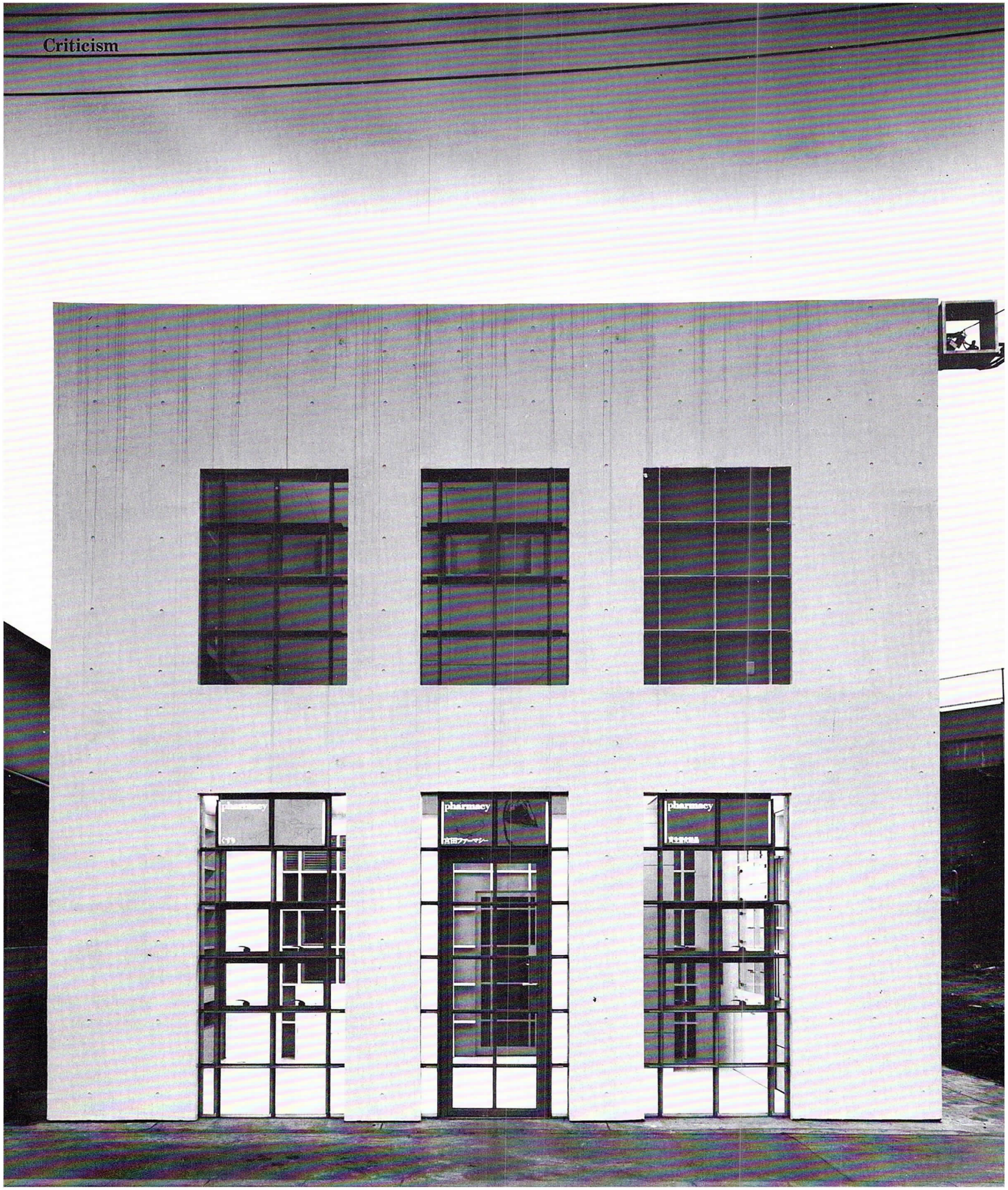
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Hiromi Fujii's Vision-Reversing Machine

Hajime Yatsuka
Translation by Terutoyo Taneda

2 In parallel with Noam Chomsky's, Gilles Deleuze's, and Félix Guattari's concepts, Hiromi Fujii refers to a series of his recent works as making up a "transformation machine."[1] Aside from whether this explanation holds water in the context of Fujii's logic, we may safely say, at least at the metaphorical level, that the analogical terms the architect uses firmly bring out his intention, which is to translate architecture into a game with a series of rules for syntactic manipulation—*procédé* (as Raymond Roussel put it)[2] of geometrical mapping-transformation for the initial formal condition. Once the rules of procedure are specified, the result comes forth completely outside the speculation of the architect as an author, no matter how complicated the operation entailed. The architect is himself responsible for laying out the rules and vocabulary, the meshwork, the white and gray planes, etc. However, apart from the unlikelihood of anyone else coming up with anything resembling Fujii's works, there seems to be, in the status of the 'architect' as manipulator, little room for the romantic myth of the demiurge. And this transformation machine as a case of perversion makes it difficult to assert that the architect is responsible for the abnormality he has produced. That is not to say that we find no trace of the architect's personal aesthetic sensitivity in it. If, on the other hand, we are to read "meaning" into this work (although "meaning" is, admittedly, an extremely vague way of describing it), we find that, far from being effaced, as Fujii insists,[3] the meaning is in control of the whole thing, to a point where it is safe to say that it converts the whole into a system of symbols representing the parts that make it up. It is by no means a neutral entity which does not interfere with the observer, or which does not demand to be deciphered; on the contrary, the manner by which these symbols govern is best described by the adjective "violent." But it is a violence which demands to be clearly contradistinguished from the romantic world with its gesticulations of "will" (as in the work of Beethoven and Schinkel). If there is a violence-wielding party, there will be a victim; but the natural reasoning which would tempt one to identify and justify the former as the architect does not necessarily apply in this case: we must even postulate the possibility that the architect may belong with the latter. There is no doubt that the myth of the demiurge is, at least to some extent, undermined by this violence; and it is inconceivable that our architect is unaware of the scope of this enticing adventure, which has deep roots in the world of twentieth-century art and was first conceived by Mallarmé in the form of the death of the author.[4]

In a sense, at one level, the strictly composed works of Fujii, including the particular subject of this study, are extremely lucid in their formal being, leaving little room for ambiguity to creep in. But at another level, they are decidedly ambiguous in the sense that the rules for manipulation are exasperatingly intricate, making it virtually impossible for an outside observer to grasp clearly all of them unless he reconstructs the drawings for himself with the help of guiding explanations. They are also infinitely intricate in the sense that even if one or two discrepancies are concealed in the rules of manipulation, few could recognize them. This ambiguity, this semantic ambivalence, should be regarded as an aspect which does *not* inhere in the works themselves, but rather belongs to the general world of which architecture is a potential part. Possibly a description of the schism in this world can effectively bring into relief the most interesting aspect of Fujii's architecture; and maybe this constitutes the most pertinent critical approach to it. More specifically, this schism is that which separates the world of reason from the world of experience. This separation is not always easy to identify in day-to-day situations, for it is in the airless valley of ambiguous compromise that the conventional world of architecture thrives. The activation of a super-rationalistic rigor which we find in Fujii's works crystallizes into a phenomenon that resists being grasped at a glance. A machine structured according to a strict set of rules is a game which belongs, no doubt, to the ultima Thule of reason. If these works appear to the viewer as hard-to-discern complexes which may be justifiably written off as "ambiguous," it is because the viewer is confining himself to the empirical side of the issue. Outside the context of observations made from the point of view of common sense, however, the machine is complete in a most lucid way. Thus, the options this machine offers are quite clear: as long as the viewer prefers to observe it from the realm

of day-to-day experience, he will continue to be alienated from the object. To put it plainly, and as the majority of people would put it, "It doesn't look like a livable place." But let us not neglect to remind ourselves here that observations of this kind have more to do with the world of symbols than with the world of facts. In other words, the reasoning behind such observations is *not* that the house in question physically precludes all possibility of habitability, but rather that the house, as a symbol, is of a character not normally associated with the notion of "living" or of "life"—which is only a kind of ideological space constituted by a cluster of vectors of "meaning" held in the grip of convention. How the occupant feels about the house is a totally unrelated question, and it is of no value to discuss this matter in generalized terms, or at least, it is of little concern to me. At any rate, if the viewer tries to take a stand on another side, the side of day-to-day experience, he will soon realize that he cannot depend on his eye (conditioned as it is by commonplace ideology); for such observations are here given no room, as they do not pertain to the myth of the demiurge.

Of interest to the critic, then, is rather the absurdity of the "reason" illustrated here, the paradoxical aspect of the whole thing. Taken literally, of course, the "absurdity of rationality" is an obvious paradox, but ever since Modernism went bankrupt as an ideological entity, paradoxes of this kind have been surfacing all over the "field," and it would even appear that "paradox" has been made into a form of thematic capital—this is a far more serious phenomenon than Charles Jencks realizes with his theory of equivocation. Modernism, superficially at least, has consistently abhorred formalism, identifying rationalism with *Zweckmässigkeit*, and, for a rationalism of this type, it is clearly possible to claim that the logic which addresses itself solely to the reason behind form (and not even to architecture itself), in a strict sense should not be regarded as rational. In this case, the above-mentioned paradox is unfounded. But in reality *Zweckmässigkeit* is no more than one form of rationalism and we now know that this "rationalism" is not the objective, unified axiom that this word at first would suggest, but rather a bundle of ideologies that may manifest themselves in diverse forms. There thus arises the possibility of asserting that Fujii's rigoristic formalism is also a form of rationalism.

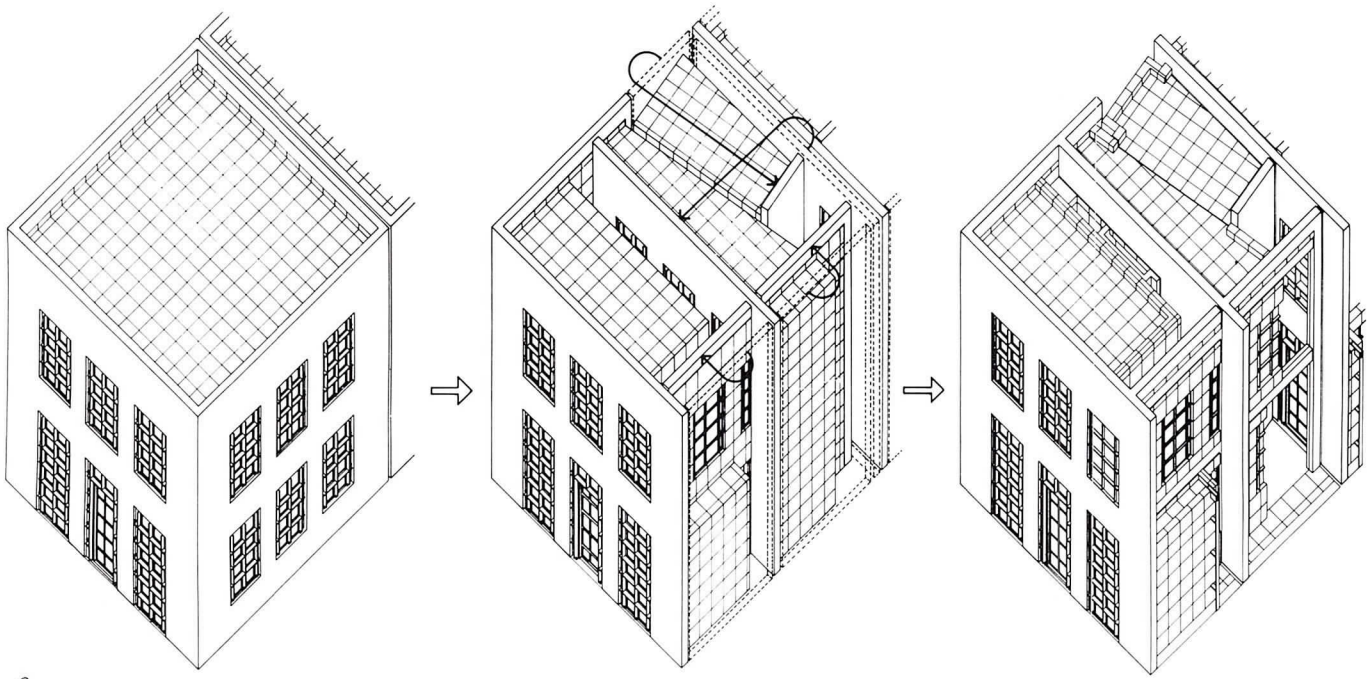
To explain this point, we may draw on the mesh motif which is frequently found in his recent works. The imposing image created by checker patterns delineating wall joints and frames of openings is a trademark of this architect, but the design per se has little functional meaning and in some cases has no practical significance at all, as in the case of a lattice fitted into a simple recess in a wall. If these fixtures have no or little functional value, then they may be considered decorative. The Miyata Residence is equipped with all sorts of props and devices, like the switch cover and window knobs fitted on the exterior of the house, which are intended to contribute to the illusion of interior-exterior reversal; but these fixtures are too non-functionally and paranoiacly arranged to be regarded as having even decorative value in the usual sense, although the idea of "interior-exterior reversal" may impose itself on the viewer with considerable impact. It is conceivable that this idea will sooner or later come under severe attack from those who cannot stand absurdity in the arrangement of "props" or rather in the organization of conceptual matter; but Fujii's absolutely serious game will continue to exist unaffected, beyond the petit bourgeois ideology by which the attacks of these critics are inspired, rejecting the latter's penetration of its surface as a mirror rejects the penetration of light. Or it may be that we should read into this absurd machine a severe criticism of the tradition of Modernism stripped of its initial revolutionary message on the one hand, and, on the other hand a rejection of the hedonism of so-called "Post-Modernism." If this is indeed the case, then Fujii's connection of "reason" with "absurdity" may well be advancing a more essential question than Robert Venturi's "contradiction."

4 *Source Note: This article originally appeared in Japanese in* Kenchiku-Bunka.

1. A concept of "machine" was developed by Deleuze and Guattari in their books *L'anti-oedipie* (Editions de Minuit, 1972), *Kafka, pour une littérature mineure* (Editions de Minuit, 1975), and *Proust et les signes* (P.U.F., 1976). Another important Japanese architect, Kazuo Shinohara, was inspired by this concept and developed his theory of "space machine" ("When Naked Space Is Traversed," *The Japan Architect*, 1976).
2. This odd precursor of dadaist-surrealists has been reevaluated by recent French novelists and critics such as Alain Robbe-Grillet ("Enigmes et transparence chez Raymond Roussel," *Pour un nouveau roman* [Editions de Minuit, 1963]), Jean Ricardou ("L'activité rousellienne," *Pour une théorie du nouveau roman* [Editions de Seuil, 1969]) and Michel Foucault ("Raymond Roussel" [Editions Gallimard, 1963]). Arata Isozaki once tried to relate his theory of "manner" to Roussel's "procédé."
3. Elimination of meaning became a rather popular subject for Japanese architects in varied ways. Isozaki, Fujii, Shinohara, and Kazunari Sakamoto are among them. See my article, "Architecture in the Urban Desert."
4. The French novelist-critic Maurice Blanchot developed this concept of the death of the author and decisively influenced such theorists as Michel Foucault and Roland Barthes on this subject. It is rather curious that he is relatively unknown to American readers. See his anthology *L'espace littéraire* (Editions Gallimard, 1955) and *Le livre à venir* (Editions Gallimard, 1959).

House/Pharmacy, Chofu, Tokyo
Hiromi Fujii, architect, 1980

Drawings by Hiroshi Maruyama and Tomoyoshi Yonei
Photographs by Masao Arai



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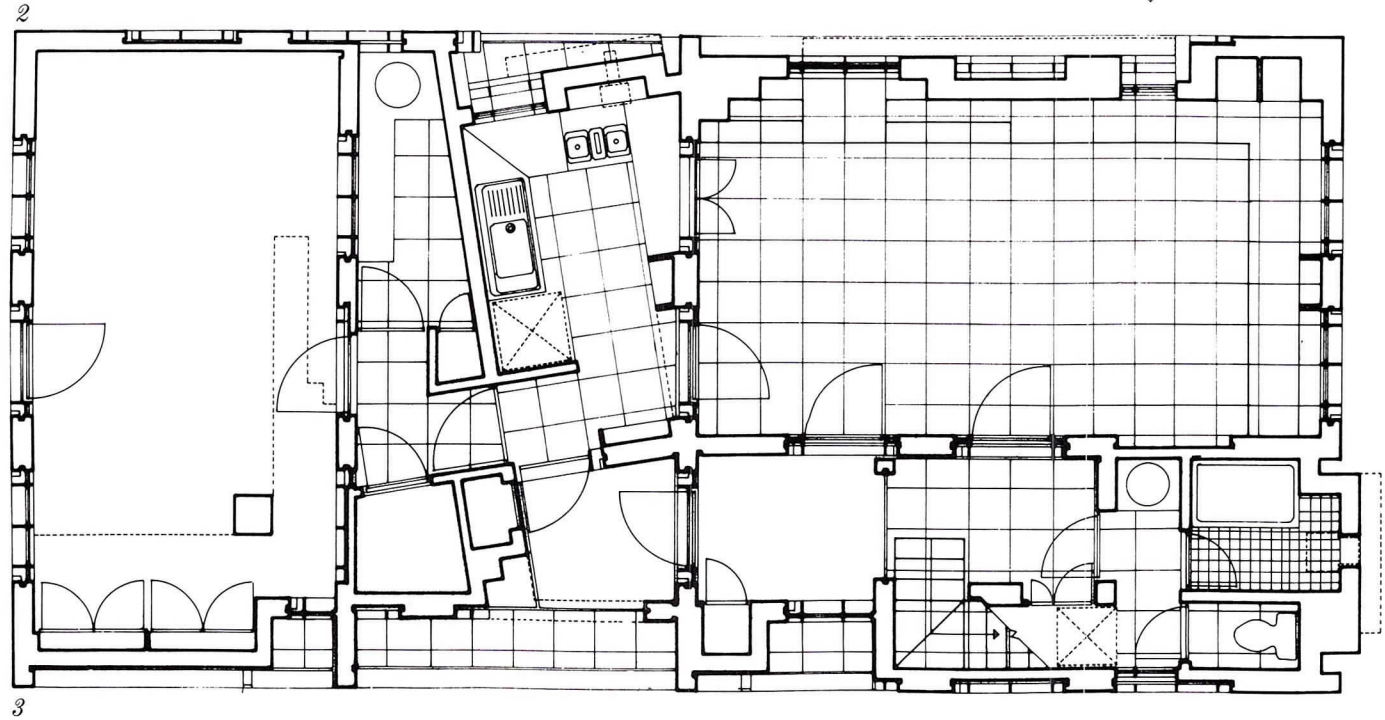

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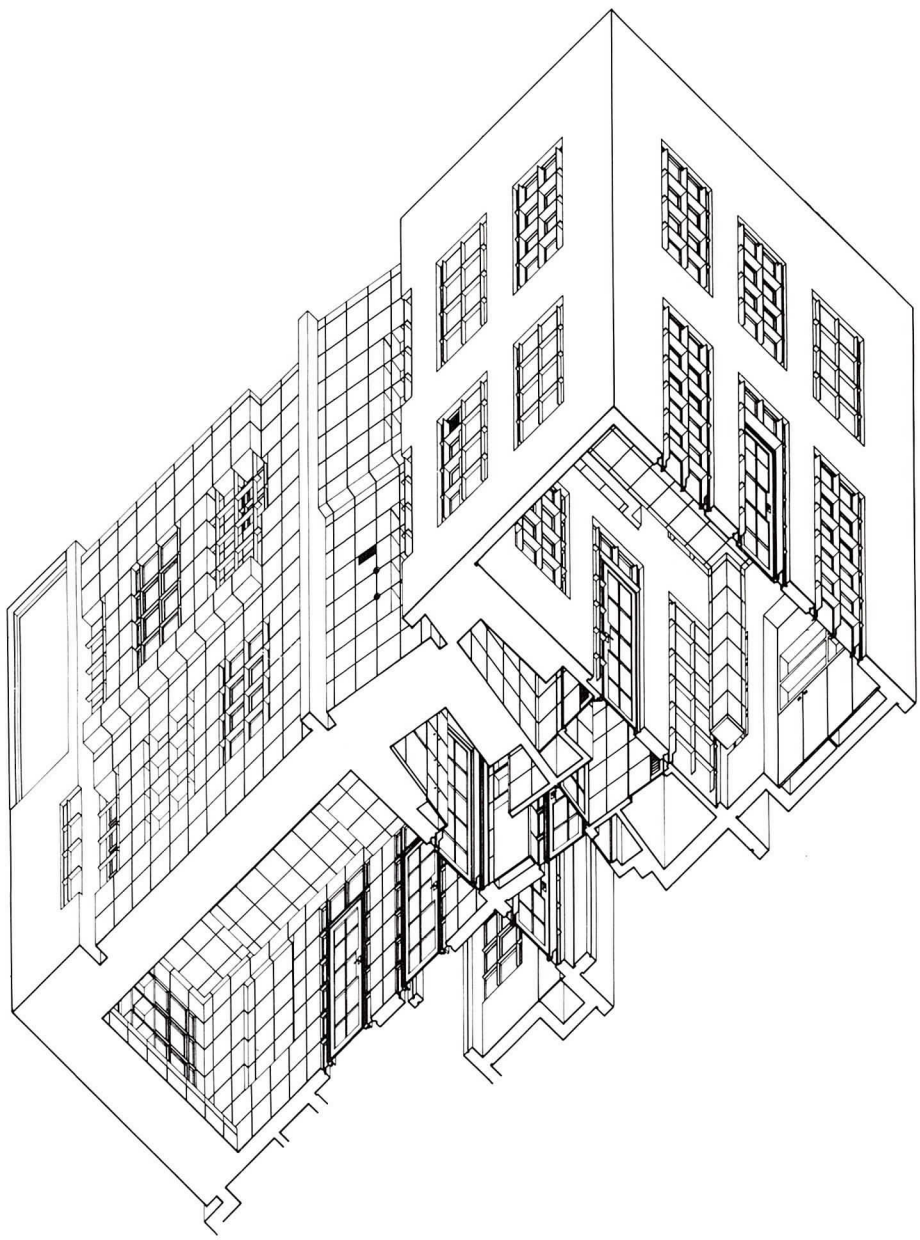
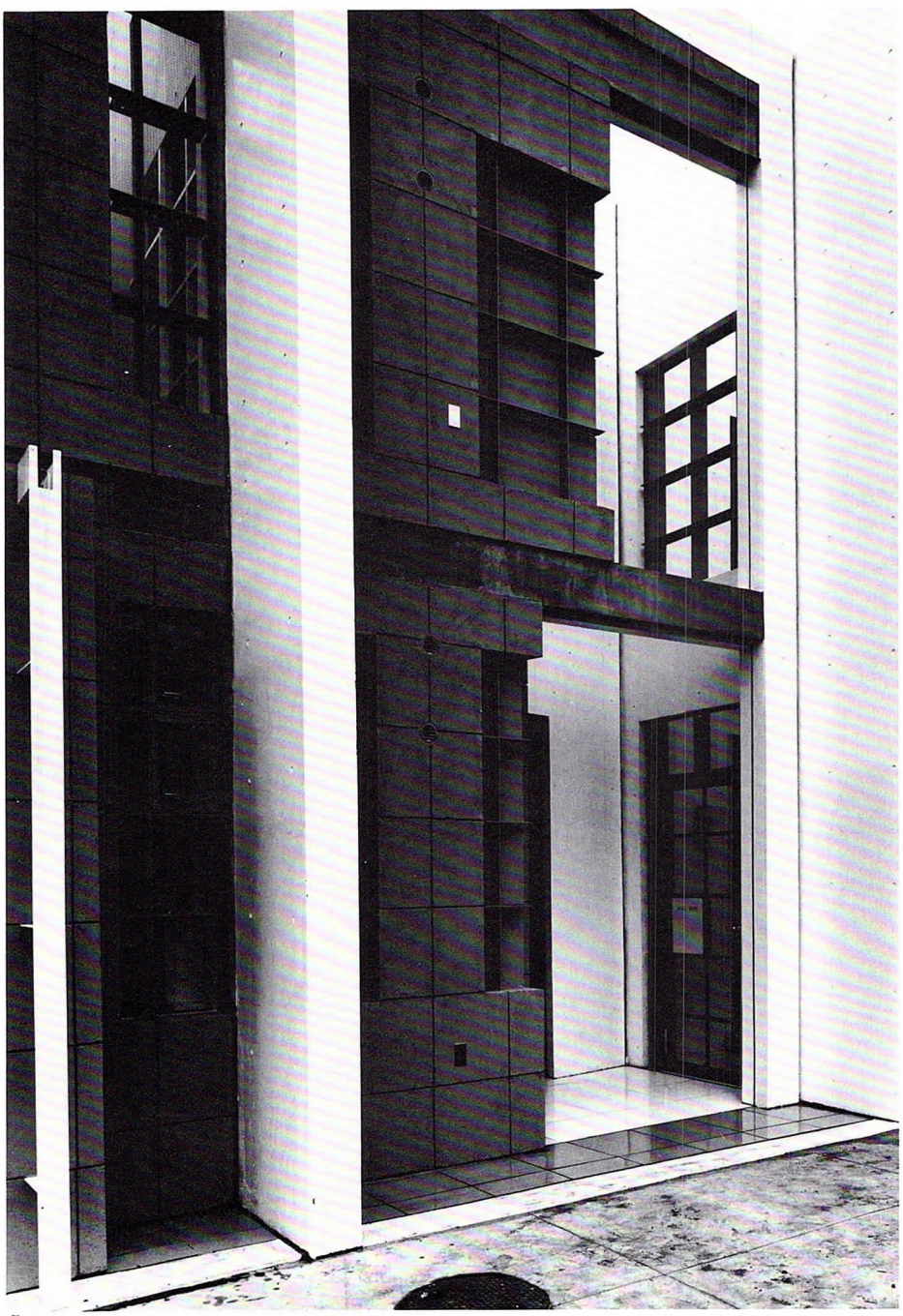
6 *1 (frontispiece) House/Pharmacy, Chofu, Tokyo. Hiromi Fujii, 1980. View from the street. The pharmacy occupies the first floor.*
2 House/Pharmacy, Chofu, Tokyo. Hiromi Fujii, 1980. Analysis of metamorphology.
3 First floor plan.
4 House/Pharmacy, Chofu, Tokyo. Hiromi Fujii, 1980. Axonometric view from below.





5 View from the northeast, showing the entrance to the residence.

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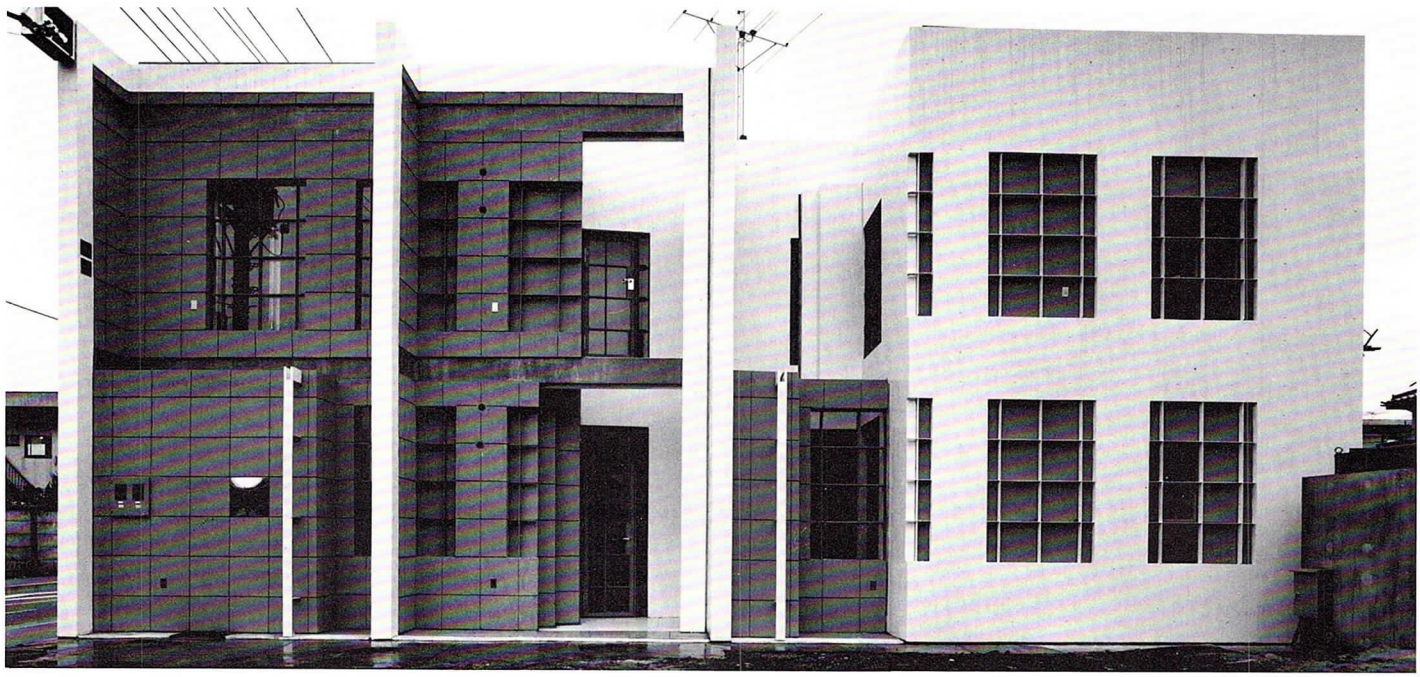

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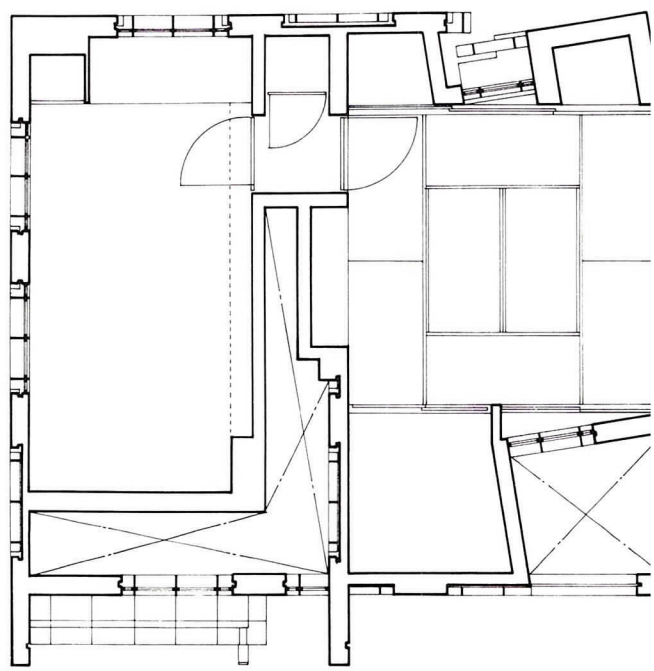
6 House/Pharmacy, Chofu, Tokyo. Hiromi Fujii, 1980. General view from the north.
7 Second floor plan.
8 View from the west showing the second-floor veranda.



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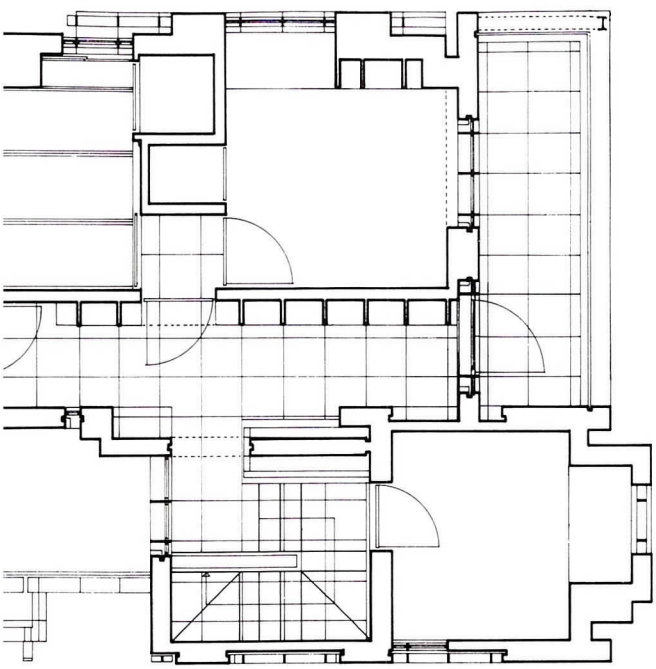
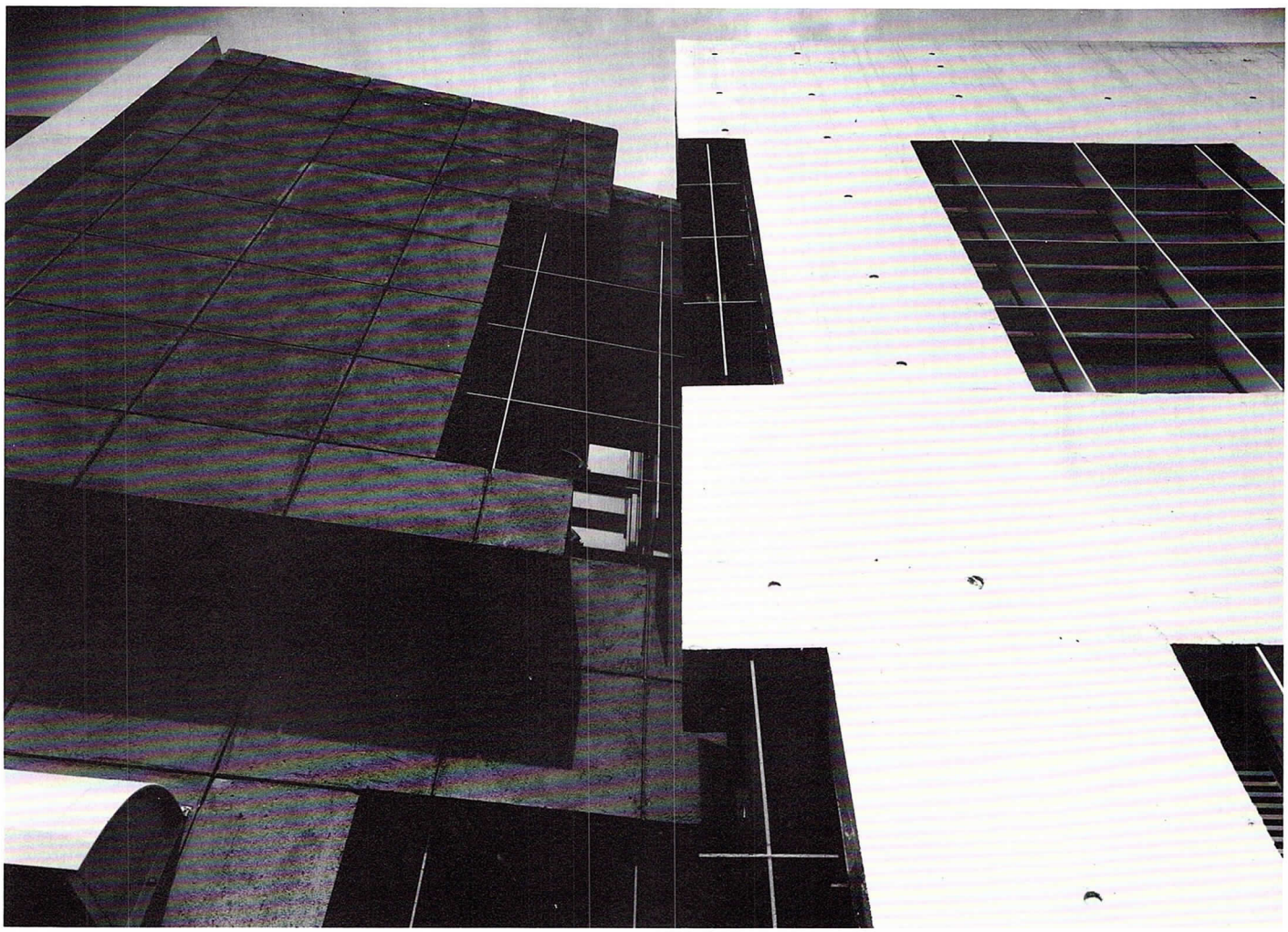


9 House/Pharmacy, Chofu, Tokyo.
Hiromi Fujii, 1980. Southwest view.



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10 View from the street showing the grid pattern of the entrance door to the pharmacy.
11 Entrance foyer. The living room is out of view on the right. The back door is on the right immediately outside the entrance.

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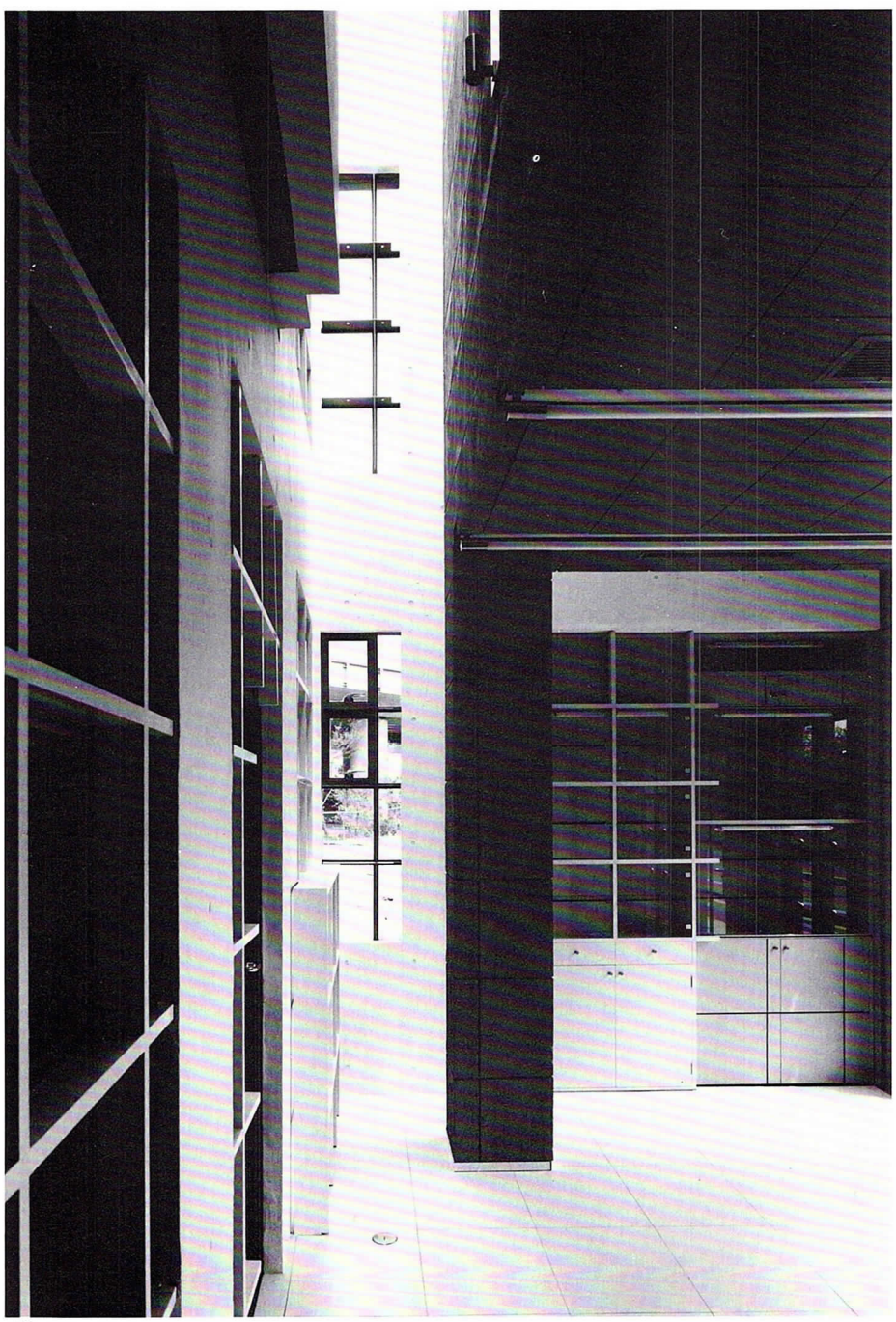

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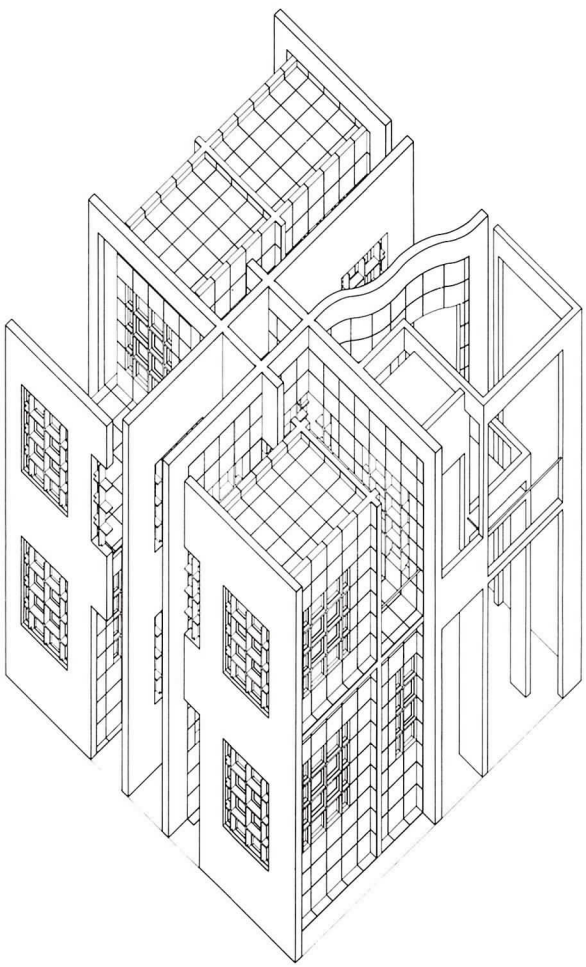
12 House/Pharmacy, Chofu, Tokyo. Hiromi Fujii, 1980. South side of the living room. Built-in benches and shelves line the walls.
13 North corner of the pharmacy.

Figure Credits
1-13 Courtesy of Hiromi Fujii.

1 Project T-13 by Hiromi Fujii.

Architectural Metamorphology: In Quest of the Mechanism of Meaning

Hiromi Fujii



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By metamorphology, I mean more than the simple transformation of a square into a circle or a straight line into a curved line. I have in mind alteration of the conformity that serves to establish the theories and codes which make possible the transmission of meaning under ordinary circumstances. As a concrete example of what I am talking about, let us refer to the architecture of the eccentric and original Italian architect Francesco Borromini (1599–1667). The individual elements of Borromini's buildings do not always adhere to the prescriptions of classical synthetic order. For example, his columns sometimes function as buttresses; sometimes they soften the effect of cantilevered balconies; sometimes they intensify a sense of rotational movement or serve as branching points to emphasize the intersection of two axes. Similarly, his cornices act as tension elements preventing the various other compositional elements from seeming disjointed, or else as elements emphasizing spatial continuity. In other words, his columns and cornices have shifted from the roles they play in the classical order to become elements intensifying spatial effects. Their meanings are entirely different from the meanings columns and cornices have in the classical order. Such alteration of meaning or code is what I intend to convey by the word *metamorphology*.

As I argued in my essays on "Quintessential Architecture" and on "Architecture as a Suspended Form,"[1] although the ideologies and spiritual content transmitted by architecture have varied from period to period, metamorphology produces effects that make possible the generation of novel architectural meaning. Like my other two approaches, it interprets architecture as a machine. The following are the intellectual bases conditioning my thoughts on this matter.

All of the elements in architecture based on the classical principle of synthesis partook of a common meaning and contributed to the production of collective impressions. For example, a column—which rests on a foundation, serves as a structural support, and produces an effect of strength and stability—has acquired meanings in relation to these functions and impressions. We readily accept columns on the basis of such acquired meanings. But these

acquired meanings are not always in agreement with the meanings I impose on elements in designing. One might even say that I deliberately attempt to create a gap between the acquired meanings and the imposed design meanings by consciously preventing the integration of the two.

A thorough pursuit of acquired meaning ultimately leads to Order, Theory, and Law—in other words, to God. Roland Barthes considers ultimate meaning to be God, whom he further describes as the unique entity incapable of becoming any other meaning. God is the remainder, the ultimate meaning, and as such an obstacle to the production of free meaning, or design.

Psychoanalysis overthrew the Cartesian concept of the subject as a lucid intelligence. Nonetheless, it is necessary to consider the conditions of cognition. Old-fashioned concepts of cognition recognized what was termed the inner voice, something possessed by all subjects. For a long time, this inner voice was thought to control only the world of artistic expression. But with increased understanding of the other part of the subject—that is, the unconscious—the myth of integration was exploded. The division of the self into conscious and unconscious destroyed logos and logic since the division of the subject eliminated the integration between the acquired meanings of things and their design meanings. But for this very reason, design-imposed meanings are no longer bound to old-fashioned semantic concepts. Consequently, emphasis is no longer placed on the transmission of meaning but on the importance of the right to generate or produce meaning.

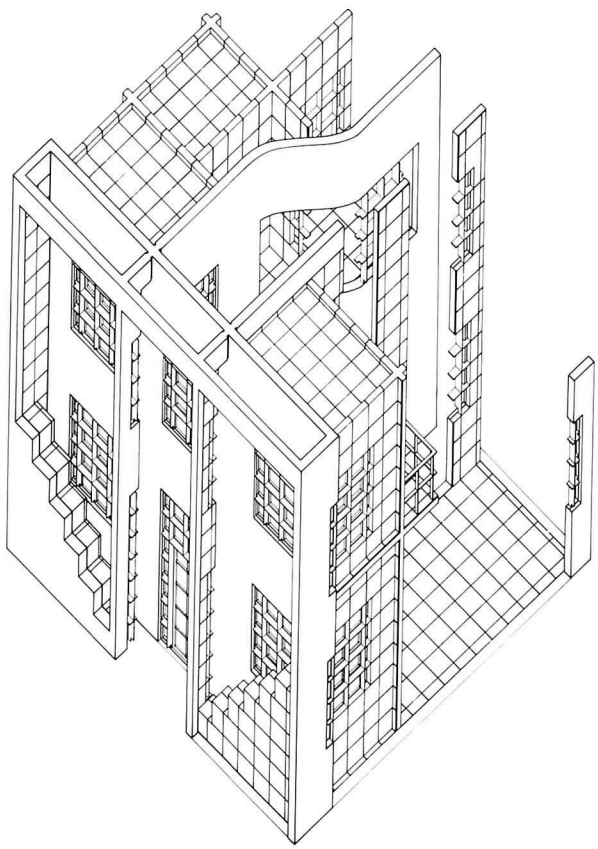
Metamorphology, in my interpretation of the word, has as a goal the production of effects generating meaning. But it is less concerned with investigating meaning itself than with issues of the function and efficacy of the effects. Striving to use metamorphology to good effect resembles the efforts of technicians and mechanical specialists to improve the performance capabilities and efficiencies of the machines they make.

Like the methods evolved for the production of quintessential architecture and architecture as suspended form, metamorphology results from reflections or examinations of the function of diversification. In the two earlier systems, however, my attempt was to eliminate meaning and reach understanding through pure geometrical facts. In other words, my earlier approaches functioned through the destruction of everyday codes and meanings.

Speculation as to the nature of human perception of ordinary things and phenomena lies behind this scheme of diversification. The formalists say perception is *automated* when the act of perceiving becomes ordinary and familiar. They add that art must diversify in order to inhibit such automation. Art must make perception difficult; it must be a method for formalizing the extension of perception and for making perception difficult. Undeniably, when perception comes into contact with codes and everyday meanings, it is converted into something understood and thus becomes automatic and de-activated. When this occurs, the individual looks at things without seeing them, without being conscious of them. If the production of meaning is regarded as starting from a method for stimulating awareness of objects and phenomena, diversification is perfectly understandable as a way of activating perception.

In connection with a fundamental examination of this issue, the method and work of Peter Eisenman come to mind. By employing methods and concepts like "cardboard architecture" and "conceptual architecture," he has produced buildings, some of which have been difficult to understand. But it was during the period in which one of his most important buildings was created—namely House II—that he concerned himself most intensely with the production of meaning. In House II the method takes the form of a progression from deeper to more superficial layers. The issue was how to produce meaning which ranges from deep structure to the preconscious level. To express the development in concrete terms, he had to eliminate architectural meanings and codes from the walls and columns composing the solid spatial volume. He did this by reducing all elements to something like white cardboard. This has the effect of transforming walls into planar

2 Project T-14 by Hiromi Fujii.



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elements and posts into linear elements. The next step is to generate meaning from those elements.

According to Eisenman, if two planar elements are lined up facing each other, a person passing between them unconsciously experiences psychological oppression and tension. These psychological phenomena serve to evoke recollections of a rectangular solid spatial volume, the progenitors of which are the planar elements. Sigmund Freud explained recollection and memory as the outcome of the psychological processes of displacement and condensation occurring in one way or another as an outcome of oppression and tension on the unconscious level. Psychological displacement or condensation can be thought of as the shifting of one meaning to another or the fusing into one meaning of several competing meanings. If this is the case, meaning production is impossible unless unconscious oppression and tension are in some way intimately related to the processes of displacement and condensation. As long as oppression and tension in Eisenman's works are produced by planar and linear elements lacking meaning codes, they seem to have very little intimate relation with the shifting or competition of meanings. And even if they do have some such intimate connection, his method strikes me as highly ineffective as a meaning producer.

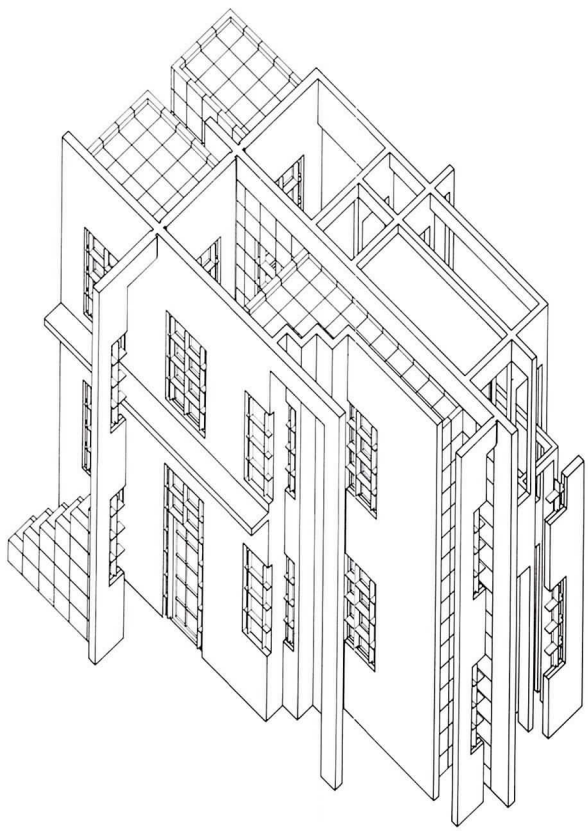
Discovering kinds of psychological oppression and tension that do effectively associate with the psychological operations of displacement and condensation involves the following problem. To clarify it, I must return to the architecture of Borromini. As I have said, in Borromini's work columns do not have the ordinary meaning associated with the classical architectural order but are elements designed to heighten spatial effects. In an age when people regarded the column only in the light of the ordinary architectural order, Borromini's usage must have stimulated a sense of semantic estrangement. But the estrangement is basically different from the one that results from differentiation. Differentiation produces estrangement as an outcome of the elimination of meaning. In the case of Borromini's buildings, the estrangement is born of a condition of suspension between the ordinary (classical) mean-

spatial-effect elements. This condition of suspension, which awakens the psychological phenomena of oppression and tension, is unstable. Since it moves in the direction of stability, it comes to entail two competing meanings, which, as a result of the processes of condensation and displacement, tends toward fusion into one meaning.

The foregoing discussion attempts to show that oppression and tension capable of stimulating the psychological processes of displacement and condensation must arise from non-correspondence between acquired meaning (the architectural-order meaning of the column) and design meaning (the design use of the column as a space-effect element), and from semantic estrangement. Furthermore, non-conformity between acquired meaning and design meaning is an indispensable principle for the production of new meaning. Metamorphology is one method for the generation of non-conforming relationships.

Metamorphology alters acquired meanings (customary codes) for the sake of producing non-conforming relationships. But alteration alone is insufficient. The altered customary or ordinary meaning must be able to compete with actuality. The altered acquired meaning must be more than a deviation. It must have contiguity or the kind of affinity called "resemblance" with the original acquired meaning. For instance the columns that Borromini used in a metamorphosed sense as space-effect elements look very much like columns playing their ordinary role in the classical architectural order. In this sense, they carry the code of ordinary columns. The difference, as I have already pointed out, is between the function or operation of columns as spatial-effect elements and columns as component parts in the standard order. Since the code of column is common to both kinds of elements, the distinction between the two is a contiguous one evolving from their functional distinction. Because of their very contiguity to each other the mutual opposition between the two meanings of column generates substantial tension and brings about a competition relation with actuality.

The work of many other architects also provides examples of metamorphology created by contiguous semantic dif-



3 Project T-15 by Hiromi Fujii.

4 Project T-16 by Hiromi Fujii.

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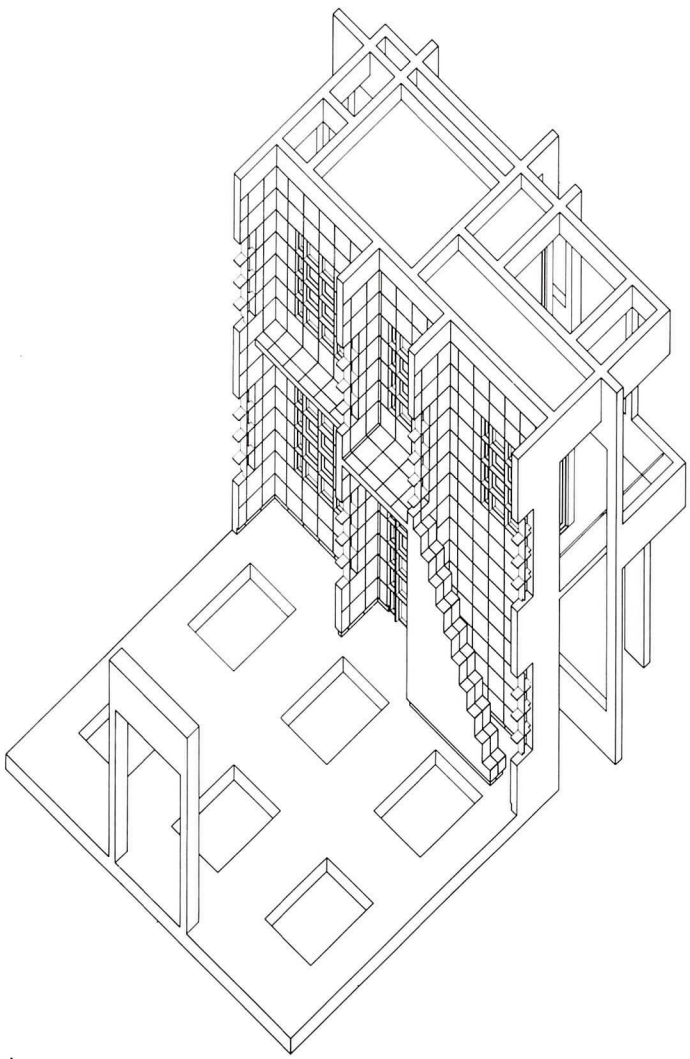
1-4 Courtesy of Hiromi Fujii. Drawings by Hiroshi Marumaya and Tomoyoshi Yonei.



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ference between homogeneous or affinitive elements. For instance, the exterior of Project E42 (1938–1939), which Giuseppe Terragni designed for a competition for a congress building, consists of horizontal and vertical elements placed in a regular alternating rhythm of narrow and wide bays. The mathematics of the composition evoke associations with strict classical architecture. The interior is much freer and seems to have no relation to the mathematical, classical, and static exterior. Inside the building, walls are angled, and spaces intersect in cruciform arrangements. The transition from the classical exterior to the freer interior would probably stimulate a powerful sense of estrangement because of the code differences between the two kinds of design. But the code of the interior and the code of the exterior resemble each other in that both are architectural. The two codes are contiguous but different, and this means that the relation between them becomes actual and is canceled. Similar mutual proximity of meaning caused by metamorphology is found in the Benacerraf House designed by Michael Graves, which consists of two flat walls with north and south openings and a jungle gym structure squeezed between them. Neither functional nor visual connection is sensed between the two. The thing that is sensed is the abstract code difference between the former as architecture and the latter as a compositional element. This is the difference between the spatial-division code of the wall surfaces and the spatial-formal code resulting from the space-compositional nature of the jungle gym. Producing space by the division of space is a basic and classical architectural approach.

The general characteristics of exteriors produced on the basis of this "divisive" approach are the kind best represented by the outside walls of Palladio's buildings: that is, smooth walls regularly broken by openings, with everything planned to agree with the interior partitioning. The work of the Russian Constructivists, the Futurists, and the members of the De Stijl movement best illustrates the method whereby a compositional approach is adopted toward spatial creation. The characteristics of this kind of design can be seen with especial clarity in the interior of the Schröder House (1924) by Gerrit Rietveld. In this

building the horizontal members—handrails, beams, and slabs—are in dynamic opposition to the vertical columns and posts. This opposition gives the house its overall characteristic. The difference between the divisional and compositional methods found in this building resembles the difference between the flat walls and the jungle gym in the Benacerraf House. It is the difference between the code of spatial division and that of spatial composition, and approximates the kind of discrepant but contiguous meaning seen in Borromini's columns and Terragni's Project E42, as well as exhibiting traces of Graves's metamorphological operation.

To pursue this issue further, let us consider Terragni's Littorio A project (1934), a competition design for the Palazzo del Littorio. A vast, gently curving front wall faces a wide boulevard. Behind the wall—as if concealed—is the building; there is no apparent visual or functional relationship between the two. Ordinarily the difference in code between them would be the only discrepancy involved. In this case, however, a further code difference is produced by cutting light lines in the wall surface and by suspending the wall itself. In other words, this building involves double metamorphology. First there is the metamorphology of the facade. Then there is the metamorphology whereby the incised line and the suspension of the wall disrupt only the ordinary sense of mass or volume in a wall. This metamorphosis converts the wall into a single flat surface.

In the preceding pages I have concentrated on the nature of the metamorphological process, on how codes can be transformed, and on the nature of the metamorphosed meaning that is essential if new meaning is to be produced.

I should like to offer the following argument as a résumé, beginning with the purpose of the method and the production of meaning. *Meaning* in this instance is not a superficial synthesis of acquired meaning and design meaning but a non-conformity of these meanings making possible the generation of new meaning on the unconscious level. Producing such non-conformity is the goal of metamorphology, which operates in two domains. The first domain is that of the metamorphology of acquired meanings, which can be called ordinary, everyday, or customary meanings. In architectural terms, this is the metamorphology of customary codes into architectural forms, like stair forms, interior forms, or exterior forms. In addition, this type of metamorphology occurs with respect to the customary compositional rules of architecture—for instance, rules of order, spatial division, and spatial composition. Metamorphology in this domain amounts to a contiguity based on semantic differences.

The second domain is that of design-imposed meaning. In this case, too, there are two kinds of metamorphology. The first is treated in detail in my discussion of analogy and contrast in semantic difference. The second resides in the logic of meaning. This last is difficult to analyze. I shall content myself here with naming only two examples: the cantilevered balcony in Terragni's Littorio A project and Marcel Duchamp's toilet, which he dubbed *Fountain*.

I should like to mention some of the processes that can be employed in the generation of metamorphology. Although the process varies according to the kind of metamorphology, I list here as many procedures as possible: disparity, gapping, opposition, reversal, inversion, substitution, subrogation, abbreviation, severance, fragmentation, transection, tilting, circumsection, transposition, arrangement, dispersal, quotation, repetition, comparison, and so on.

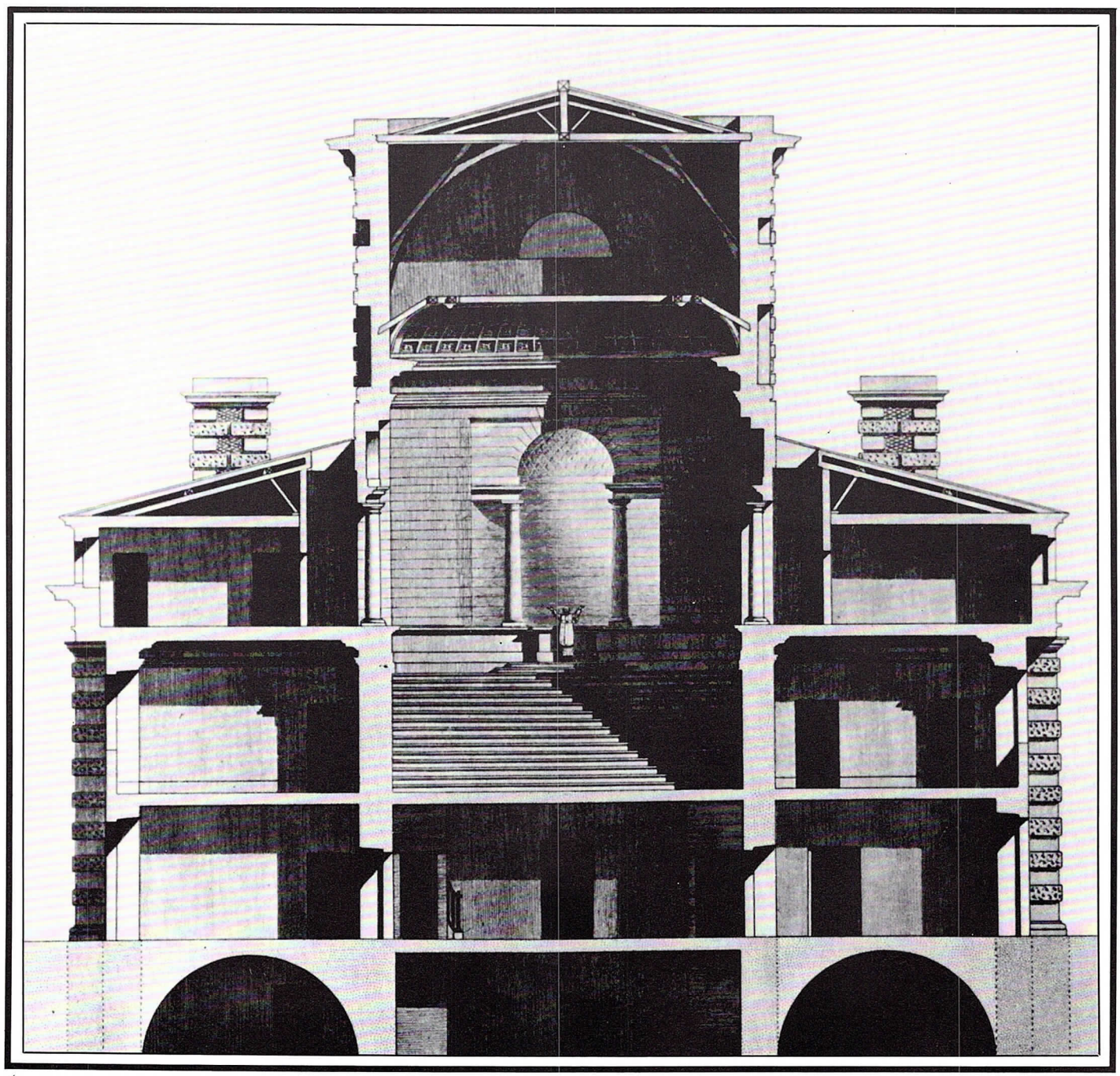
This article has set forth a line of thought starting with reflections on diversification and centering on the mechanism of architectural meaning-production. In addition, it has touched on the metamorphology of architectural meaning and the concrete processes whereby such metamorphology is achieved. These processes will require continued study in the future.

Notes

Source Note: This article originally appeared in Japanese in Kenchiku-Bunka, *October, 1979. It first appeared in English in* Japan Architect, *vol. 55, no. 11–12 (Nov.–Dec. 1980).*

1. Hiromi Fujii, "Existential Architecture and the Role of Geometry," in *A New Wave of Japanese Architecture* (New York: The Institute for Architecture and Urban Studies, 1978).

1 Director's House, first project for Saline, Arc-et-Senans. Claude-Nicolas Ledoux, 1775. The position of the priest with arms upraised before the light evokes the deistic beliefs of the Enlightenment.



1

Louis Kahn and the French Connection

Kenneth Frampton

Architecture is the masterly, correct, and magnificent play of masses brought together in light.
Le Corbusier, Towards a New Architecture, *1923*[1]

Order is . . .
Design is form-making in order.
Form emerges out of a system of construction.
Louis Kahn, Perspecta, *3, 1955*[2]

Cret and French Rationalism

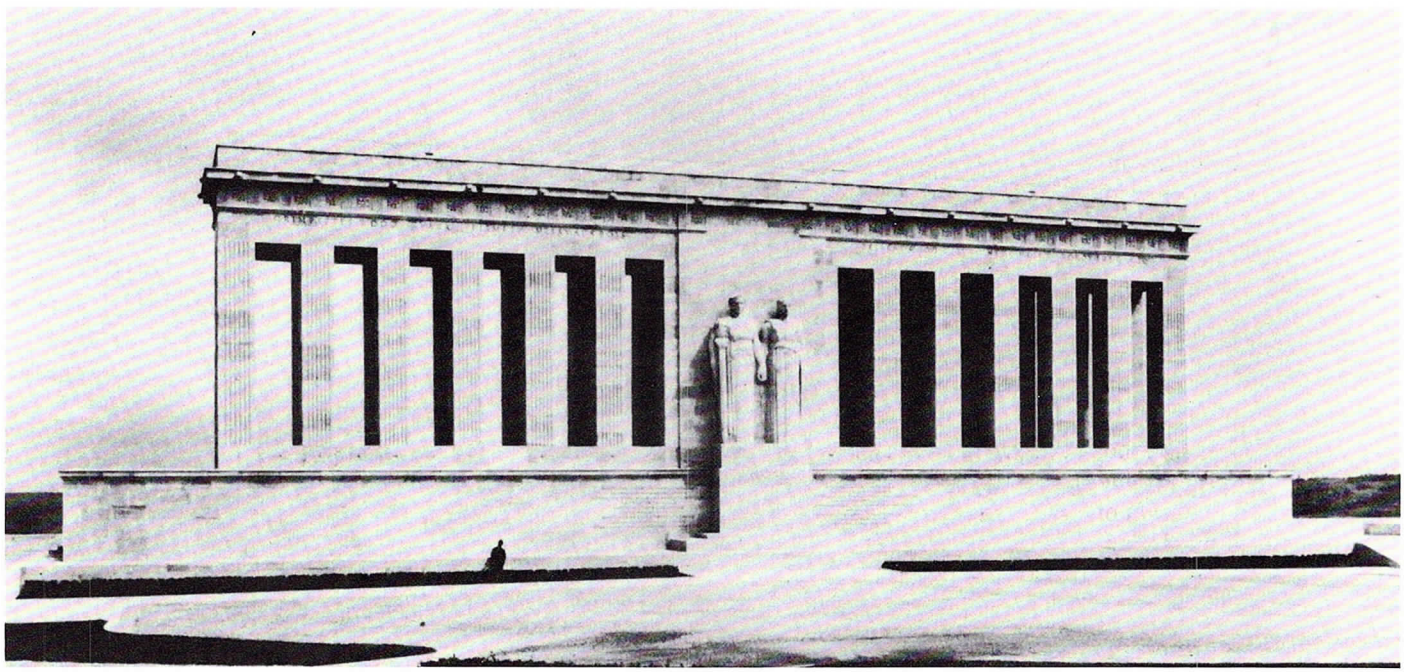
As far as the French "connections" in Kahn's career are concerned, the obvious point of departure is the French émigré Paul Philippe Cret (fig. 3) who was Kahn's professor in Philadelphia and taught at the University of Pennsylvania from 1903 to 1937. Cret professed the precepts of the Ecole des Beaux-Arts; that is to say, he taught according to the principles on which he himself had been raised in the atelier of Daumet-Esquié-Jaussely. Cret was committed to French classicism and by and large worked within its constraints throughout his life (fig. 2). He delivered his credo to Dr. Fiske-Kimball, director of the Philadelphia Museum of Art, when he wrote that "classicism is a discipline which requires a certain humility, an abandonment of too much personality or 'as we moderns put it' an abandonment of exasperated self-expression."[3]

While Cret remained committed to the methods of the Ecole, he nonetheless saw classicism as a tradition which was capable of further development. Above all he was attracted by the precepts of Structural Rationalism—by the theories of Viollet-le-Duc and the work of Henri Labrouste. This general concern is evident in an essay that he wrote in 1927, three years after Kahn had graduated, entitled "The Architect as Collaborator of the Engineer." Here Cret referred to Henri Labrouste, Anatole de Baudot, and Le Corbusier in a text which seems to have been provoked by the English translation of *Vers une architecture*. Cret intimated that he had reservations about the Structural Rationalism practiced by Viollet-le-Duc's acolytes such as De Baudot, who attempted to derive the entire syntax of a building from structure and construction. Cret quoted the French critic Louis Dimier to the effect that "the necessities of construction, even supplemented by what M. de Baudot calls economic and social necessities, will never suffice to build an edifice. For of course these ideas have only a limiting and corrective value; they are not creative and fruitful. What is fruitful is the conception of form; it is design which emanates neither from geometry, nor from mechanics, but from the imitative arts."[4]

While entertaining a respect for the syntactical precepts of Structural Rationalism, Cret was understandably skeptical about the capacity of construction to constitute the sole basis for formal order and cultural significance in architecture. The importance that Cret attached to precedent and imitation clearly had an influence on Kahn's early development. As Vincent Scully has written: "Kahn was trained in the Beaux-Arts manner to regard the buildings of the past as friends rather than as enemies, friends from whom one was expected, perhaps with more intimacy than understanding, to borrow. . . . The young Kahn did not regard himself as a revolutionary. As a dutiful student he traced and adapted forms from archetypal academic books. . . . The spaces of his student schemes are symmetrically made by solid structure and distinguished as to type by changes in structural scale. . . ." (fig. 4).[5]

Cret's ambivalence toward both Viollet-le-Duc and his prime pupil De Baudot is sufficient to indicate that these rival theories were discussed at length by Cret during Kahn's education, and the unique nature of Kahn's mature work suggests that Cret's preoccupation with Structural Rationalism was to have a lasting impact on his career. For Kahn, as for Cret and Le Corbusier, the engineer was seen as having a unique role to play in the development of architectural form. What remained unclear, for Cret as for others, was the exact nature of this relationship. In the words of the slogan around which the thesis of *Vers une architecture* was organized, Cret was concerned as to the appropriate balance between "The Engineer's Aesthetic and Architecture."

In "The Architect as Collaborator of the Engineer," Cret was to posit his own views about this relationship in terms



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2 American Battle Monument Memorial, Chateau Thierry, France. Paul Philippe Cret, 1928.
3 Portrait of Paul Philippe Cret. Adolphe Borie, 1914.
4 Student design for a shopping center. Louis Kahn, 1924.

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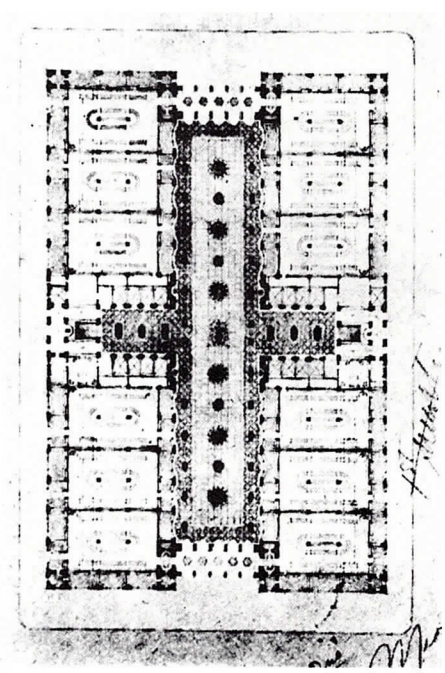

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that were quite close to the spirit of Structural Rationalism. That Cret's position was close without being identical seems to be evident from the following passage:

"The entire mechanical unit must be intensely realized by the architect before he can endow it with character and significance—animate it so that it speaks to the imagination and stirs the emotions. Then he may begin his labors, mindful of the truth that Taine has noted—that strength and dignity of design are attained not by dissembling, but by emphasizing structural purpose. Furthermore, the mechanical restrictions themselves are not wholly inflexible and the mechanical solution is not necessarily arrived at independently of all aesthetic consideration. The mathematician, working to reconcile a number of mechanical conditions, may find not one, but several solutions—all equally adequate to meet the requirements. Obviously there arises a question of choice, which may be guided not by mechanical but by aesthetic considerations. Again, details, such as the shape and thickness of certain beams or the proportions between certain parts of the steel structure, which have no bearing on the mechanical adequacy, can be determined according to their relation to the architectural problem. Details—yes; because a fundamental change is not necessary to render a form *significant*, but the knowledge that must be drawn on to effect these minor changes, so vital to the beauty of the whole, is gathered only by long training in aesthetics.

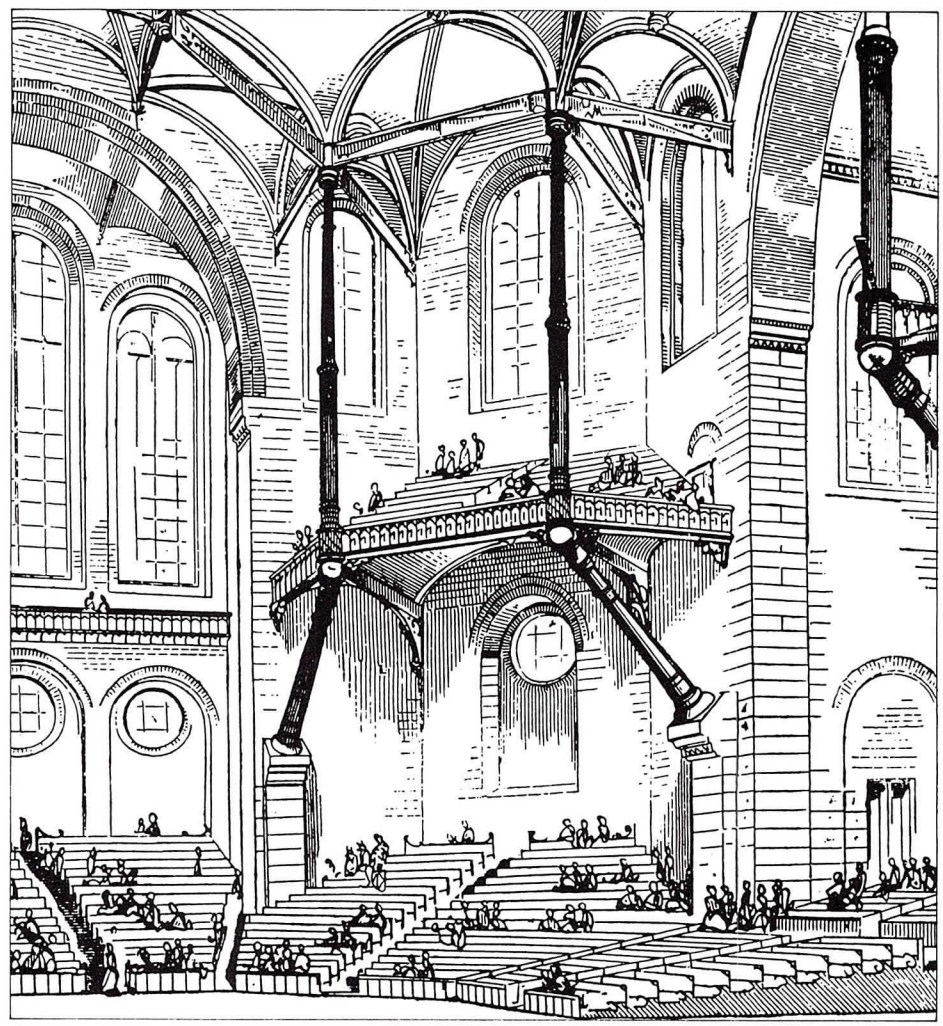
"Thus, the architect, collaborating with the engineer, finds that even in the construction of the framework itself he can exert an influence toward the architectural design that he is to develop. On the other hand, for him to evade the influence of the mechanical design would be a fatal step in the direction of defeating the whole aesthetic purpose. He cannot allow himself to forget, for instance, that the 'spirit' of a steel form is not the spirit of stone. In the middle of the last century Labrouste was among the first to realize this important canon of modern architecture and to experiment in designs peculiarly adapted to the strength and simplicity of the steel frame. The 'beauty of iron' is not the beauty of marble or granite. The cartouches and architectural mouldings of the stone vocabulary lose all meaning as the ornamentation of a metal form."[6]

Soon after his retirement from the university, Cret was to return to this theme, only this time he was to touch on other French connections which were also to be of consequence in Kahn's career. Thus we find him writing of architectural education in 1938, "If, as in some quarters, it is thought that construction methods are generating the forms without the intervention of aesthetic selection, there will be a tendency to increase the construction courses over those dealing with plastics and history. This is by no means a novelty. Functionalism (as we call it today) was the subject of the course given by Viollet-le-Duc to his students around 1865 and later summed up in his *Entretiens*. In the same way, the return to simple geometric forms and volumes, the elimination of decoration, is a revival of the theories of Durand around 1803."[7]

While all of this may appear somewhat incidental, I would like to make the case that Cret not only introduced his students to the work of Viollet-le-Duc, De Baudot, Labrouste, and Durand, but that he also involved them in debating the oppositions that existed, at a theoretical level, between on the one hand the Structural Rationalism of Viollet-le-Duc (fig. 5) and De Baudot, with their strong affinity for the Gothic, and on the other hand the classicism of Durand's permutative system, with its rather arbitrary method for combining facades with the modular fabric of the building itself. One may construe from his writing that Cret considered the Rational (that is, the Structural) Classicism of Henri Labrouste as the historical mediation between these two extreme aspects of French Rationalism. The Bibliothèque Sainte-Geneviève (1838–1850) may be cited as the first demonstration of this mediation (figs. 6, 7).

In any event, these figures appear as the theoretical protagonists that Kahn was introduced to in his formative years at the University of Pennsylvania, and if one adds to this illustrious company Auguste Choisy's majestic *Histoire de l'Architecture* of 1889 (figs. 8–10),[8] which Kahn frequently acknowledged as a major influence on his development, one may gain some idea of the full range of the French theorists who were to exert an influence on Kahn's development.

5 Design for a concert hall in stone, iron, and brick from Viollet-le-Duc's Entretiens sur l'Architecture *(1863–1872).*
6 Bibliothèque Sainte-Geneviève, Paris. Henri Labrouste, 1838–1850. Reading room. This view dramatically illustrates Labrouste's effort to reconcile the use of advanced technological structures in a traditionally classic context.
7 Bibliothèque Sainte-Geneviève, Paris. Henri Labrouste, 1838–1850. Elevation and section of reading room.



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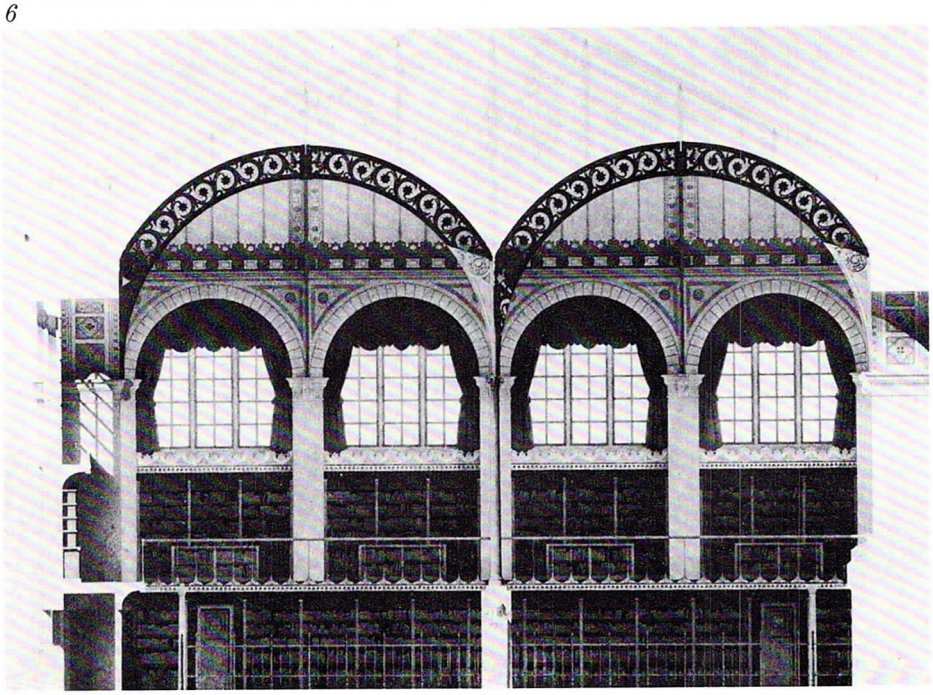

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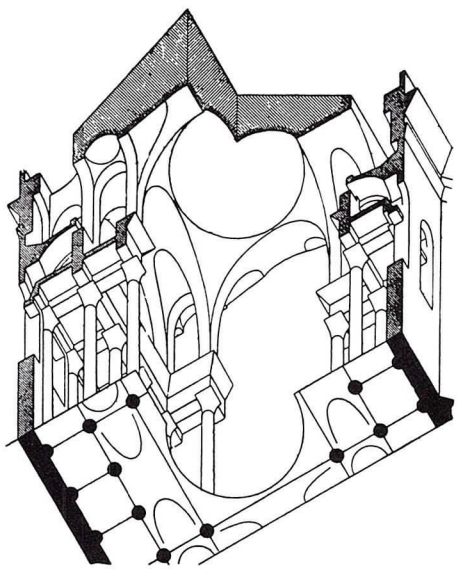

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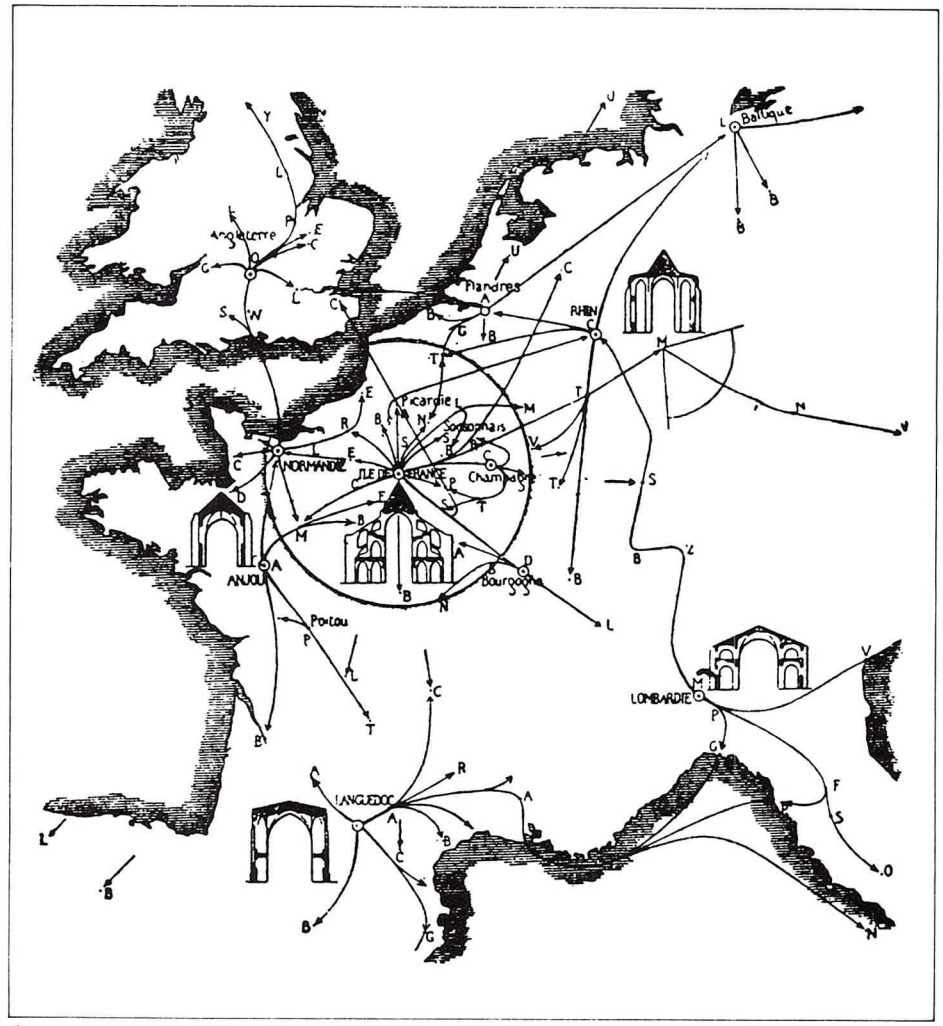
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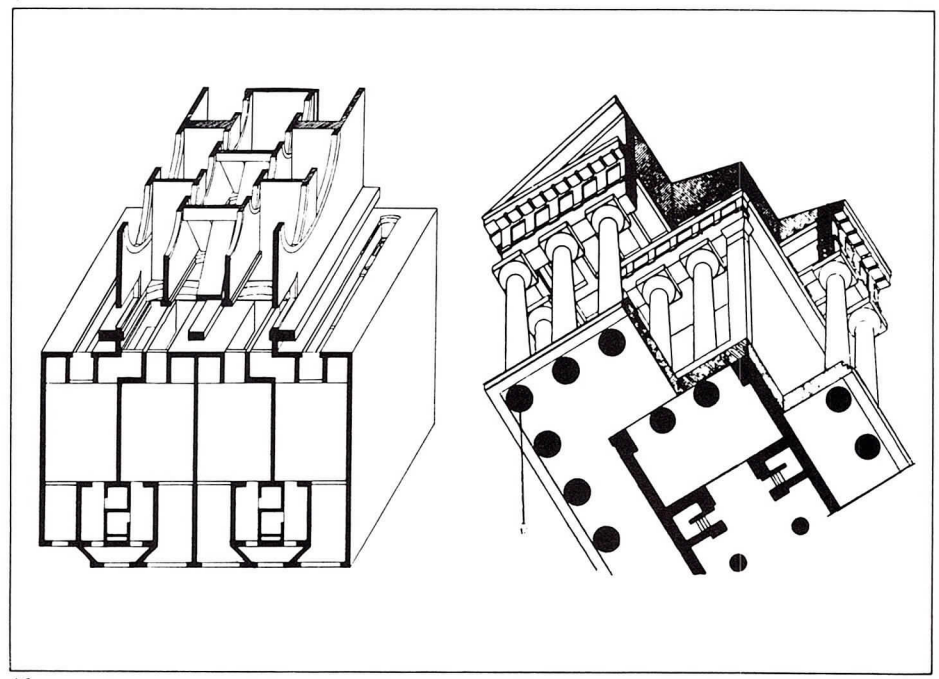

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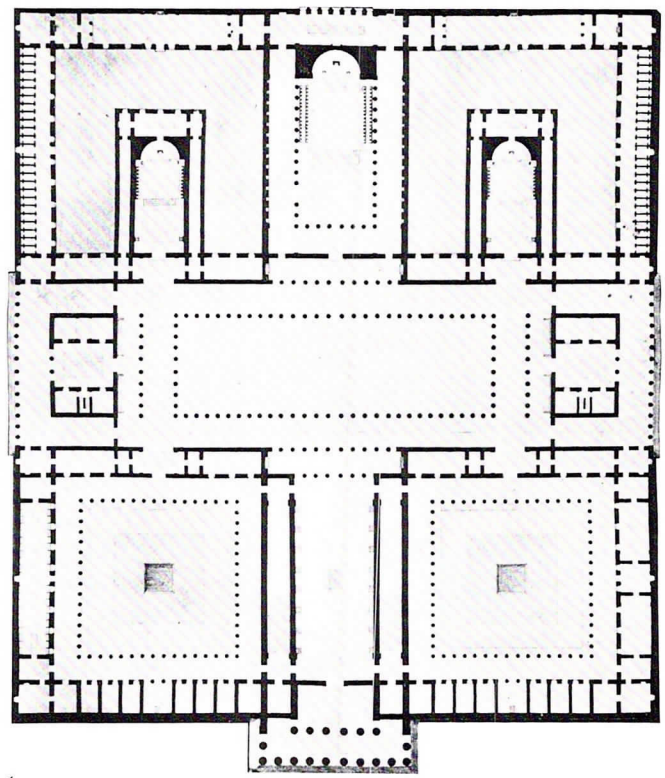
8 Typical upward-looking axonometric of J. G. Soufflot's Sainte-Geneviève church of 1755 from Auguste Choisy's Histoire de l'Architecture. *This drawing illustrates the effort of the Greco-Gothic ideal to unify the sublimity of the peristyle with trabeated form.*

9 From Choisy's Histoire de l'Architecture. *This map was meant to illustrate the differentiation of the regional Romanesque style throughout Europe. Choisy remarks on the local resistance to normative Gothic.*

10 The comparison is drawn by Giurgola and Mehta between Choisy's axonometric of the Parthenon and Kahn's isometric of his Hostel for Members of National Assembly, Dacca, Bangladesh
11 Design for Court of Appeals. Henri Labrouste, 1824. Plan using principles of distribution similar to those advanced by Durand.

In this respect primacy must be given to J. N. L. Durand and his *Précis des leçons données à l'école Polytechnique*, if only because Durand's elementarist system of composition had become fully incorporated into the teaching of the Ecole des Beaux-Arts by the time that Labrouste was a student (fig. 11). For all of Cret's categorization of Durand as a proto-functionalist, it is evident that Durand was not a functionalist in the Neo-Gothic sense of the term, for patently he did not subscribe to any kind of "form follows function" ideology. He posited the grids, enfilades, colonnades, and elevations of his *Précis* as essentially empty elements which, if appropriately chosen and combined, could be arranged to accommodate an infinite variety of programs (figs. 12, 13). His system was open, not only in the sense that a large permutation of elements could be freely combined, but also in the sense that the vacuous generality of the space generated by this system could be brought to accommodate, in a "loose fit," a wide variety of uses. However much it may have been modified in the interim, traces of this method are still detectable in the mature work of Kahn (see his Jewish Community Center project of 1954 [figs. 14, 15] as an early example of such an application).



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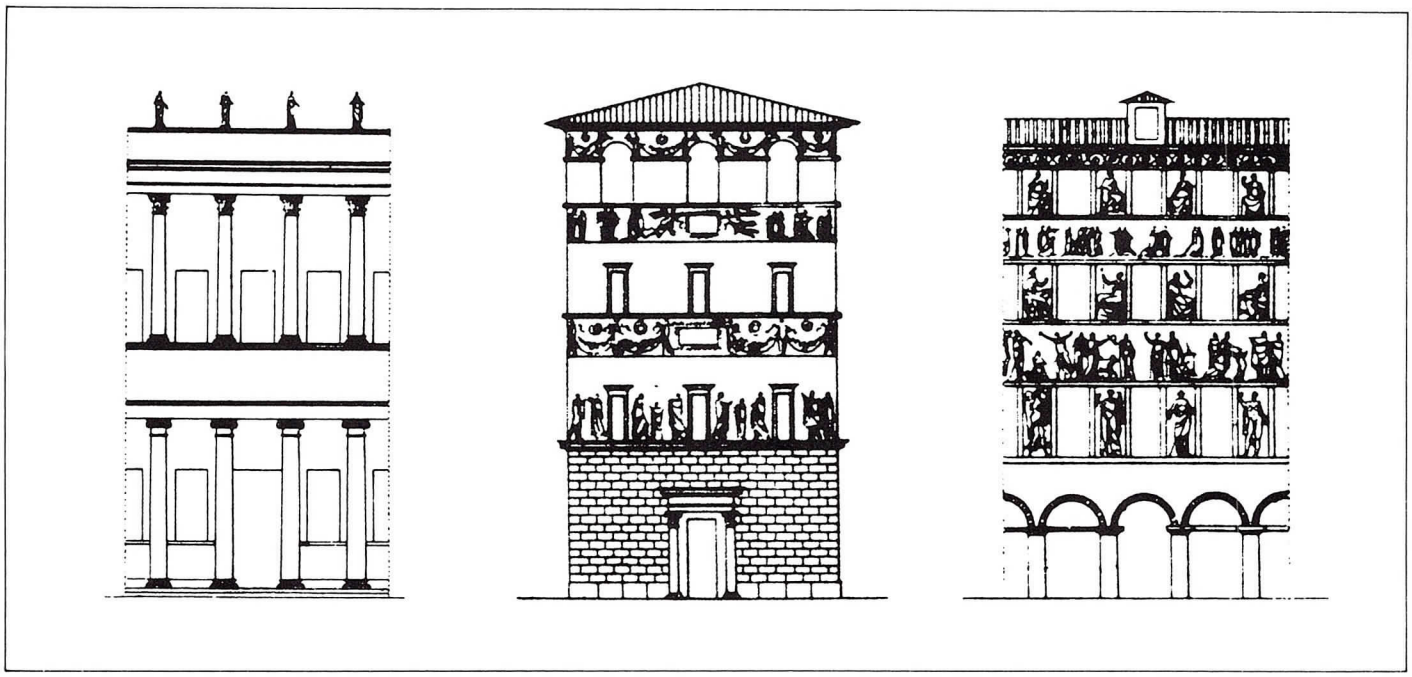
The second major French influence on Kahn is apparently Viollet-le-Duc and, in more specific terms, the work of Viollet-le-Duc's prime pupil Anatole de Baudot. The main evidence we have for arguing that De Baudot influenced Kahn resides in the invention of *ciment armé*, which De Baudot perfected in collaboration with the engineer Paul Cottacin for purposes of constructing the church Saint-Jean de Montmartre, which was finally realized in Paris in 1904 (fig. 16). When we look for the sources of Kahn's peculiar approach to structural form, we find ourselves inevitably returned to De Baudot as the sole architect of the turn of the century who anticipated Kahn's approach to the expression of structure.

In sum, there is evidence that, consciously or otherwise, Kahn was to assume the full spectrum of the French Rational-Classical legacy, ranging from the methods of Elementarist composition to the sublime preoccupations of the Greco-Gothic ideal. Most of this complex argument

12, 13 Vertical combinations from J. N. L. Durand's Précis des leçons d'architecture données à l'Ecole polytechnique *(1802). Various forms of representative masks to be applied to normative grids.*
14 Jewish Community Center, Trenton, N.J. Louis Kahn, 1954–1959. Section of intermediate version showing brick supporting structure.
15 Jewish Community Center, Trenton, N.J. Louis Kahn, 1954–1959. Reflected ceiling plan, intermediate version with column structure.
16 Church of Saint-Jean de Montmartre, Paris. Anatole de Baudot, 1904.



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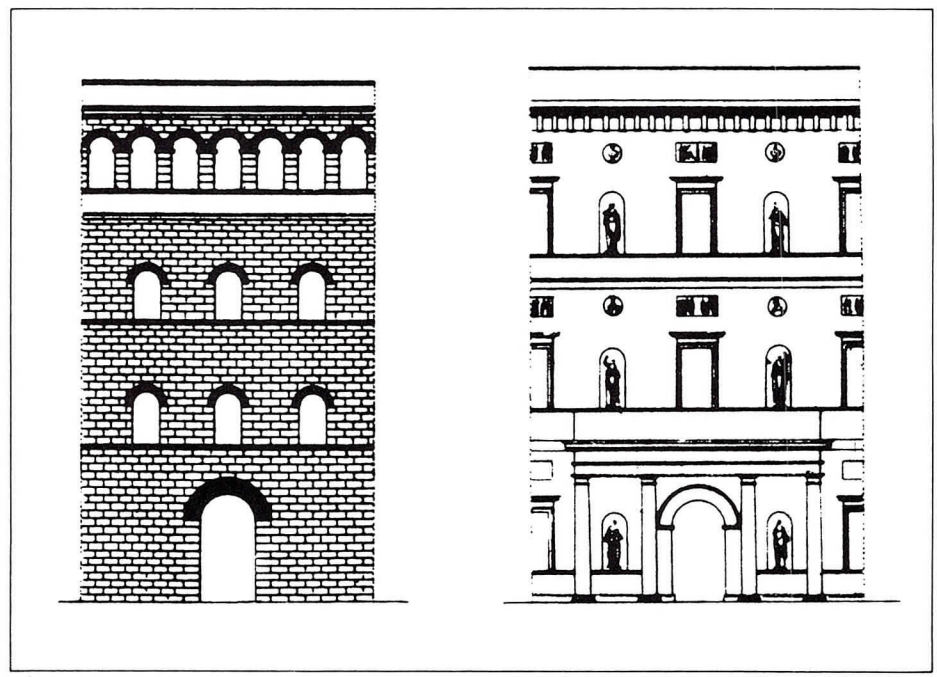

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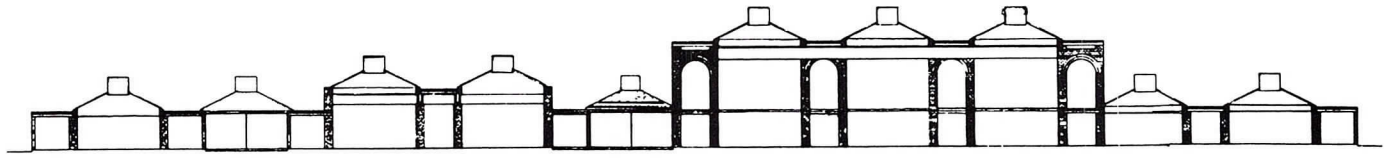

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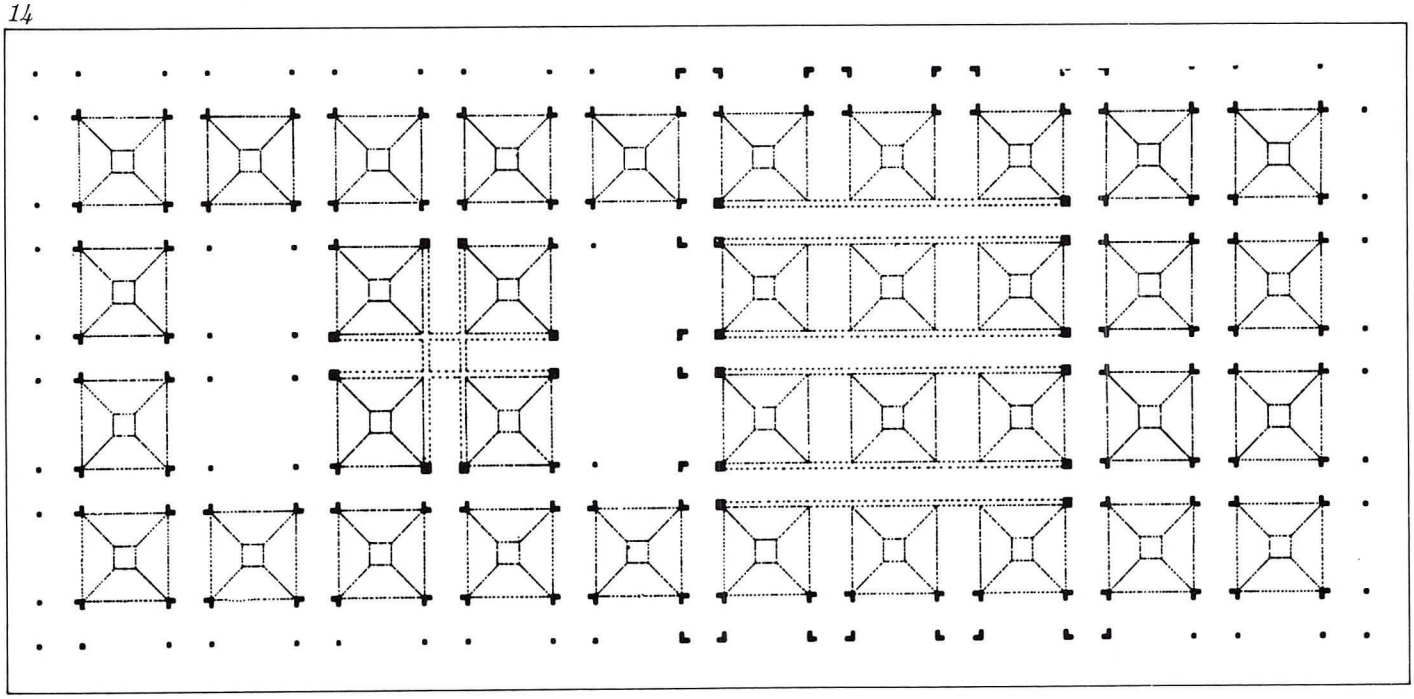

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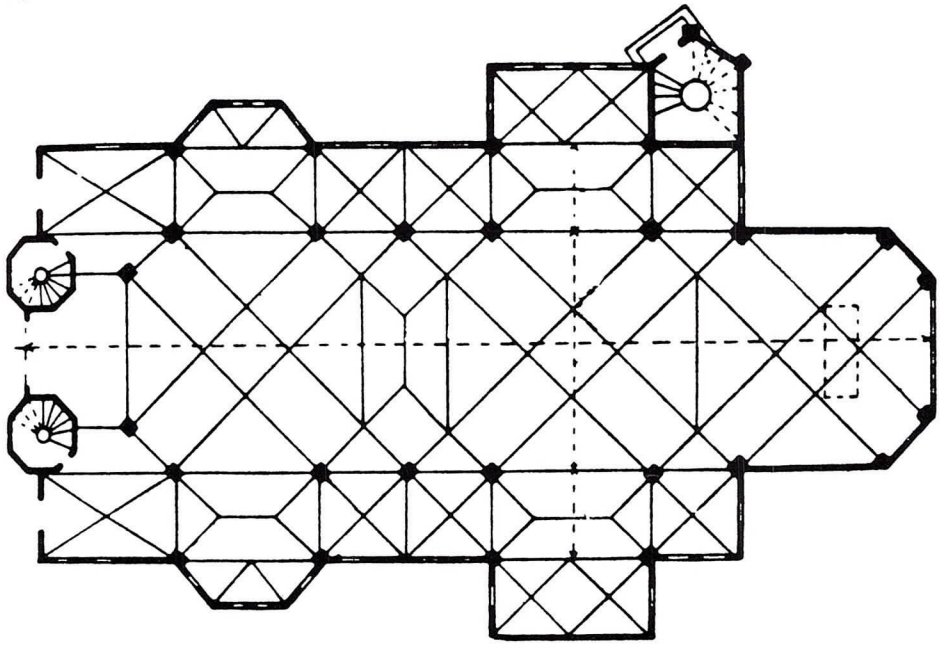

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have stemmed from the fact that he not only opposed classical form but that he also rejected the technical advantages of Neoclassical building technology, which for him meant reinforced concrete. Instead of the Hennebique system, universally available by 1896, De Baudot employed perforated brick and brick arches and pillars. These delicate filigree elements were held in place by a dense cement infill and a thin wire reinforcement, which penetrated the perforated brick fabric like ligaments. In other words, he invented and employed a system which could only result in the production of structurally taut and expressive elements, comparable to those found in Gothic culture. These elements could be perceived as being determined to an equal degree by gravity (i.e., natural force) and the process of fabrication. In analyzing the structure of St.-Jean de Montmartre, one is forced to conclude that something close to De Baudot's precepts was assumed by Kahn, although evidently Kahn did not feel it necessary to reject totally the advantages of reinforced concrete.

Louis Kahn and Structural Monumentality

Viollet-le-Duc must be held to account for Kahn's early preoccupation with Gothic structure and perhaps above all for his assimilation of the structural and aesthetic concepts of R. Buckminster Fuller. Fuller, somewhat like Viollet-le-Duc, clearly intended that a new architecture should be based exclusively on the principles of empirical science and the laws of nature; that is to say, he unconsciously assumed the challenge of Perrault in the most literal way possible. Without ever citing Viollet-le-Duc, Fuller seems to have been equally committed to the precept that "as to reasoning, we are able to distinguish sophistry from demonstration by verifying the conclusion experimentally and practically. This was the reason of those men in the Middle Ages, the builders of edifices which we in our days sometimes admire, but with which we are so little acquainted."[10] In this passage taken from the *Entretiens* of 1872, Viollet-le-Duc approvingly cites Roger Bacon for his advocacy of a system based upon *method*, *examination*, and *experiment*.

It is one of the ironies of modern architectural history that the second World War impulse toward monumentality, which arose in part out of the manifesto *Nine Points on Monumentality* (issued in 1943 by Sigfried Giedion, J. L. Sert, and Fernand Léger) should have brought Kahn to adopt a Baconian stance in his contribution to Paul Zucker's symposium on monumentality held in 1944, given under the misleading title of *New Architecture and City Planning.*[11] Kahn approached the problem of monumentality in an extremely unorthodox way. Above all he seems to have sensed that an authentic monumentality could only be achieved with elements whose tectonic authority was indisputable. Thus we find him writing, "Monumentality in architecture may be defined as a quality, a spiritual quality inherent in a structure which conveys the feeling of its eternity. . . ."[12] While referring in this context to the exemplar of the Parthenon, he nonetheless went on to place the burden of monumentality on the constituent structural elements. Thus in citing the Gothic cathedral he could write, "Our architectural monuments indicate a striving for structural perfection which has contributed in a great part to their impressiveness, clarity of form, and logical scale."[13]

Immediately afterward Kahn was to analyze the decadence of modern engineering in the following terms:

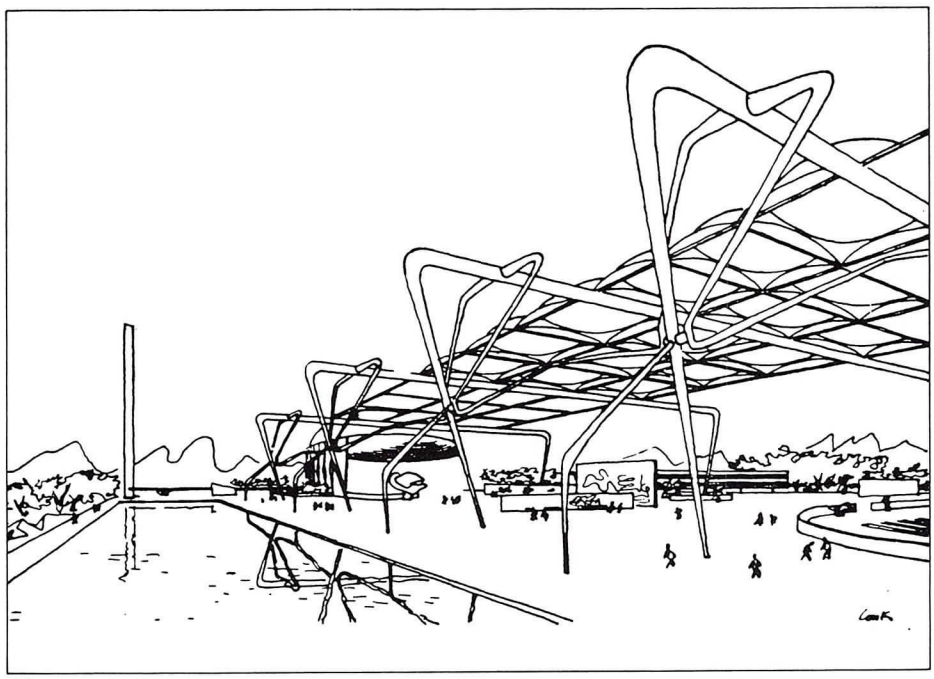
"The I beam is an engineering accomplishment deriving its shape from an analysis of the stresses involved in its use. . . . The shape adapted itself to the ease of rolling. . . .

"Safety factors were adopted to cover possible inconsistencies in the composition of the material of manufacture. Large-scale machinery and equipment needed in its fabrication led to standardization.

"The combination of safety factors (ignorance factor as one engineer termed it) and standardization narrowed the practice of engineering to the section of members from handbooks recommending sections much heavier than calculations would require and further limited the field of engineering expression stifling the creation of the more graceful forms which the stress diagrams indicated."[14]

At this juncture Kahn was to follow Cret almost to the letter in recommending that the architect and engineer should collaborate in the evolution of authentic forms,

19 Design for exhibition in Philadelphia. Louis Kahn, 1944. Welded tubular steel space frame and glass domes.
20 Comparison between Auguste Choisy's analysis of Beauvais Cathedral and Kahn's 1944 esquisse *for a modern cathedral out of welded tubular steel.*
21 Analysis of Beauvais Cathedral from Choisy's Histoire de l'Architecture.



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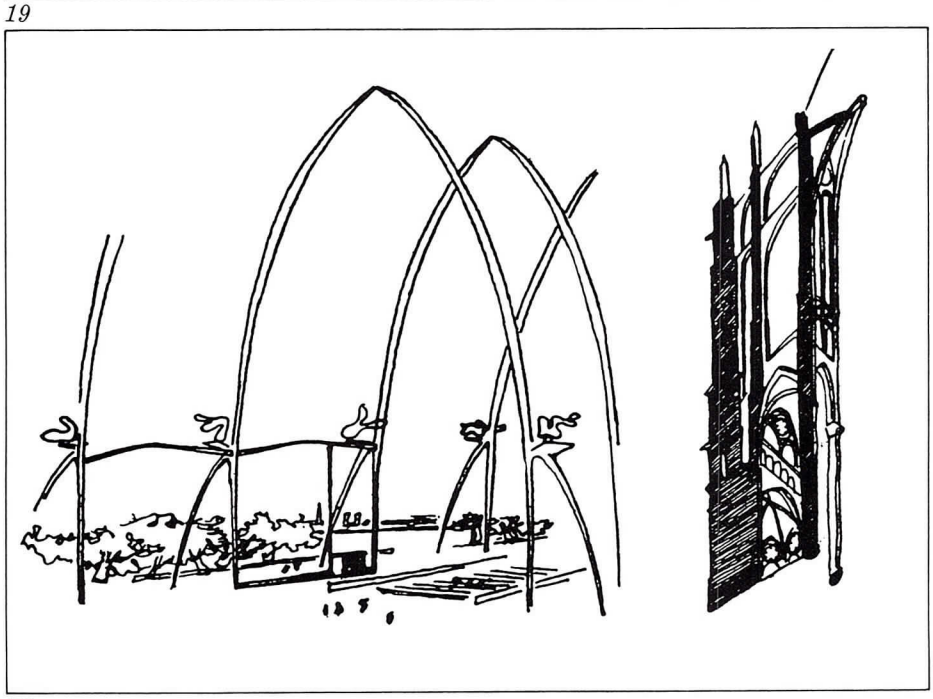

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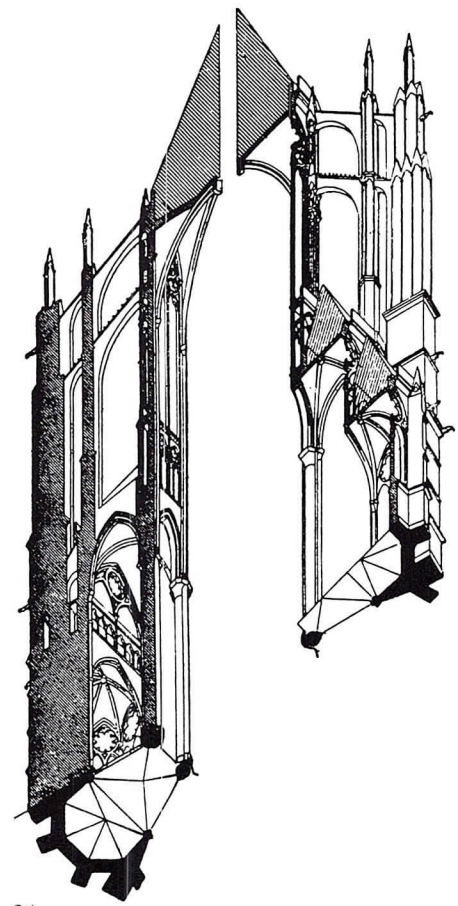

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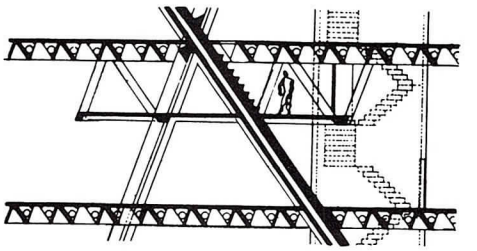

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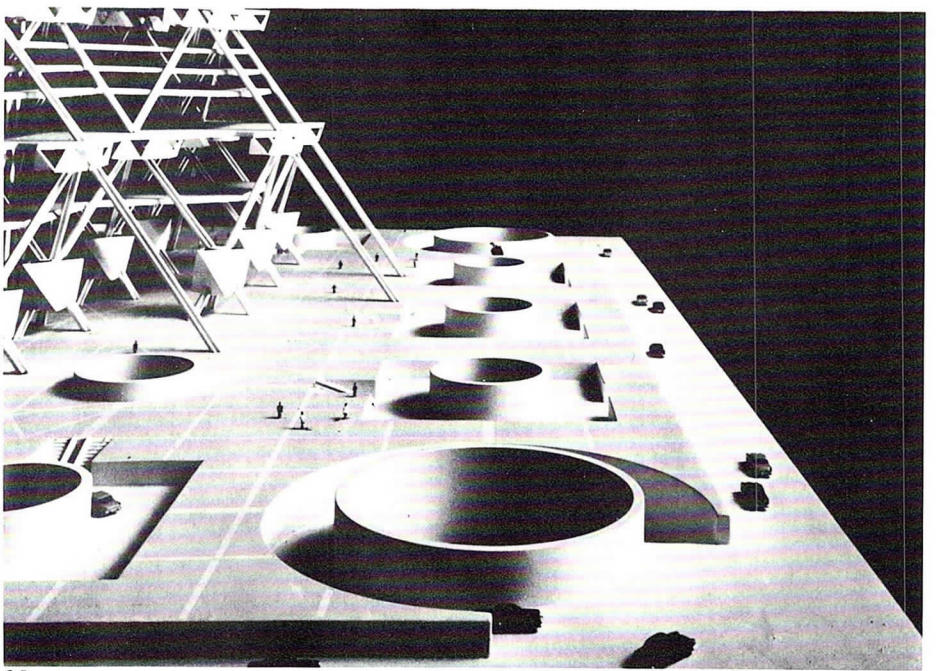
22 Design for an office tower for the center of Philadelphia, Penn. Louis Kahn, 1952–1957. Section of triangular capital unit. "Now we can build with hollow stones."
23 Design for an office tower for the center of Philadelphia, Penn. Louis Kahn, 1952–1957. View of the plaza.
24 Design for an office tower for the center of Philadelphia, Penn. Louis Kahn, 1952–1957. Detail plan of triangular capital unit.
25 Design for an office tower for the center of Philadelphia, Penn. Louis Kahn, 1952–1957. Section through tower.



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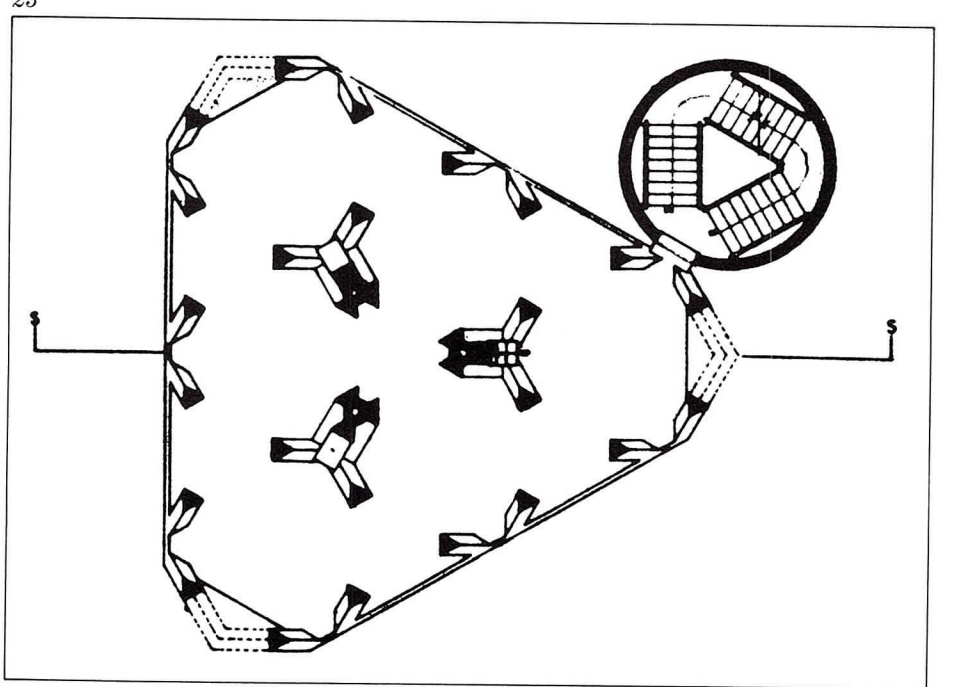

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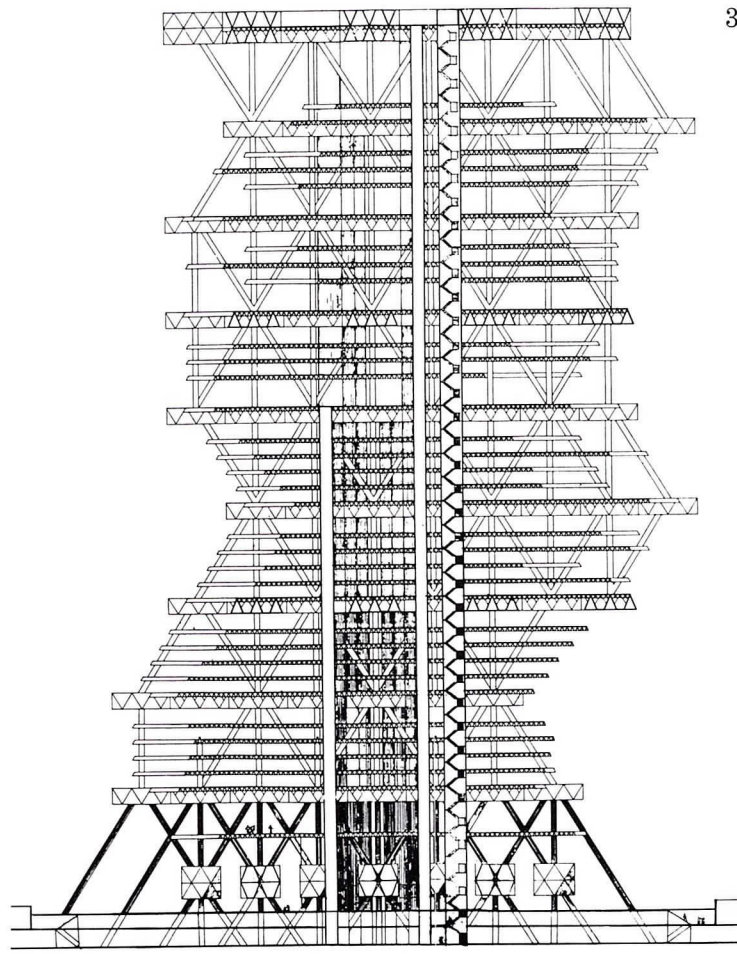
which were to be derived empirically from the scientific principles of statics rather than from the mere convenience of production and fabrication.[15] On the other hand, he was again to follow Cret in taking his distance from any simpleminded determinism. Thus he categorically denied that monumentality can be adduced scientifically or that it should be the only aim of the architectural endeavor.

Kahn was to clarify his basic thesis in a sequence of illustrations, the first of which was an *esquisse* derived from Auguste Choisy's rendering of the structure of Beauvais cathedral (figs. 20, 21). This was followed by a series of giant space frames, projected by Kahn as being built out of welded tubular steel (fig. 19). The text explicating these illustrations condensed an attitude which was to remain with Kahn throughout the rest of his career. "Beauvais cathedral needed the steel we have. It needed the knowledge we have. Glass would have revealed the sky and become a part of the enclosed space framed by an interplay of exposed tubular ribs, plates and columns of a stainless metal formed true and faired into a continuous flow of lines expressive of their stress patterns. Each member would have been welded to the next to create a continuous structural unity worthy of being exposed because its engineering gives no resistance to the laws of beauty having its own aesthetic life."[16]



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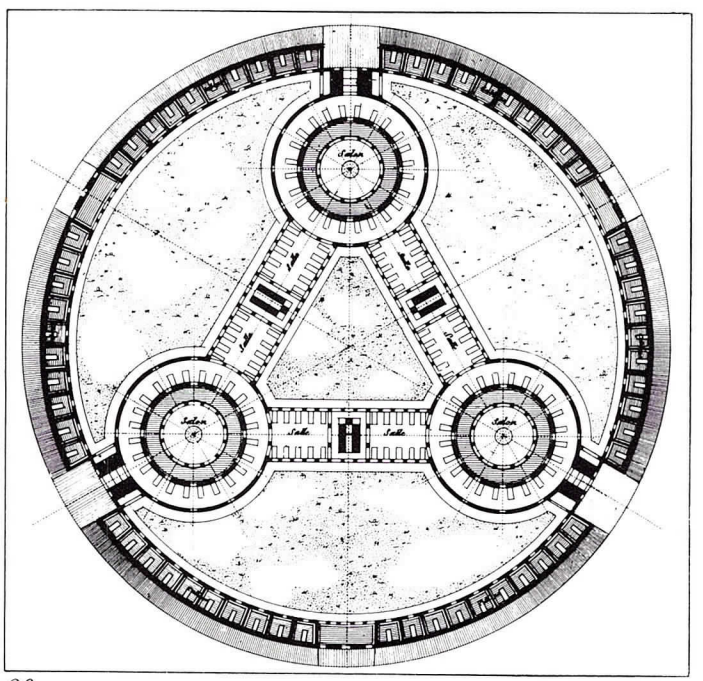
While these concluding words might have even come from Perrault, Kahn's attitude to structure in this illuminating passage is equally close to both Viollet-le-Duc and Fuller. Both men were patently a decisive influence in the remarkable space-frame project for Philadelphia City Hall, which Kahn designed in collaboration with Ann Tyng in 1954 (figs. 22–25). On this occasion he wrote in terms which the French master of Neo-Gothic theory would have found decidedly sympathetic: "In Gothic times, architects built in solid stones. Now we can build with hollow stones. The spaces defined by the members of a structure are as important as the members. These spaces range in scale from the voids of an insulation panel, voids for air, lighting and heat to circulate, to spaces big enough to walk through or live in. The desire to express voids positively in the



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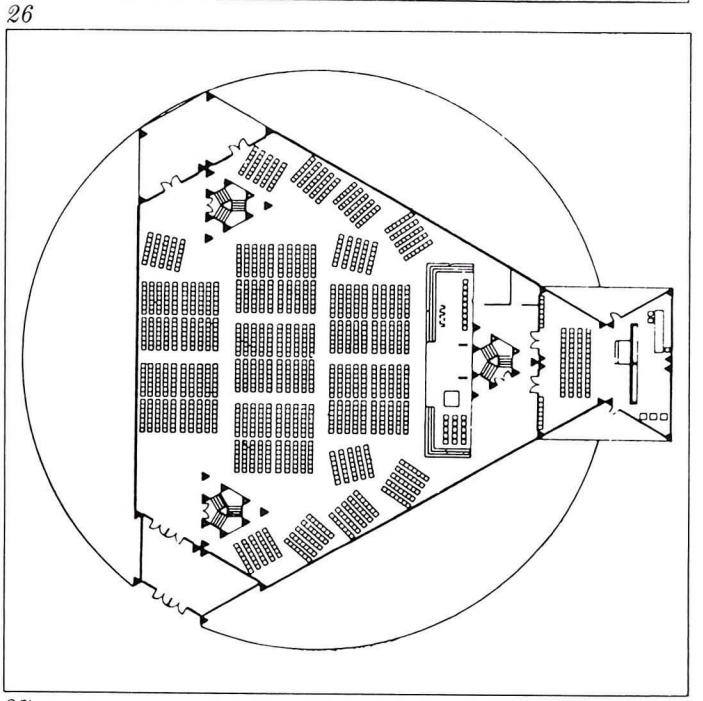

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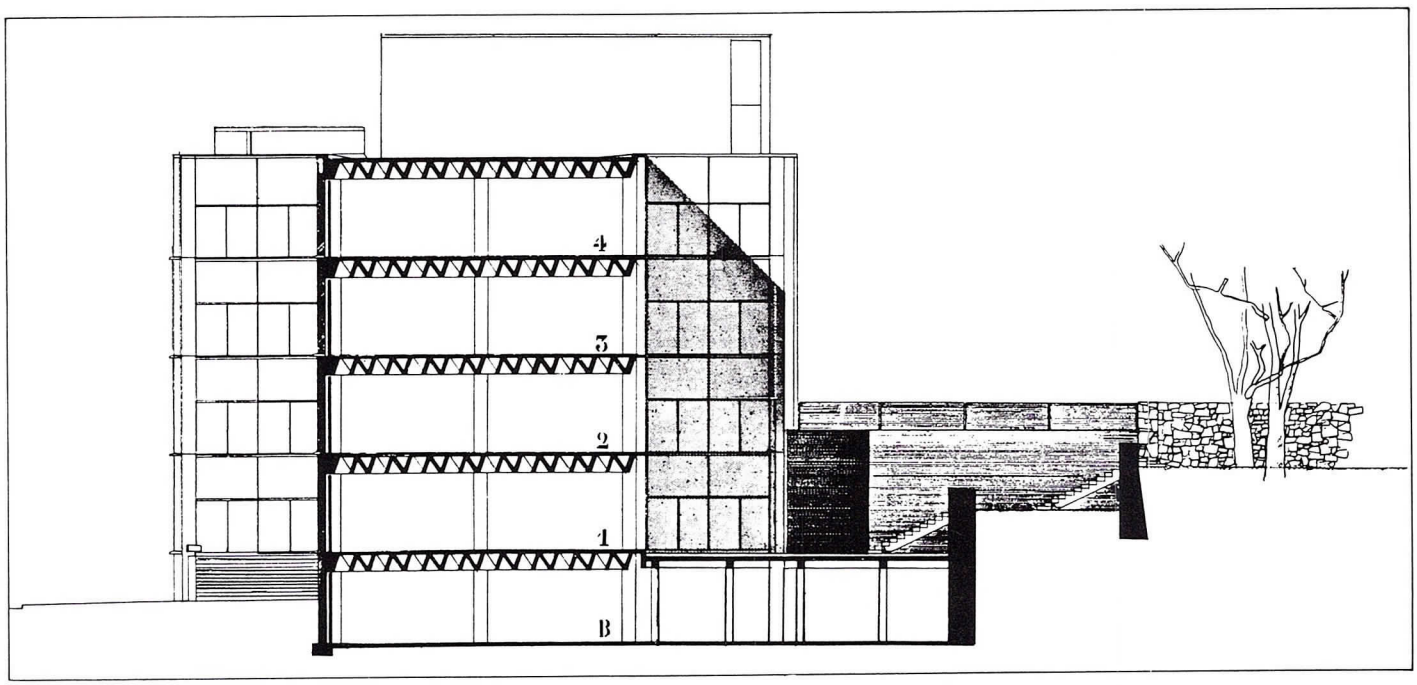
design of structure is evidenced by the growing interest and work in the development of the space frames. The forms being experimented with come from a closer knowledge of nature and the outgrowth of the constant search for order. Design habits leading to the concealment of structure have no place in this implied order. Such habits retard the development of art. *I believe* that in architecture, as in all art, the artist instinctively keeps the marks which reveal how a thing was done."[17]

There is yet a third Frenchman whose influence lies behind Kahn's work of the mid-fifties. His name is Robert Le Ricolais, and while he never collaborated with Kahn in his capacity as an engineer, he remained nonetheless a close associate of Kahn's throughout the latter's tenure as professor of the master's class in the architecture school of the University of Pennsylvania. Like Kahn Le Ricolais was a structural visionary whose experimental work was close in certain respects to the position expounded by Fuller.

And yet despite his evident affinity with the structural determination of Fuller and Le Ricolais, Kahn clearly believed that a significant architectural culture could not be predicated on this alone, and hence, as Marcello Angrisani has shown in his essay "Louis Kahn and History,"[18] Kahn welcomed the reemergence of the architectural typologies of the French Enlightenment as these were restored to public attention by Emil Kaufmann's *Three Revolutionary Architects: Boullée, Ledoux, and Lequeu,* conveniently published in Philadelphia in 1952 by the American Philosophical Society.[19] Angrisani argues that three projects from Kahn's hand in the mid-fifties reveal immediately the extent to which he had been influenced by the Kaufmann publication. These projects are the Yale Art Gallery (1951–1953) (figs. 28, 29), the Jewish Community Center Bath House at Trenton (1954) (figs. 30, 31), and the Adath Jeshurun Synagogue project for Elkins Park (1954) (fig. 27). Of the last of these projects Angrisani observes, "The planimetric image of the synagogue is fundamentally embodied by the inscription of an equilateral triangle in a circle . . . and in the two other projects the triangle is an unusual form which draws attention to

26 Project for an inn, St.-Marceau. Claude-Nicolas Ledoux, c. 1785. Plan.
27 Adath Jeshurun Synagogue, Elkins Park, Penn. Louis Kahn, 1954. Second floor plan.

28 Yale Art Gallery, New Haven, Conn. Louis Kahn, 1951–1953. Cross section through gallery and garden.
29 Yale Art Gallery, New Haven, Conn. Louis Kahn, 1951–1953. Reflected ceiling plan, final structural concept.



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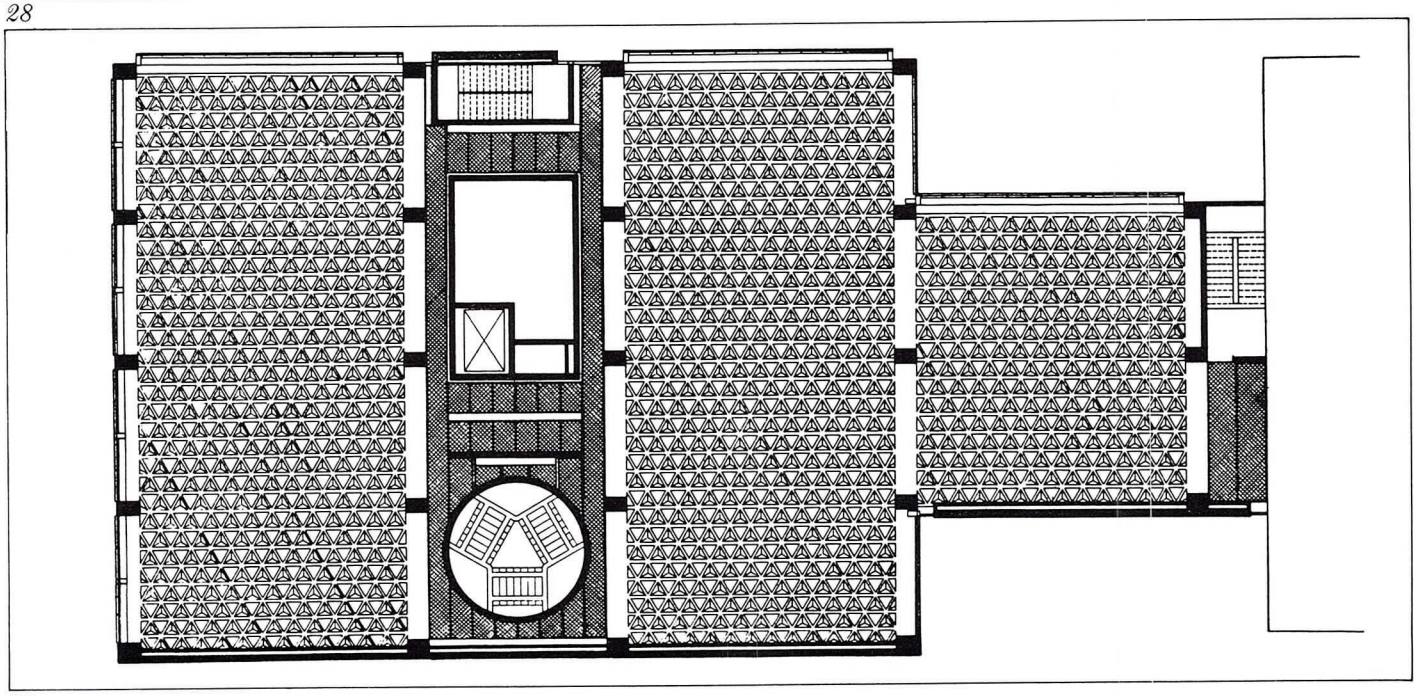

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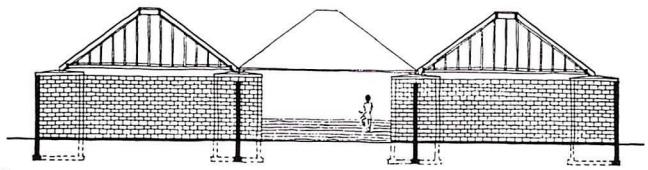

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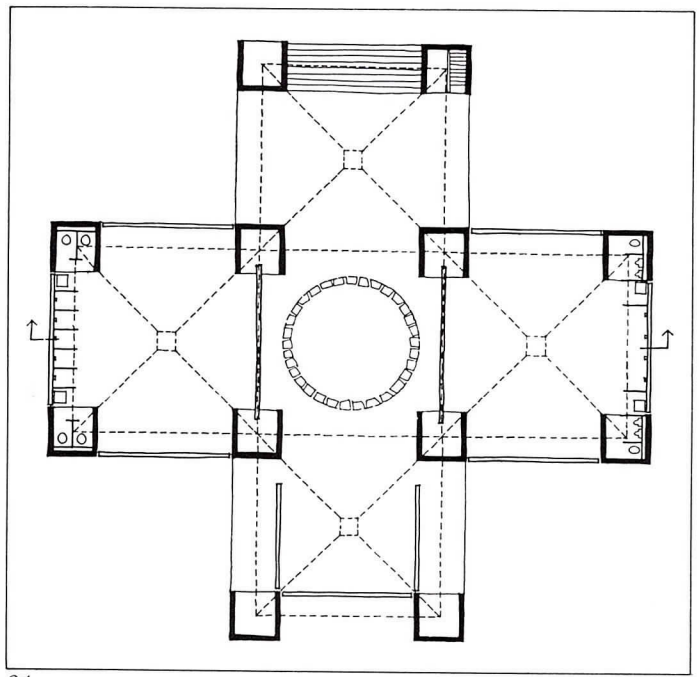

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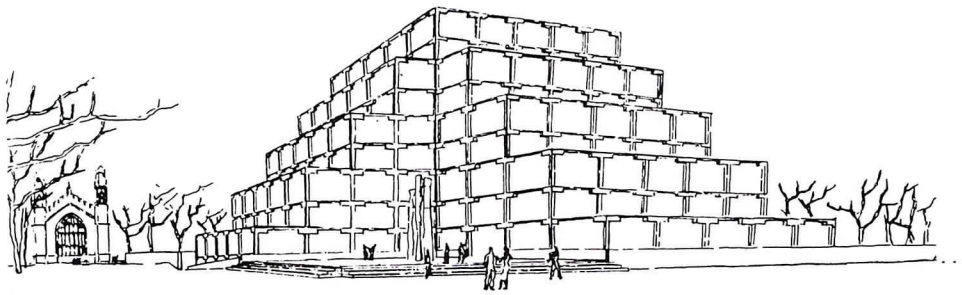
30 Jewish Community Center Bath House, Trenton, N.J. Louis Kahn, 1955–1956. Section through atrium and dressing rooms.
31 Jewish Community Center Bath House, Trenton, N.J. Louis Kahn, 1955–1956. First floor plan.

itself by virtue of the fact that it is largely absent from the figurative conceptions of modern architecture. It is to be found in the entrance hall of Kahn's Samuel Radbill hospital of 1953 . . . and in the art gallery in one of the two interior staircases, in a cylindrical cage, which encloses three equilateral stair runs. But in these cases the geometric figure does not generate the plan of the entire building, as opposed to the Elkins Park synagogue and the project by C. N. Ledoux for the Hotel Saint-Marceau" (fig. 26).[20]

Some idea of the method adopted by Ledoux and Kahn may be gained from Laugier's *Essai sur l'architecture*, where he writes, "No doubt at all, it is easy to erect over the plan of an equilateral triangle a church which will look most attractive. This is how I would set about it. I inscribe in the triangle a circle that gives me the outline of a dome which I let rise from the ground. At the three angles I construct three rotundas which give me three sanctuaries where I place three altars. In the center of each of the three facades I make an opening for a door, which produces three entrances each having an altar facing them."[21] On the typological and liturgical consequences of such a design Laugier is at pains to refrain from comment.

It is clear that the Trenton Bath House and the Elkins Park Synagogue were the first of Kahn's projects to display in a striking way that functionally arbitrary play with geometrically absolute form common to both Kahn and Ledoux. In both instances it is as though we are witnessing a procedure repeated through a long trajectory of history in which the initial Cartesian undermining of antique form by Perrault could only be overcome by adducing the positive beauty of Euclidean form. Aside from his 1956 project for a pyramidal library building for Washington University (figs. 32, 33), the Trenton Bath House was surely the most totally *illuministe* work that Kahn was ever to realize. This much is evident from the formal similarity linking this modest shelter to both Ledoux's cannon foundry and Boullée's numerous proposals for pyramidal cenotaphs (fig. 34). A comparable Ledolcian connection is also present in Kahn's initial project for the First Unitarian Church in Rochester of 1959 (figs. 35, 37),



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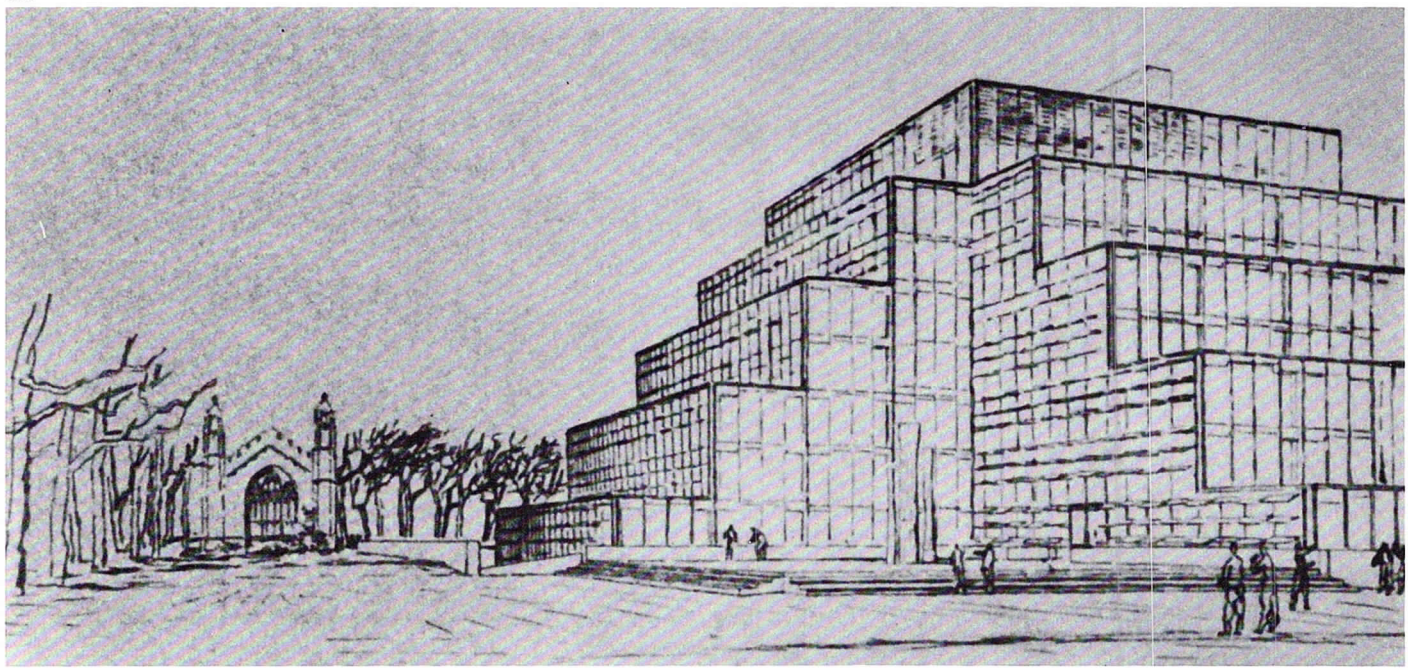

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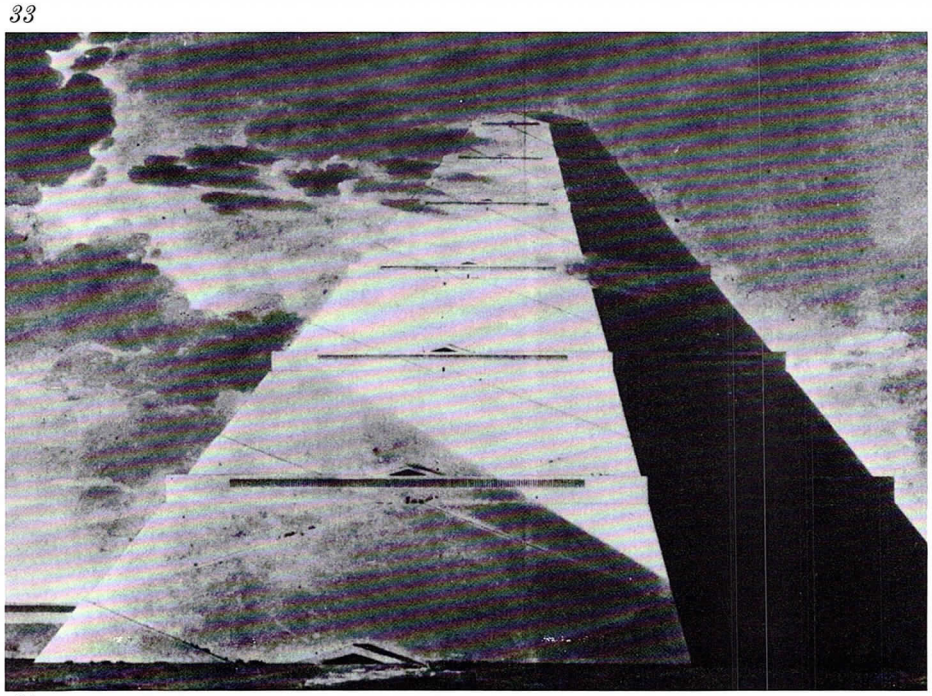

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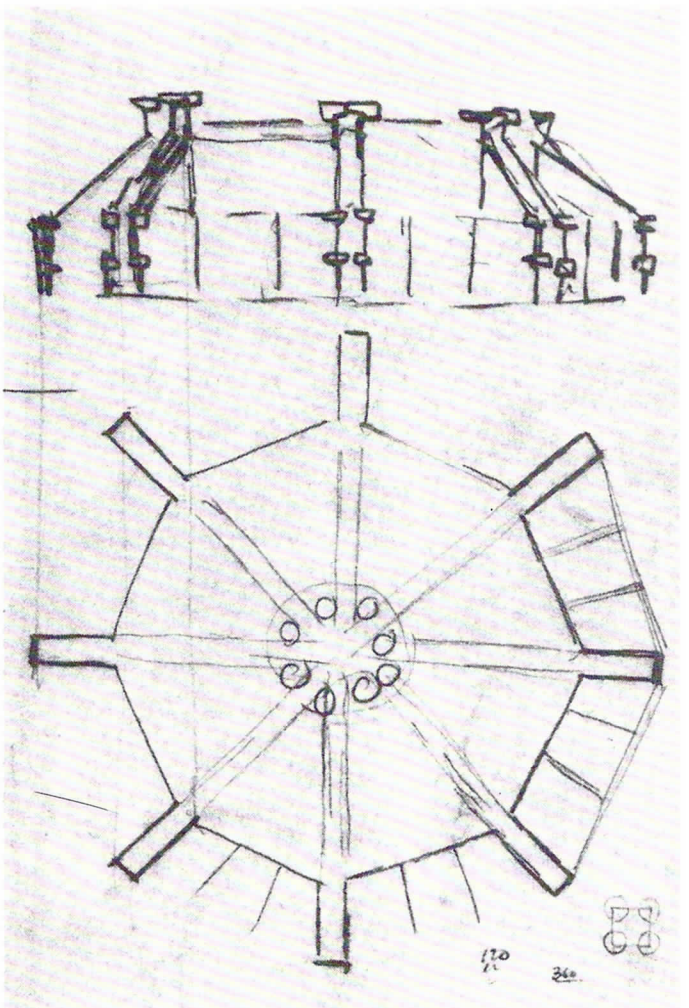
32, 33 Project for Washington University Library, St. Louis, Missouri. Louis Kahn, 1956. Perspective drawings showing features of the building.
34 Project for a pyramidal cenotaph. Etienne-Louis Boullée, c.1785.

35 Unitarian Church, Rochester, N.Y. Louis Kahn, 1959–1967. Early sketches showing effort to create an architecture predicated equally on construction and Platonic form.
36 De Witt House. Claude-Nicolas Ledoux, c.1780.

37 Unitarian Church, Rochester, N.Y. Louis Kahn, 1959–1967. First floor plan, 1959 version. Note transformation of early sketch into a parti *combining the square and the dodecahedron.*



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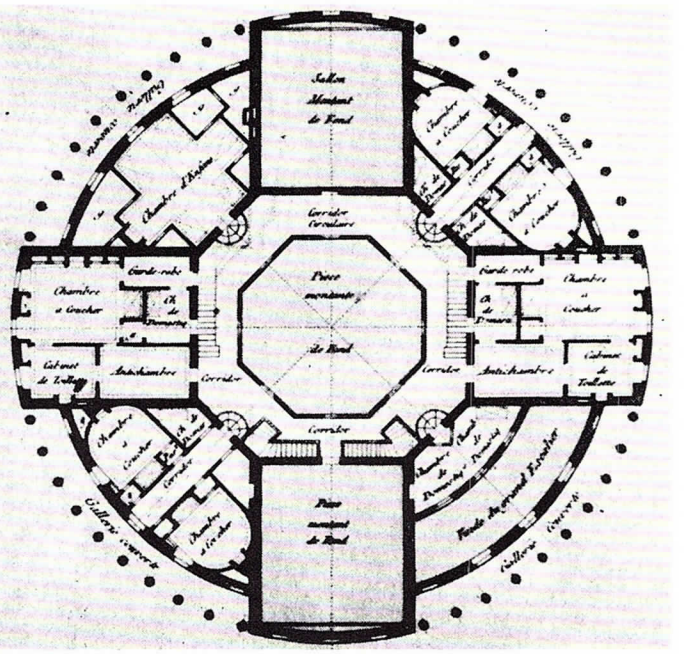

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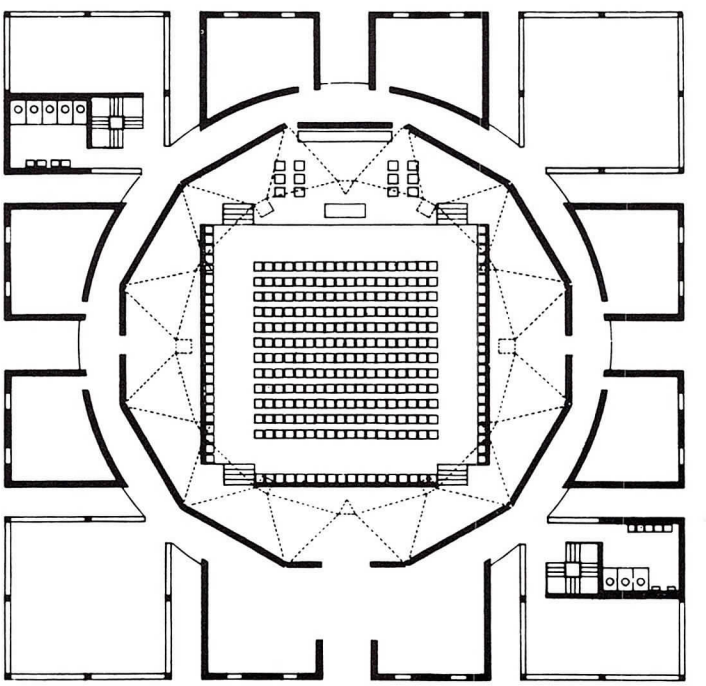

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which was evidently based on the Enlightenment game of enclosing a circle within a square, only to enclose it in another square in its turn. Angrisani cites in this connection Ledoux's De Witt house project, which was prominently illustrated in the Kaufmann study of 1952 (fig. 36).

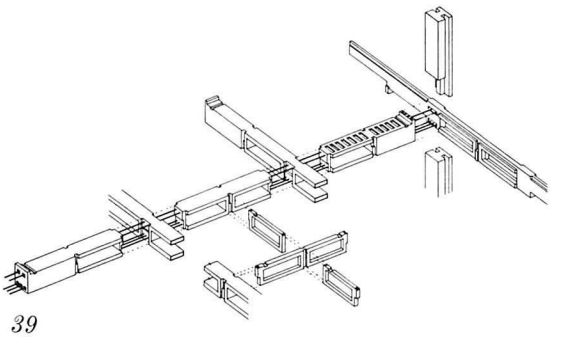
However, none of this should be regarded as being evidence of any direct imitation of Ledoux, above all because in all of these works Kahn seems to have depended if not on De Baudot then certainly on Viollet-le-Duc for the methods according to which he determined the structural elements that would embody and enrich these lucid but arbitrary geometrical schemes. Kahn set about reinterpreting the Ledolcian influence in structurally rationalist terms. At the same time, as Angrisani points out, Kahn took the "revolutionary" rejection of the classical elements and the Baroque principle of *concatenation* as archetypal points of departure for his own work. What for Ledoux and Boullée had been a daring rejection of the teachings of J. F. Blondel, by virtue of predicting monumental and institutional form on relatively empty and non-hierarchical Platonic permutations, was for Kahn a necessary stand against the *ahistorical* "void" of the modern epoch.

It was this that separated Kahn from the vulgar historicizing and monumental rhetoric of his American contemporaries, that is, from the expression of the New Monumentality as this appeared in the work of Eero Saarinen, Philip Johnson, John Johansen, and even Wallace Harrison. For Kahn, "historicist" monumentality meant an orientation toward the underlying structure of traditional forms. Thus he remained committed to transforming these forms rather than reducing them to the status of being mere references which made rather obvious allusions to historical precedents, and it may well be that it is this subtle distinction which accounts for his eclipse from current discourse.

Both Kahn and Ledoux were brought to confront a situation in which not only had the traditional institutions been largely overrun by unprecedented societal structures, but also the rules for representing such monumental institutions had lost their "natural" authority. As Angrisani remarks, "Ledoux's simple, geometrical forms were able to assume the social and political problem providing his egalitarian conception became transcedent and was able to establish itself as a symbol."[22]

It must be admitted, of course, that the French Enlightenment was by no means the only source of Kahn's characteristic forms. Above all cognizance has to be taken of the primary importance of Frank Lloyd Wright, who clearly remained a distant but seminal influence on both the First Unitarian Church designed for Rochester and the Richards Laboratories built for the University of Pennsylvania in 1960 (figs. 38–40). It is obvious that Wright's Unity Temple and Larkin Building (fig. 41), both completed in 1904, are fundamental points of departure for Kahn's determination of these early works. Rochester seemingly takes its square theme from the Unity Temple, while the shaft/service structure adopted in the case of the Larkin Building is patently the precedent for formulating the Richards Laboratories as a series of "served" laboratory towers suspended within a "servant" latticework of structural piers and masonry service ducts. At this date Kahn had yet to fully embrace the Wrightian strategy of rendering all civic institutions as introspective public realms which, housed in massive structural piers and ducts, establish a more or less hermetic interior, one which is pierced only by architectonic slots for the subtle filtration of both space and light. But the precedent for, say, the Salk Institute or for the library at the Phillips Exeter Academy or for the Hurva Synagogue (fig. 42) is patently already there in the Larkin Building, and the case can be made, given Wright's evident facility with Beaux-Arts elemental methods (the Durandesque tartan grid, etc.), that this introspective paradigm also ultimately came, at least in part, from the same source—namely the Neoclassicists of the Enlightenment. It has surely been noted before that Ledoux and Boullée also projected their public institutions as massive introspective forms.

However, that which Kahn seems to have taken from the Enlightenment—and which Wright strictly left alone—was the possibility of deconstructing classical Roman ele-



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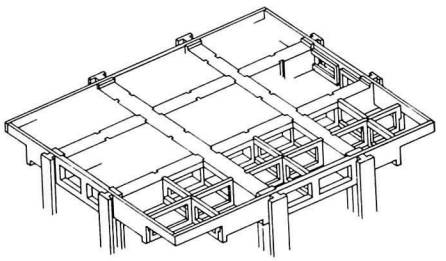

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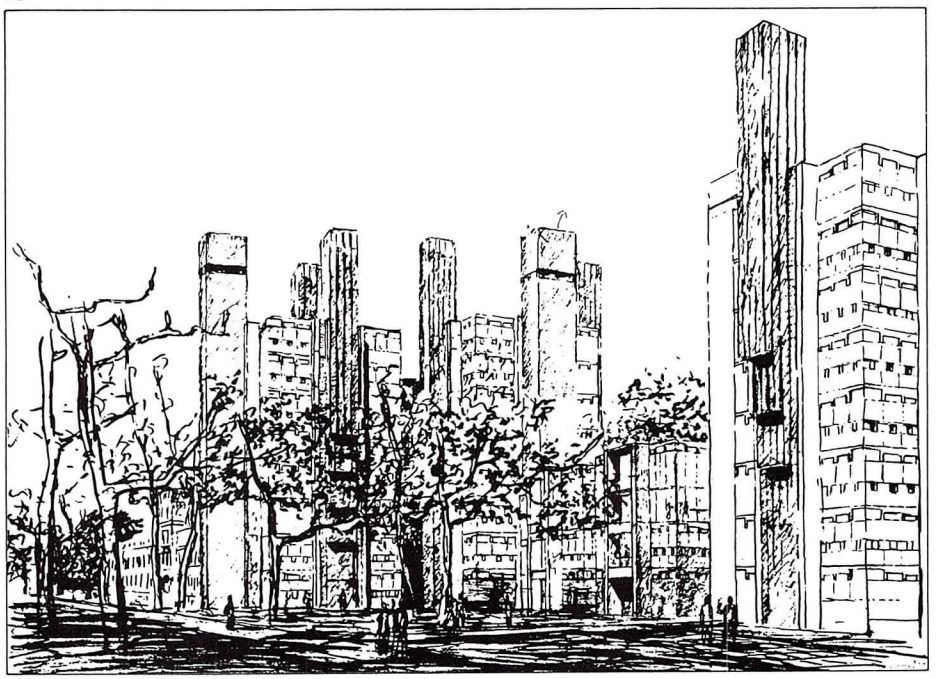

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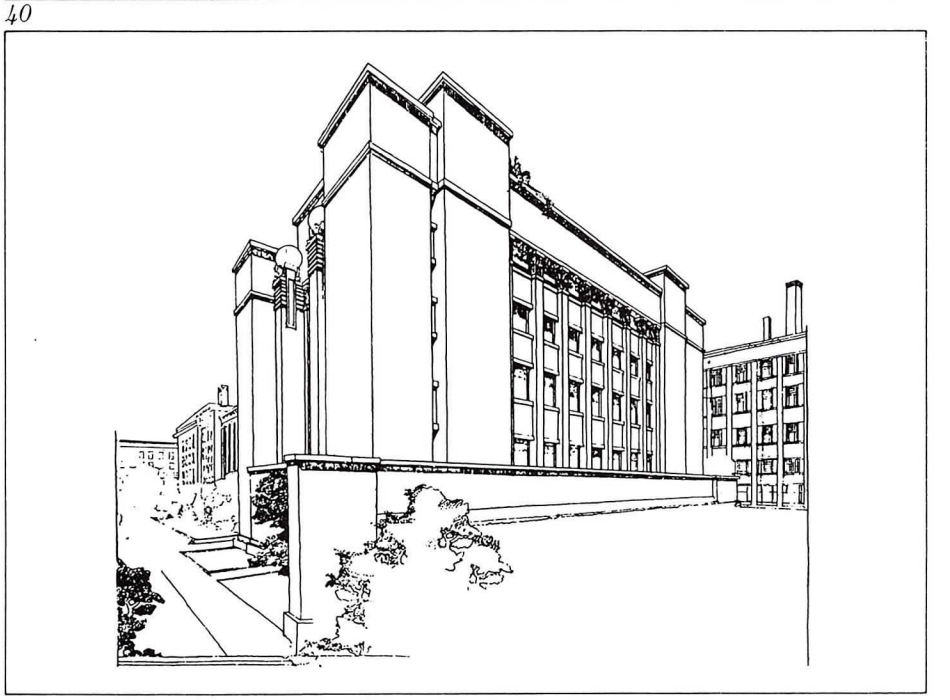

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38, 39 Richards Research Buildings, Philadelphia, Penn. Louis Kahn, 1957–1964. Isometrics of assembly of pre-cast concrete members of floor system.
40 Perspective sketch, from southwest.
41 Larkin Building, Buffalo, N.Y. Frank Lloyd Wright, 1904. Elevation.

ments to such a point that they became nothing more than thin tensile screens (empty shells of their origins, so to speak), devices which could be used to simulate the presence of an absent mass and which could readily serve to engender a series of buildings within buildings. These manneristic possibilities were perhaps never more evident than in the empty arch screens employed by Ledoux to embody his *Maison destinée à deux artistes* (fig. 45), a ploy which Kahn emulated with far greater subtlety in his community center projected for La Jolla (fig. 46) or in many of his works which were finally built in Bangladesh (fig. 44).

And yet unlike Ledoux, Kahn invariably rendered these empty screens as Structural Rationalist episodes whose authority resided in the materiality of their tectonic syntax. On the basis of elements such as these Kahn seems to have aspired to an "order in design" which would rise above the decorative and eclectic historicism of his contemporaries.

The other Enlightenment figure who unquestionably had a lasting impact on Kahn was Piranesi. As Vincent Scully points out, Piranesi's map of Rome (fig. 47) was accorded a place of honor above Kahn's desk throughout the entirety of his mature career, and it seems that Piranesi was the essential catalyst which enabled Kahn to synthesize two otherwise irreconcilable aspects of his art: on the one hand, his constant preoccupation with the technical and tectonic authority of the constituent elements from which building had to be compounded—the ducts and piers of service and support (figs. 43, 49); on the other, the capacity to combine and recombine the ruined fragments of a lost heroic past—ruined both by time and by the delirium of imagination—and to posit these fragments, recomposed *en miettes*, as viable models for a disjunctive future (fig. 48).

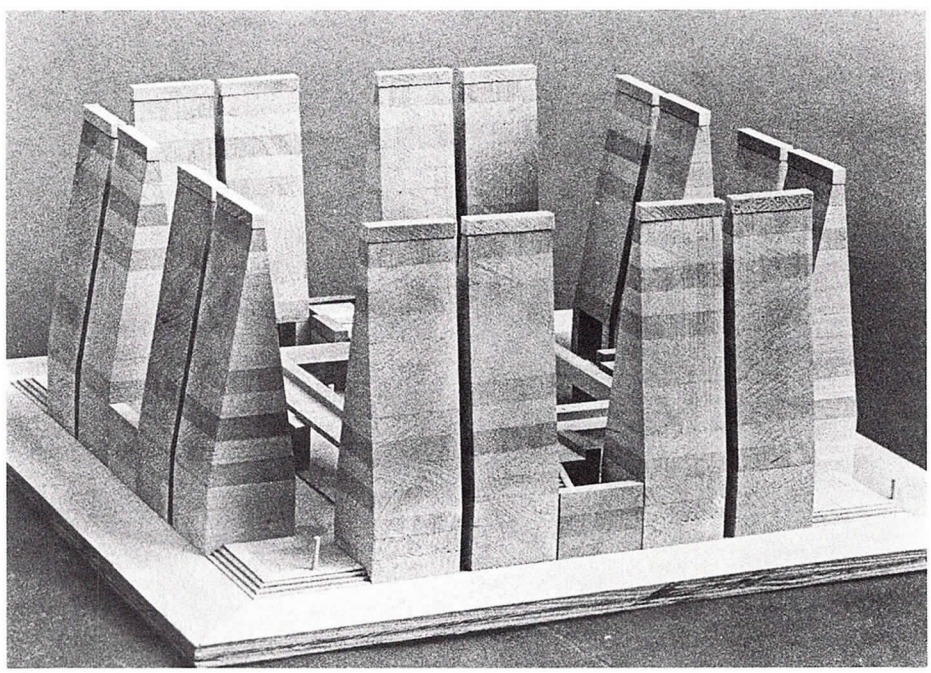
Thus Kahn's work presents us with two complementary yet utterly opposed principles. The first is categorically anti-progressive and asserts the presence of a collective abstract architectural memory in which all valid compositional types are eternally present in their disjunctive purity. The second principle is vehemently progressive and pursues the renovation of architectural form on the basis of advanced technique. It seems that Kahn believed that this second principle, as it responded to new tasks and uses, would be able to lead, when combined with the first, to an appropriate architectural expression, resynthesizing fresh poetic and institutional values in terms of concrete form.

In the last analysis these two principles seem to correspond exactly to Kahn's distinction between *Form* and *Order*, as Francesco Tentori was to point out in his essay "Order and Form in the Work of Louis Kahn." Kahn himself made the "progressive-tectonic" principle explicit when he wrote that "form comes from the system of construction and the structural elements inherent in them."[23] Order, on the other hand, he appears to have envisaged as the institutional matrix by which the overall pattern of the work comes into being.[24] In some instances this order could be typologically determined, as in the case of the Hurva Synagogue or the Rochester Church. In other cases Kahn resorted to geometrical permutations reminiscent of the compositional strategies of French Neoclassicism.

Apart from these multiple links to the French Rational line, there remains in all this the perplexing question as to why this unexpected rejection of the functionalist paradigm should make its most abrupt appearance in the United States rather than elsewhere and the related issue as to why it should be formulated by Kahn in terms of the monumentalization of structure.

It is altogether easier to tackle the second question rather than the first and to speculate as to the reason that Kahn predicated his notion of monumentality in terms of structural form. Clearly Kahn sought to compile his buildings out of well-defined constituent elements whose tectonic authority would be unimpeachable and whose phenomenological presence would be equal to the archetypal building forms of the antique world—to the athletic massiveness of the Roman arch and to the sublimely tapered cylindricality of the Doric column. At the same time, as a post-Cartesian, Kahn sought to reveal these elements

42 Hurva Synagogue, Jerusalem. Louis Kahn, 1968–1974. View of model with inner building removed.
43 Salk Institute Laboratory Buildings, La Jolla, California. Louis Kahn, 1959–1965. Typical cross sections through box girder and laboratory, second version, showing interstitial floor construction.



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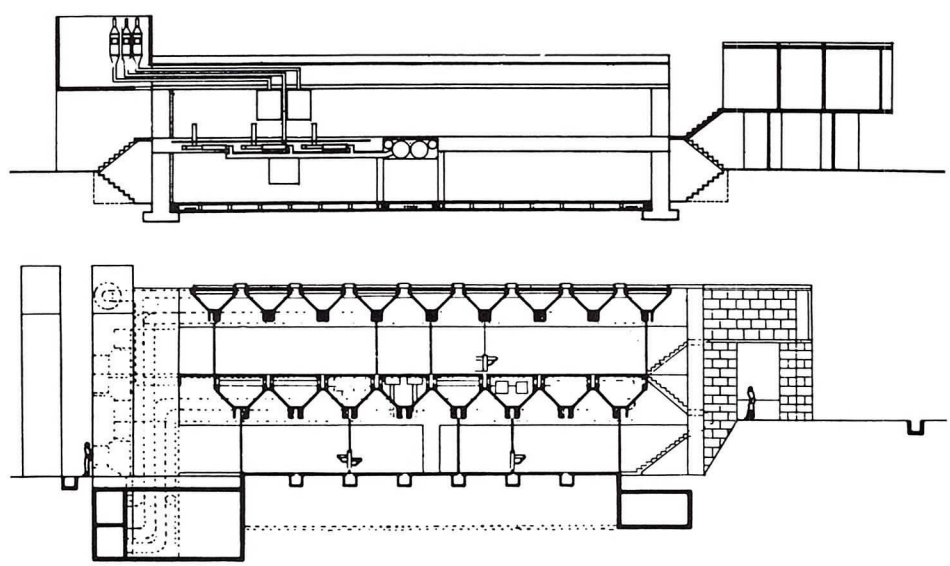

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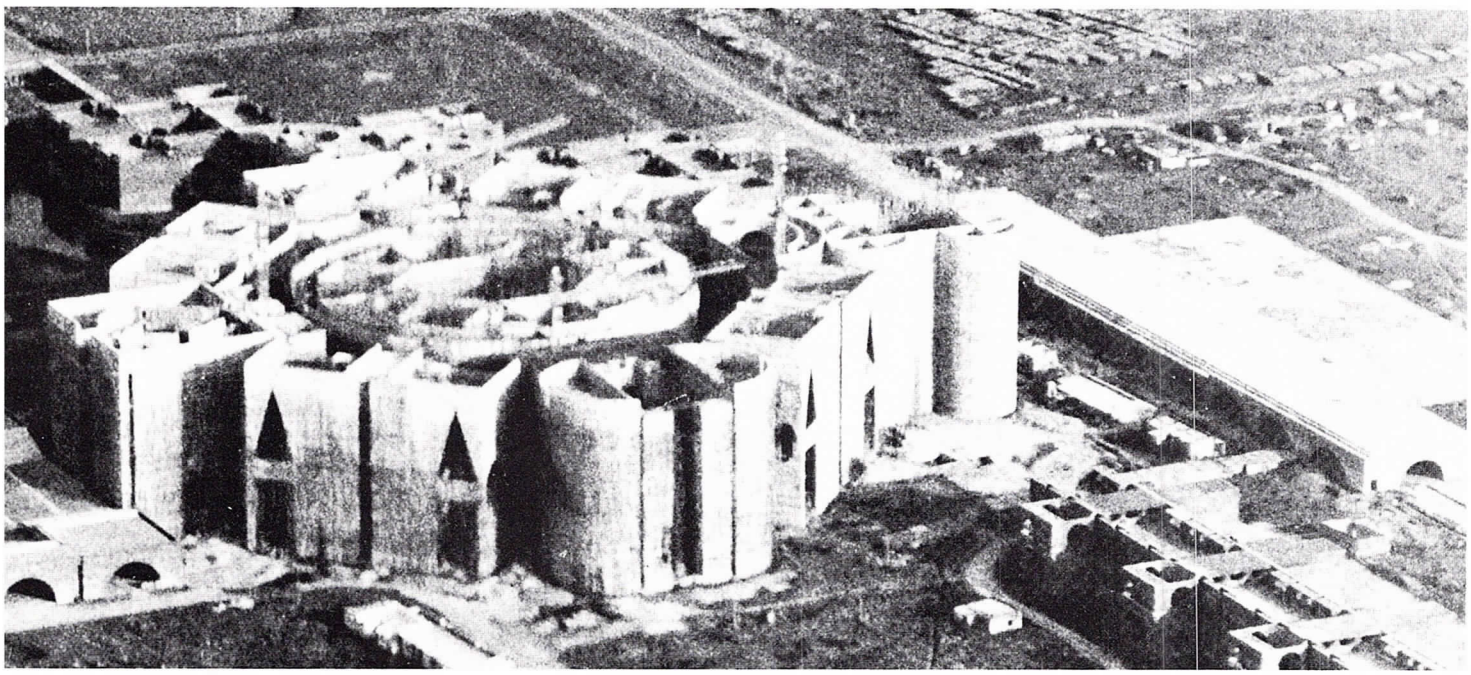
44 "Banglanagar," capital complex of Dacca, Bangladesh. Louis Kahn, 1962–1974. Aerial view of the assembly under construction.

45 Maison destinée à deux artistes, Ville Idéale de Chaux, Arc-et-Senans. Claude-Nicolas Ledoux, c.1785.

46 Salk Institute Community Center, La Jolla, California. Louis Kahn, 1959–1965. Partial plan and elevation of lecture hall.



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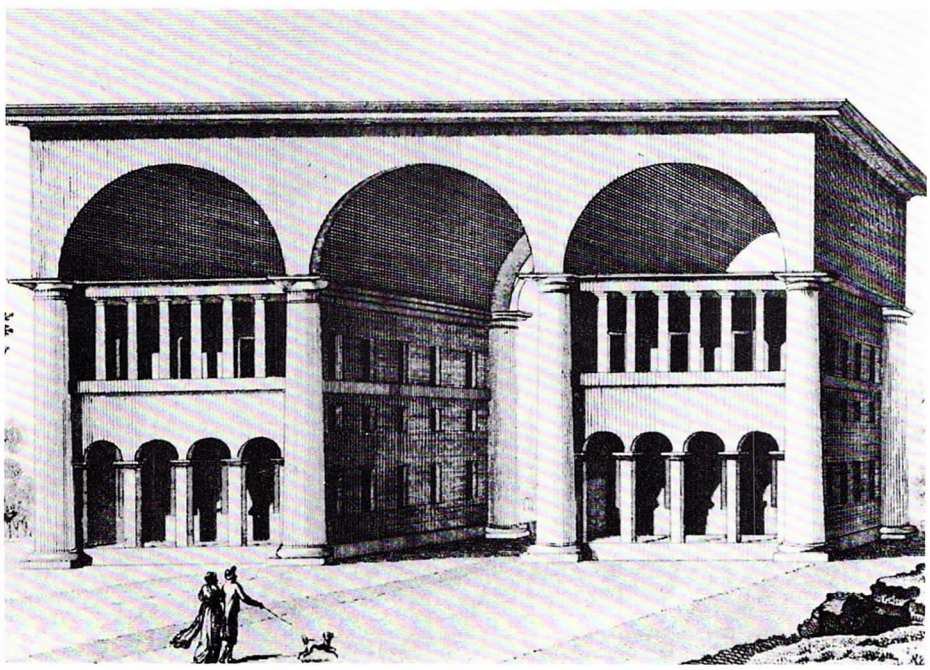

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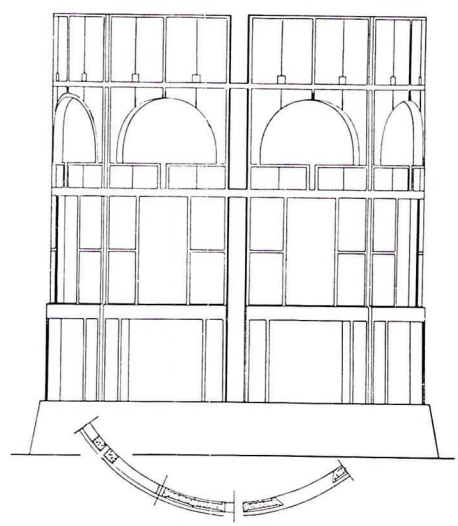

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47 Imaginary scheme for Campo Martii, Rome. G.B. Piranesi, c.1762.
48 Plan for Midtown Civic Center Forum, Philadelphia, Penn. Louis Kahn, 1956–1957. Perspective sketch, north view. It is this kind of "archaism" which isolated Kahn from the empirical planners of his time.
49 Yale Art Gallery, New Haven, Conn. Louis Kahn, 1951–1953. Air distribution system: 1) oak flooring, 2) air outlet, 3) terrazzo, 4) floor slab, 5) framing at window, 6) acoustical plank, 7) bridging, 8) continuous air distribution duct, 9) electrical raceway for adjustable lighting units.

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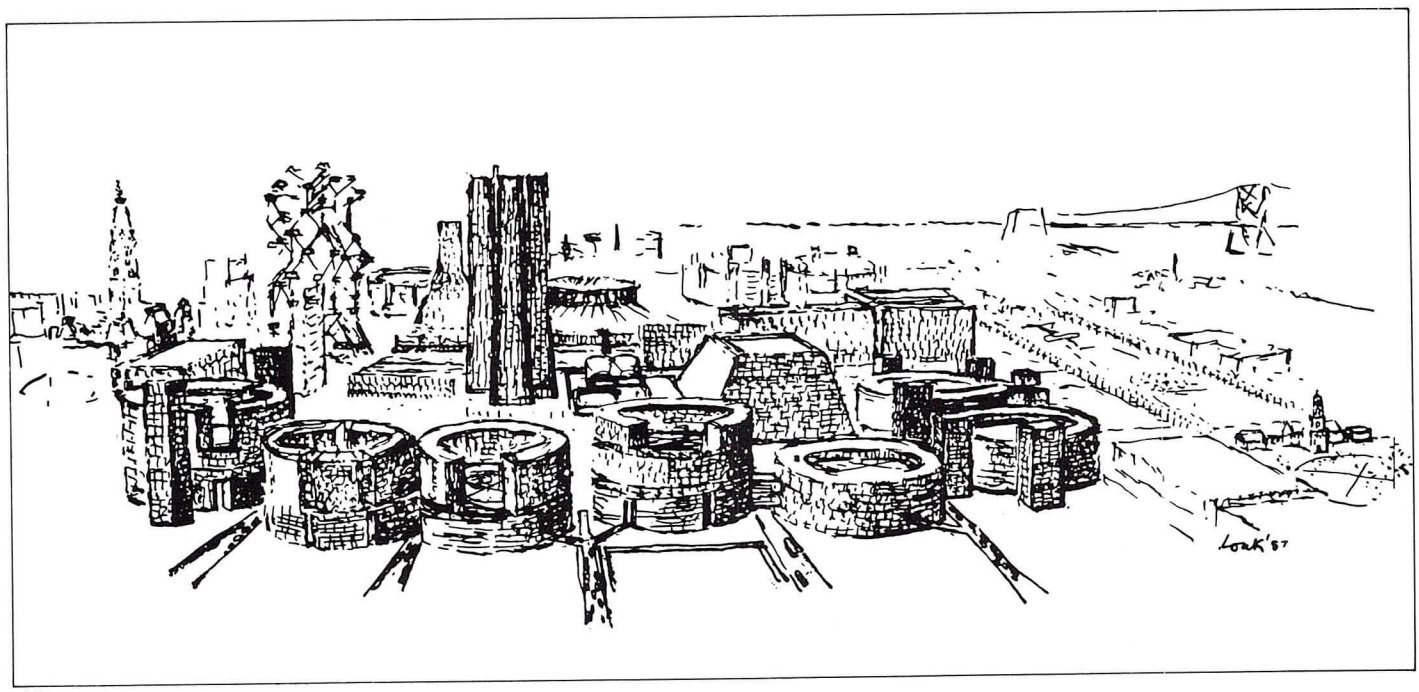

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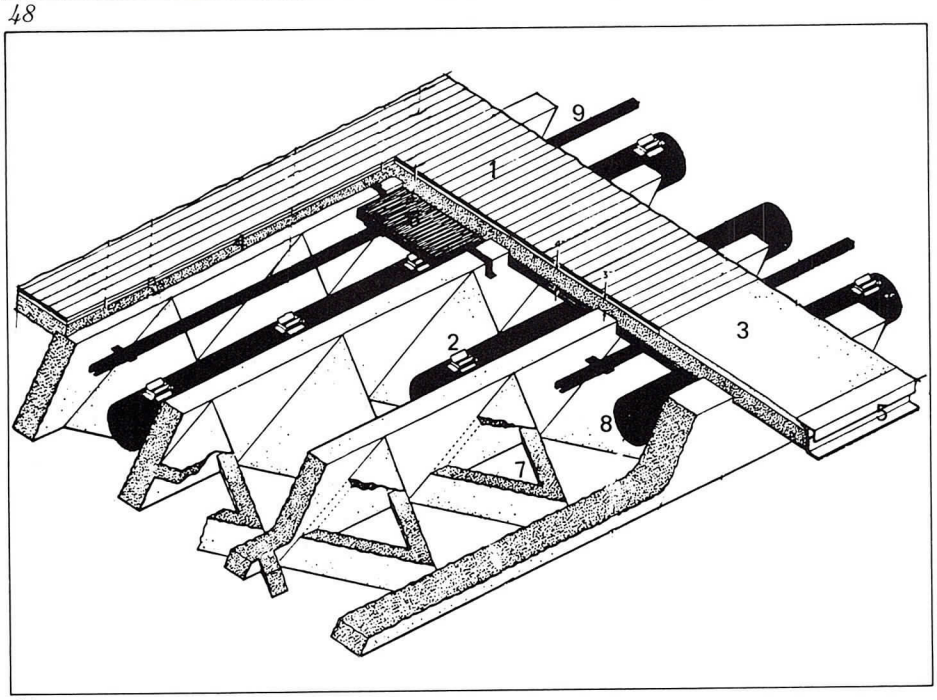

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in terms of the static forces of nature, as these may be manifested through a syntactic articulation of the constructional process—a "scientific" verification which would have been impossible in terms of the configuration of the building as a whole. There is, then, a division between *Form* and *Order* in Kahn's work, that is to say, between the constituent elements of a structure (Form) and its "typological" configuration as an institution (Order). At the same time, the third term in Kahn's exegetic discourse, namely *Design*, is conceived as a mediatory procedure whose role in architectural practice is to reconcile the empirical demands of society with the universal structuring capacity of Form and the specific configurations of Order. While Kahn conceived of Form as being compounded out of structural elements, he also saw it as evoking a phenomenological presence. Thus he wrote:
"Design is a circumstantial act. It is a battle with the nature of man, with the nature of nature, with the laws of nature, with the rules of man, and with principles. One must see all this to put it into being. Design is a material thing. It makes dimensions. It makes sizes. Form is a realization of the difference between one thing and another, a realization of what characterizes it. Form is not design, not a shape, not a dimension. It is not a material thing. In other words, form is really *what* and design is *how*."[25]

Aside from those subjective issues, which rarely respond to inquiry, the reason that this phenomenological and disenchanted a-functionality should make its appearance in America rather than elsewhere is perhaps to be explained by the perennial frontier conditions obtaining in the cultural ethos and socio-psychology of the United States: the fact that North America has always felt itself to be on the frontier, not only because of the progressive thrusts which it has always made into the future (its progressive edge extending from ruthless colonization to technological advance), but also because of its ever-receding frontier of an abandoned culture and history, which by definition was the condition of its foundation. While in the late nineteenth and early twentieth centuries this ontological loss was compensated for by the triumphant academicism of the Ecole des Beaux-Arts and by the innumerable stylistic raids made by the purveyors of high-class kitsch upon traditional European culture—the pastiche Gothic university, convent, and cathedral and the endless proliferation of Stockbrokers' Tudor—the more sensitive American architects invariably recognized that this tradition could not be replicated and that the United States would eventually have no choice but to create a transhistorical culture of its own. And while this painful awareness is even detectable in the displaced Palladianism of Thomas Jefferson, it is all the more evident in the heroic program of H. H. Richardson's Romanesque style, and it is this oscillating legacy which reemerges in a transmuted form in the successive careers of Louis Sullivan, Wright, and Kahn—oscillating in the sense that Richardson and Wright are positive and Sullivan and Kahn are negative. As Maria Bottero has written in her essay "Organic and Rational Morphology in the Work of Louis Kahn":
"I think that the meaning and importance of the architecture and thought of Louis Kahn rises between the two opposite poles of American organicism and European rationalism, like a glowing arc lamp. The Beaux-Arts aspect which has so long been discussed and accepted as a main element characterizing and determining his work—seems to me only secondary and incidental, in any event, in no way central to the real historical meaning that his work has taken on for us.
"This meaning lies in the new ambiguous dimension, in the difficult coexistence of past and present, synchronous and diachronic, measurable and immeasurable, that Kahn has managed to achieve, opening a breach in the closed circuits of Wright's organicism and European rationalism. In themselves alone, these two experiences, these two approaches, so coherent and conclusive, to architectural dialectics are no longer fruitful: there is no valid school of Wright, and European rationalism has slipped into the commercialism of the 'International Style'."[26]

The heroic and tragic destiny of Sullivan within this historical trajectory—his ultimately unsuccessful effort to render the tall office building in a manner which would redeem it as a cultural form—is surely the spiritual and historical challenge against which Kahn's own career is to be assessed. It is painfully obvious from the two extant

facades of the Guaranty Building in Buffalo that Sullivan sought to turn a commercial exigency into an occasion for a monumental presence, for a form which would be comparable to the finest achievement of Assyrian or Islamic culture. This fact no doubt accounts for the delirious tattoo-like decoration, that is, for Sullivan's determination to impregnate the surface and (by implication) the body of the building with the quintessence of culture. That the speculative and technical forces which determined this building's existence were indifferent to the intentions of culture was not lost on Sullivan, who remained acutely aware of his pathetic suspension, like Melville's heroes, upon a tide of development which was totally indifferent to the destiny of man.

With Kahn, as Bottero suggests, we pass from Sullivan's romantic anguish to Kahn's stoic recognition that the possibility for a "consequential, temporal participation" does not exist. With remarkable acuity she writes, "Moreover, the Beaux-Arts forms of his architecture have a very precise figurative function, and bear witness to his particular creative process, which disregards actual and legitimate temporal sequences and is always ready for slips of the memory, and that mysterious selection of form, which is all the more mysterious in that the form rises out of a submerged world. This explains the widespread prejudice that Louis Kahn's architecture is academic, monumental and historically out of context.

"In reality the arches, squares, cylinders, skylights, exedrae and symmetrical axes which spring from this architecture in ever richer and more complex ways, give rise, once they are realized, to fragile and powerful simulacra of the discontinuous and the non-homogeneous, of what is ours and at the same time what is not. The clean-cut surfaces of the walls are slim diaphragms, the flexible and unconventional use of which creates a continuous interplay of light and shade—highly refined and complex filters of the energy field of light; but the light relayed from these surfaces is an unreal light, *une lumière 'autre'*. The more intelligent and pertinent the use of Design and appropriate the choice of materials, perfect the technique of execution and detail, meticulous the expression of all the static forces involved, the more the measurable enters the realm of the immeasurable, and from what is physically and tangibly present, from surfaces, cracks, holes, and pools of light, it blows like a metaphysical weightless breeze—without the weight of earthly gravity . . . but in return, laden with allusions to mnemonic depth and dimension and to everything that this architecture, in its fragile, contingent, physical and almost miraculous equilibrium 'is not'.

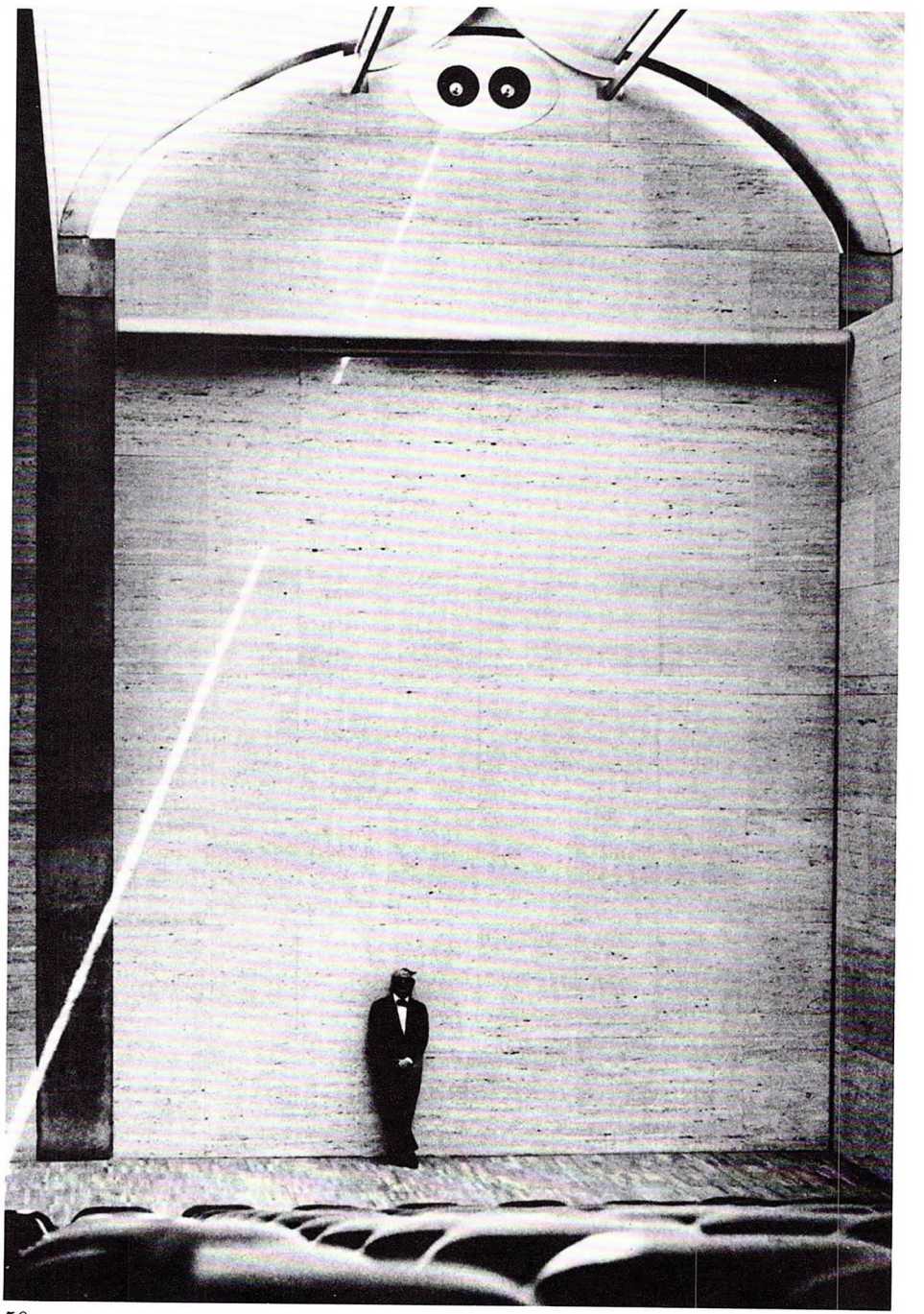
"What it 'is', in fact, one can always define as the product—temporary, fleeting, as limited as you may wish—of everything it 'is not', of this immeasurable and vast force which presses on and continually urges new events.

"In this sense, and almost reversing the terms of the problem, Kahn's architecture recovers the sense of history and reproposes the basic theme of Sullivan's aesthetics. . . .

"But in Kahn, the finite-infinite dichotomy has another meaning which in no way implicates Sullivan's vital dynamism towards a formal-formative end. He, on the contrary, proposes modern cognitive space, in which (after filtering through European rationalism), the subjective and individual can be realized only by limiting, denying, decentralizing itself; but in which . . . the assumption of subjective finitude . . . brings up for examination once more the synchronous and logical classifications of rationalism, pointing from behind its fragile, immobile, and provisional screen, at the dark and blind forces of change in progress and the inevitable erosion of time."[27]

In Kahn a number of strands converge in a transhistorical figure who, subliminally or otherwise, inherits not only the oscillating "organicism" of the American experience, but also the loss of center—the *Verlust der Mitte*, to quote the title of Hans Sedlmayr's seminal work—which lies beneath the apparent certainty of European Rationalism. This moment of avant-gardist doubt seems to be caught between the delirium of an imagined archaeology (Piranesi) and the arbitrary play of utopian institutional form (Ledoux), or to put it more specifically, by way of Kahn's own terminology, between the Form of a mythic past and the Order of an equally mythic future. Like the Enlightenment architects and like Mies van der Rohe, to whom his work is almost inversely related, Kahn sought refuge

50 *50 Kimbell Art Museum, Fort Worth, Texas. Louis Kahn, 1966–1972. Kahn in the auditorium. "When a man says that natural light is something we are born out of, he cannot accept a school which has no natural light. He cannot even accept a movie house, you might say, which must be in darkness, without sensing that there must be a crack somewhere in the construction which allows enough natural light to come in to tell how dark it is. Now he may not demand it actually, but he demands it in his mind to be that important."*



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from this latent anguish in the transcendental emanence of light, in Mies's *beinahe nichts* or in Boullée's deistic vista of an endlessly cavernous interior irrigated by light—his Metropole of 1783—or in Ledoux's project for the director's house in his Ville Idéale de Chaux at Arc-et-Senans of 1775 (see fig.1). Kahn was patently inspired by Le Corbusier's famous aphorism, with which this text begins, when he wrote in his essay "Form and Design" of 1960:

"Even a space intended to be dark should have just enough light from some mysterious opening to tell us how dark it really is. Each space must be defined by its structure and the character of its natural light. Of course I am not speaking about minor areas which serve the major spaces. An architectural space must reveal the evidence of its making by the space itself. It cannot be a space when carved out of a greater structure meant for a greater space because the choice of a structure is synonymous with the light which gives image to that space. Artificial light is a single tiny static moment in light and is the light of night and never can equal the nuances of mood created by the time of day and wonder of the seasons."[28]

Here we have the fundamental concept which seems to link Kahn to Neoclassical Rationalism and to permit him to escape the perceptual limits of Platonic form: above all the Greco-Gothic notion of structure as the essential mediator of light. However, for Kahn, as for the Enlightenment architects, the presence of light had deistic connotations. This much is evident from the following passage in which light is seen as having an omnipresent character, as being an essence that is present in the mind even when it is absent from material reality:

"When a man says that he believes that natural light is something we are born out of, he cannot accept a school which has no natural light. He cannot even accept a movie house, you might say, which must be in darkness, without sensing that there must be a crack somewhere in the construction which allows enough natural light to come in to tell how dark it is. Now he may not demand it actually, but he demands it in his mind to be that important."[29]

This aphoristic passage would account for the cut that serves the generic vault in his last masterwork—the vault-*cum*-folded plate that forms the roof of the Kimbell Museum—where a "silver light" permeates the inner surface of a paraboloid shell in order to indicate how dark it is (fig. 50).

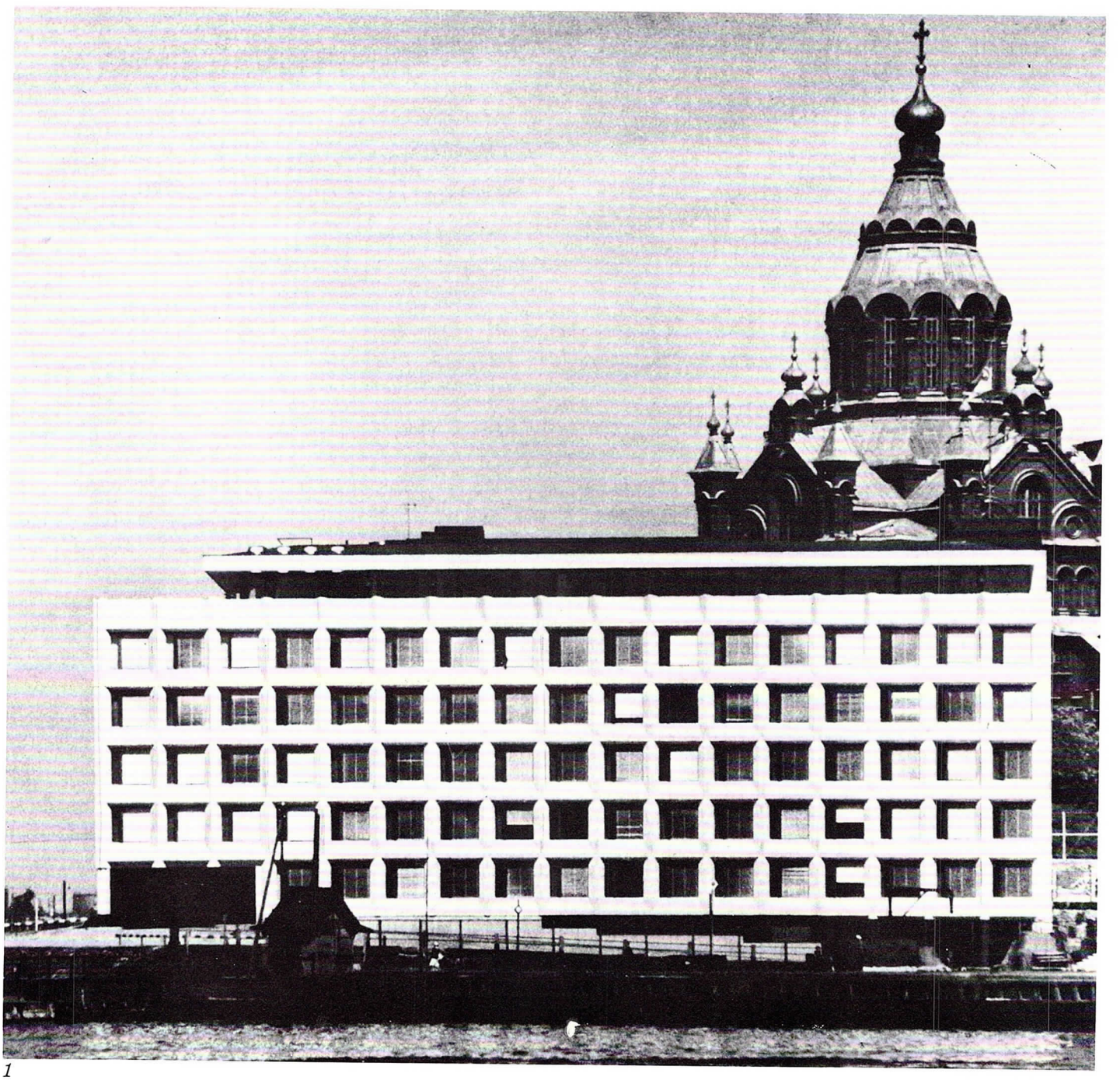
1. Le Corbusier, *Towards a New Architecture* (London: The Architectural Press, 1927).
2. Louis I. Kahn, *Perspecta*, 3, 1955.
3. Quoted in Theo B. White, ed., *Paul Philippe Cret: Architect and Teacher* (Philadelphia: Associated University Presses, 1973), p. 26.
4. Paul Philippe Cret, citing Dimier in "The Architect as Collaborator of the Engineer," *Paul Philippe Cret*, p. 64.
5. Vincent Scully, Jr., *Louis I. Kahn* (New York: Braziller, 1962), p. 11. Kahn's student design of 1924 for a shopping center unquestionably displays the characteristic attributes of Beaux-Arts work: the compilation of the plan out of discrete elements, the gradation of major versus minor axes, etc. However, 'moderne' expressive elements are discernible: the curtain wall and the vaguely pre-Colombian frieze applied to the deep fascia at the top of the structure.
6. Cret, "The Architect as Collaborator . . . ," p. 64.
7. Cret, "A Recent Aspect of an Old Conflict," *Paul Philippe Cret*, p. 85.
8. See Romaldo Giurgola and Jaimini Mehta, *Louis I. Kahn* (Boulder, Colo.: Westview Press, 1975). Of the influence of Choisy on Kahn the authors write, "There is a historical aspect to Kahn's concern for composition. Composition of elements was a preoccupation of the Beaux-Arts academic tradition at the turn of the century. Julien Guadet, the respected professor at the Ecole des Beaux-Arts, wrote about it, and his famous pupil, Tony Garnier, may have set in motion forces and attitudes which, no matter how well disguised by subsequent events in architecture, may still be with us. This may explain the association which Kahn is supposed to have with the Beaux-Arts academic tradition. However, it was Auguste Choisy, a contemporary as well as an ideological antagonist of Guadet, who influenced Kahn more—not by his words and ideas (Kahn did not read French and was not a 'reader' in the scholarly sense) but by the magnificent illustrations in his book *Histoire de l'Architecture*, which Kahn treasured." (Giurgola and Mehta, *Louis I. Kahn*, p. 184.)
9. See Kenneth Frampton, "Industrialization and the Crises in Architecture," *Oppositions*, 1, September 1973.
10. Eugène Emmanuel Viollet-le-Duc, *Discourses on Architecture*, Benjamin Bucknall, trans. (New York: Grove Press, 1959).
11. Paul Zucker, ed., *New Architecture and City Planning* (New York: Philosophical Library, 1944). For the "Nine Points of Monumentality," see S. Giedion, *Architecture, You and Me* (Cambridge, Mass.: 1958), esp. pp. 25–61.
12. Louis Kahn, "Monumentality," *New Architecture and City Planning*, p. 577.
13. Ibid., p. 578.
14. Ibid., pp. 579–80.
15. That Kahn's cognitive concept of structure was related to the structural rationalism of Viollet-le-Duc seems to find confirmation in Hubert Damisch's article, "The Space Between: A Structuralist Approach to the *Dictionnaire*," in which he writes, "These models are approximate, but even this *imprecision* cannot be seen as a problem if one accepts that in the world of the 'exact' sciences themselves the perfection of any model is conditioned by interpretation. . . . In this way, structural analysis

in its narrowest sense . . . rests in fact on operational models which only give an imperfect account of the real behavior of concrete structures . . . which is another way of saying that the 'truth' of a building is not to be found in bricks and mortar any more than in outer form. No, it lies in the space between them, that which makes them complementary, in that space where style is born, in that gap between things which is intimated in the absence of a logical link between two propositions that open the article on *Construction: Construction is the means; architecture the result.* . . . And perhaps it is there between those two small propositions separated by an ambiguous semicolon. . . . For from this gap between architecture and construction, between a form and a substance which cannot exist separately, the working of stone, of steel or of cement can assume a structural value, can invite meaning and can thereby gain access to style." See *Eugène Emmanuel Viollet-le-Duc 1814–1879* (New York: Rizzoli, 1980), p. 89.

16. Kahn, "Monumentality," p. 581–2.
17. Louis I. Kahn, *Complete Work 1935–74*, H. Ronner, S. Jhaveri, A. Vasella, eds. (Basel and Stuttgart: Birkhauser Verlag, 1977), p. 74.
18. Marcello Angrisani, "Louis Kahn e Storia," *Edilizia Moderna*, no. 86, pp. 83–89.
19. Emil Kaufmann, *Three Revolutionary Architects: Boullée, Ledoux, and Lequeu* (Philadelphia: American Philosophical Society, 1952). See also Eduard F. Sekler, "Formalism and the Polemical Use of History," *The Harvard Architecture Review*, vol. 1, spring 1980, esp. p. 37. Here Sekler makes fundamentally the same thesis as Angrisani.
20. Angrisani, "Louis Kahn e Storia," p. 87.
21. Marc-Antoine Laugier, *An Essay on Architecture*, Wolfgang Hermann, trans. (Los Angeles: 1977), pp. 119–20. See chap. IV, "On the Style in Which to Build Churches." Other parallels exist of the way in which both Ledoux and Kahn exploited the isosceles triangle, most notably between Ledoux's Hotel Montmorency of 1772 and Kahn's Indian Institute of Management, Ahmedabad, India. As C. Kyle Kinsman has observed in an unpublished paper written for Professor William Jordy of Brown University, "Each has a large entry chamber placed symmetrically on its hypotenuse; at Montmorency, it is circular; at Ahmedabad, it is diamond-shaped. Beyond the entry chamber and within the body of the triangle is a staircase. In Ledoux's case it begins from a half-ellipse; for Kahn, from a half-circle."
22. Angrisani, "Louis Kahn e Storia," p. 88.
23. Francesco Tentori, "Ordine e Forma nel l'opera de Louis Kahn," *Casabella*, no. 241, 1960.
24. As Scully points out, Kahn's initial use of the term "order" came from the period when he was most strongly influenced by Buckminster Fuller, when his model of latent "order" was predicated in part on the idea of natural crystal structure. He later used "order" to indicate a sort of pre-ordained institutional teleology to be cryptically summed up by the aphorism, "what the building wants to be."
25. Louis Kahn, from an article originally entitled "Structure and Form" for the Voice of America Forum Lectures, a series on Modern American Architecture in 1960; retitled "Form and Design" and published in Scully, *Louis I. Kahn.*
26. Maria Bottero, "Organic and Rational Morphology in Louis Kahn," *Zodiac* 17, 1967.
27. Ibid., pp. 244–5.
28. Kahn, "Form and Design," p. 118.
29. Louis Kahn, *Light Is the Theme* (Fort Worth, Texas: Kimbell Art Foundation, 1975), p. 39.

Figure Credits

1, 45 From Yvan Christ, *Projets et Divagations de Claude-Nicolas Ledoux: Architecte du Roi* (Paris: Editions du Minotaure, 1961).
2, 3 From Theo B. White, ed., *Paul Philippe Cret: Architect and Teacher* (Philadelphia: Associated University Presses, 1973). Fig. 2 courtesy of National Academy of Design.
4 From Vincent Scully, Jr., *Louis I. Kahn* (New York: Braziller, 1962).
5 From *Eugène Emmanuel Viollet-le-Duc 1814–1879* (New York: Rizzoli, 1980).
6, 7, 11 From Arthur Drexler, ed., *The Architecture of the Ecole des Beaux-Arts* (New York: The Museum of Modern Art, 1977).
8, 9, 21 From Auguste Choisy, *Histoire de l'Architecture*, vol. II (Paris: Editions Fréal & Cie., 1964).
10, 23, 28, 44 From Romaldo Giurgola and Jaimini Mehta, *Louis I. Kahn* (Boulder, Colo.: Westview Press, 1975).
12, 13 From *Perspecta* 12, 1969.
14, 15, 22, 24, 25, 27, 29, 30–33, 35, 37–40, 42, 43, 46, 48, 49 From H. Ronner, S. Jhaveri, and A. Vasella, eds., *Louis I. Kahn Complete Work 1935–1974* (Basel and Stuttgart: Birkhauser Verlag, 1977).
16, 17 From Leonardo Benevolo, *History of Modern Architecture*, vol. I (Cambridge, Mass.: M.I.T. Press, 1977).
18 From Joseph Rykwert, *The First Moderns: The Architects of the Eighteenth Century* (Cambridge, Mass.: MIT Press, 1980).
19, 20 From Louis Kahn, "Monumentality," *New Architecture and City Planning*, ed. Paul Zucker (New York: Philosophical Library, 1944).
26, 36 From Emil Kaufmann, *Three Revolutionary Architects: Boullée, Ledoux, and Lequeu* (Philadelphia: American Philosophical Society, 1952).
34 From Jean-Marie Pérouse de Montclos, *Etienne-Louis Boullée 1728–1799* (Paris: Arts et Métiers Graphiques, 1969).
41 From *L'Architecture Vivante*, winter 1924. Reprinted by Da Capo Press.
47 From Rob Krier, *Urban Space* (New York: Rizzoli, 1979).
50 From Louis Kahn, *Light Is the Theme: Louis I. Kahn and the Kimbell Art Museum*, ed. Nell E. Johnson (Fort Worth, Texas: Kimbell Art Foundation, 1975). Photograph by Robert Wharton.



1

The Retrieval of Memory: Alvar Aalto's Typological Conception of Design

Demitri Porphyrios

. . . the act of building is born out of a pre-existing germ; nothing whatsoever comes from nothing . . . the type is a sort of kernel around and in accordance with which the variations that the object is susceptible of are ordered.
Quatremère de Quincy,
Dictionnaire Historique d'Architecture, *1832.*

Nothing old is ever reborn. But it never completely disappears either. And anything that has ever been always reemerges in a new form.
Alvar Aalto,
"Painters and Masons," Jousimies, *1921.*

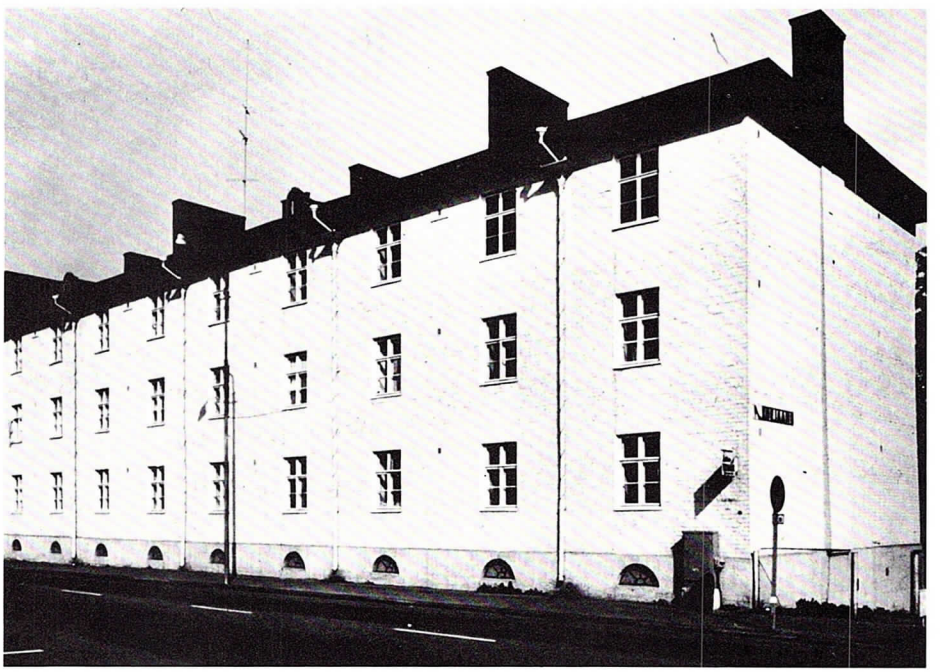
Histories of ideas credit orthodox Modernism and particularly its functionalist consciousness with a new curiosity: that of manifesting utility through sensuous form. The determination to make buildings refer to their use, though a Modernist obsession, was surely not a Modernist invention as well. Such a concept had already been formalized as early as J. N. L. Durand's *Recueil et Parallèle des Edifices*[1] of 1802 and, to our eyes, it assumes a recognizable status with the *Traité d'Architecture* of Reynaud, or better with Viollet-le-Duc's *Entretiens sur l'Architecture.* In 1860 Reynaud writes, "In everything that has resulted from God's hand there exists an intimate relationship between form and function; the exterior is the result of the internal composition . . . similarly, architecture demands that its forms be the result, the product of its destination . . . admitting nothing that is not founded on real necessity. . . ."[2] Only a few years later, Viollet-le-Duc praised the engineers for "in constructing a ship or a locomotive . . . [they] construct objects which have their own character . . . in the sense that they express their purpose. . . ."[3]

This activity whereby the function (the purpose, the use) of a building appears in its tangible and sensuous attire was for the nineteenth century structural and social moralists[4] an ontological bond—that is, a natural fusion—between utility and appearance, and it is in such a spirit that orthodox Modernism inherited the notion of the representability of function. Hence the greatly important consequence for Modernist thought: its nonsemantic poverty of form, that is, the fact that a beam is a beam and will always be a beam, and its appearance will always point strictly to its 'beamness'. In this sense, the Modernist campaign for a monosemantic formal repertoire that would be rooted in the representability of function (the utilitarian dimension of the industrial product) was—at least in its polemical formulation—a refusal to acknowledge the connotational world of meanings and an explicit acceptance of an architecture of pure denotation.

Aalto's conception of representation is of another kind. Instead of considering form as the footprint of function and utility, he conceives of it as a tool for representing propriety.[5] Aalto's buildings always point to the realm of the befitting, the socially befitting—the befitting to customs, traditions, aspirations, ideas, beliefs, mythologies, or dreams; that immaterial realm of ideologies[6] without which we would be incapable of reflecting upon the material modes that sustain our lives. "The first impulses of architecture," writes Aalto, "are born . . . out of the sentiments and lives of people. . . ."[7] But since propriety is an ever-elusive domain; since its relation to customs and traditions makes it change faces; since the befitting of today is the embarrassment of tomorrow; it becomes necessary for Aalto to conceive of the relationship between propriety and a building's appearance as an arbitrary one,[8] that is, as a relationship based on a mutual social convention, a fleeting and ever changing relationship legitimized only by the unspoken word of tradition and social habits. Hence the linguistic possibility of form. For Aalto, form is pure language; its power resides not in its ability to fuse with utility (as was the case with the nineteenth-century structural and social moralists or with the functionalist ethos of orthodox Modernism), but in its power to designate, to translate, to represent, to refer to, to associate with, or to remind us of the distant and immaterial region of propriety.

By acknowledging the linguistic possibility of form, Aalto seems implicitly to renounce the functionalist foundations of orthodox Modernism, claiming instead that form has as a necessary condition the codification of representational

1 (frontispiece) Headquarters of Enso Gutzeit, Helsinki. Alvar Aalto, 1959. Facade viewed longitudinally from the sea.
2 Apartment building, Jyväskylä. Alvar Aalto, 1923–24.
3 Headquarters of Enso Gutzeit, Helsinki. Alvar Aalto, 1959. Elevation facing the port.
4 Die Stadtkrone. Bruno Taut, 1919.
5 Competition entry for the Enskilda Bank Building, Stockholm. Alvar Aalto, 1962.
6 Competition entry for the Palais des Nations, Geneva. Eskil Sundahl, 1927.
7, 8 Competition entry for the Stockholm Central Station. Eric Högström and Paul Hedqvist, 1922.



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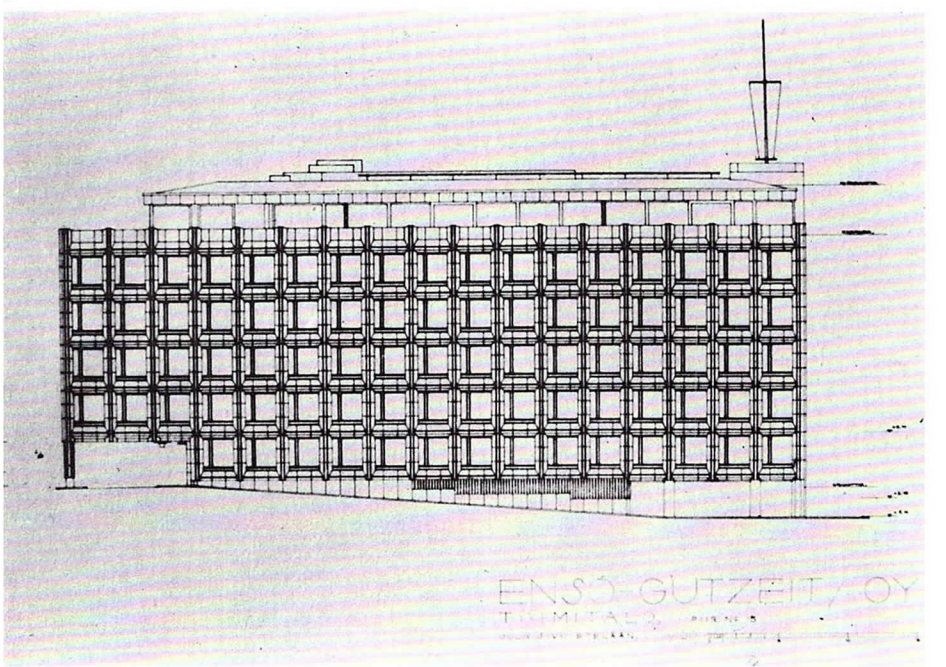

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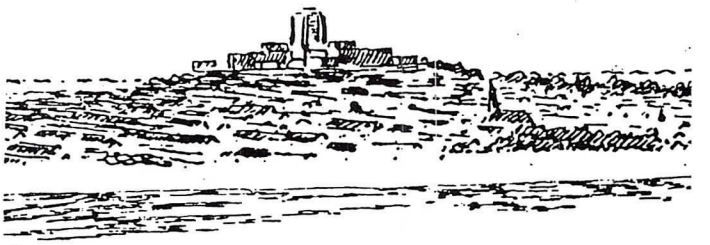
structures, that is, the formalization and social legitimization of iconographic types. Such a typological conception of design, deeply rooted in the teachings of the nineteenth-century Ecole des Beaux-Arts and particularly in the writings of Quatremère de Quincy,[9] distinguishes Aalto from orthodox Modernism, placing him instead closer to the historicist thought of either the nineteenth century or that of our own 1970s. It is this formalization and ideological legitimization of Aalto's typological thinking that we must now examine.

Iconographic Typology

Confronted with Aalto's very early buildings, one discerns his interest in design typology. In the Jyväskylä apartment building of 1923–24 (fig. 2)—designed only two years after Aalto received his architecture diploma—the tripartite articulation of the facade (*piano rustica*, *piano nobile*, and *corona aedificium*) clearly reflects his Neoclassical studies at the Helsinki Technical University while at the same time pointing to the dominant architectural discourse of a wider Neoclassical revival operative in Scandinavia between 1905 and 1930.[10] The tripartite articulation of the facade appears in all the works of Aalto, even as late as the Enso Gutzeit administrative building in Helsinki of the 1960s (figs. 1, 3). Here the parts behind the tripartite articulation do house the different activities of parking, offices, and restaurant, but what distinguishes this building from orthodox functionalism is that it refers not to the function as such, but rather to the implicit propriety with which each of the activities had been codified in mid-twentieth-century life. The *piano nobile* is occupied by the headquarters of the Enso Gutzeit company so that, by its reference to the Renaissance palazzo, the splendor of Finland's most important papermill company is commemorated. The garage takes the place of the stables while the restaurant analogically occupies the roof-terrace of the eighteenth- and nineteenth-century classical villa. Further, in the Stockholm Enskilda Bank competition of 1962 (fig. 5), the same articulatory theme alludes to the iconography of the bourgeois street elevation, memorializing the economic order which inaugurated the institution of banking.



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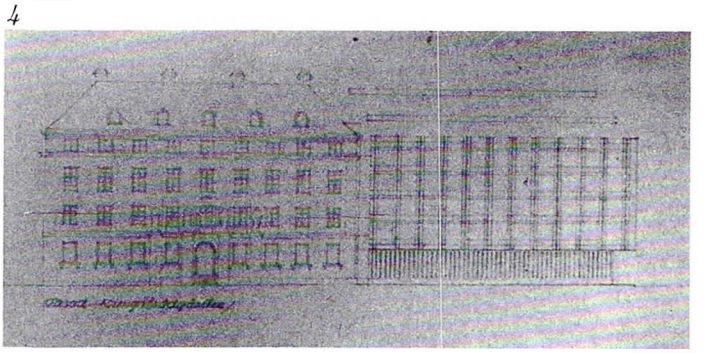

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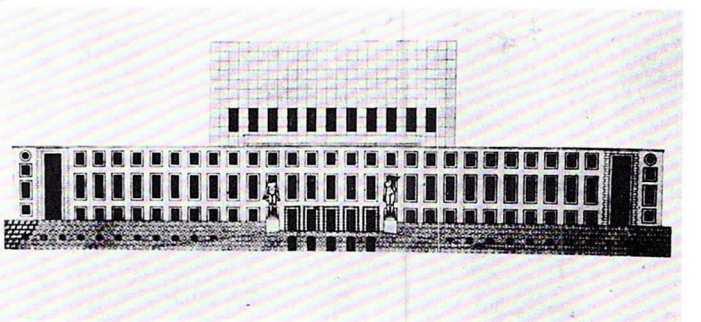

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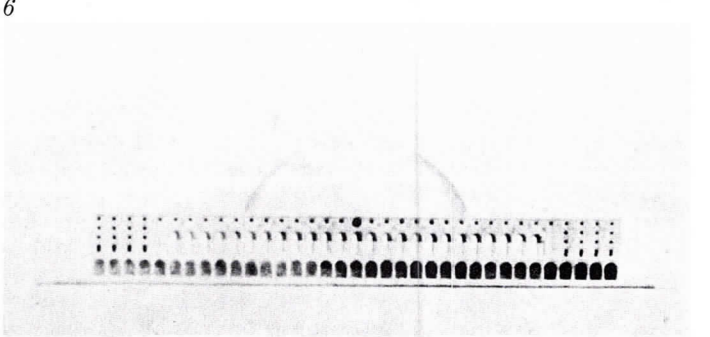

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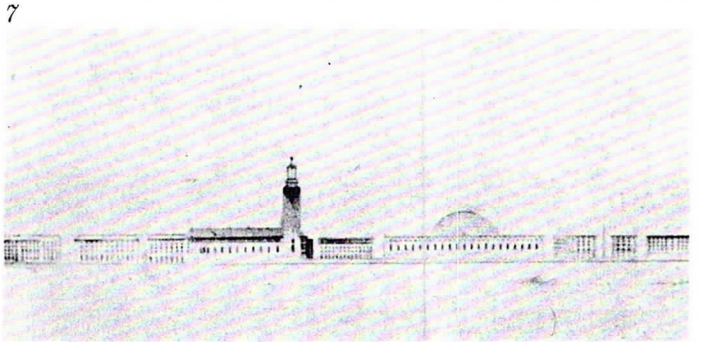

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9 Town Hall, Seinäjoki. Alvar Aalto, 1959.
10 Scandinavian House, Reykjavik, Iceland. Alvar Aalto, 1965.
11 Concert and Congress Hall, Helsinki. Alvar Aalto, 1959 (new center) and 1962 (design of concert hall).

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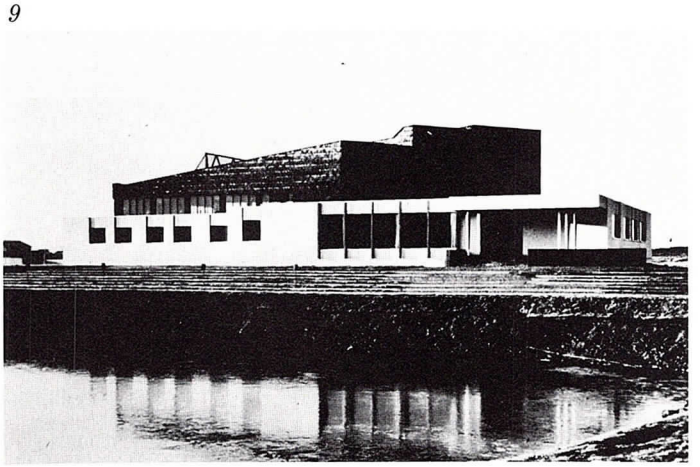

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11

By utilizing the associational richness of already operative and socially legitimized iconographic types, yet by refusing to render them complete and by always shortcircuiting our fantasies with the introduction of superimposed iconographic references, Aalto cultivates the poetic aspect of language: that of polysemy (the manifoldness of levels of signification, the profusion of secondary and tertiary meanings). The iconographic type becomes for Aalto the privileged design tool for rendering propriety visible, yet a propriety so rich in associations that it is never exhausted in its face value.

Take for example the essential iconographic type of the city-crown: in addition to its compositional contributions, the dome, the spire, the tower, or even the high gable has always crowned the most important hall of a building, has always assigned a hierarchy to a city's skyline while ascribing civic importance to the monument in relation to the city's built fabric. The prestige that Bruno Taut's *Die Stadtkrone* acquired soon after its publication in 1919 is due to that which distinguishes it, essentially, from the ideals of the Garden City sprawl.[11] A *Stadtkrone* (fig. 4) transcribes into a towering silhouette a city's essential character, its civic status, becoming both an anamnestic and prognostic sign that simultaneously points to the memory and the future of its *animus civitatis*.

Searching for similar significatory references, Eskil Sundahl[12] refers to the iconography of the crown in his Palais des Nations competition of 1927 (fig. 6), while Paul Hedqvist and Eric Högström,[13] in their entry for the Stockholm Central Station competition (figs. 7, 8), propose the dome as a competent alternative to the nearby National-Romantic spire of Ragnar Östberg's Town Hall. In fact, early twentieth-century Scandinavian Neoclassicism is a remarkable process of on one hand suppressing all garlands, triglyphs, metopes, tabernacles, and cornices, and on the other safeguarding classicism's compositional iconography. The iconographic type of the city-crown was really the last icon that Modernism shattered. Until the 1930 Stockholm exhibition, which institutionalized Modernism in Scandinavia, the city-crown featured in all important civic buildings. The 'anachronism' is that with Aalto the

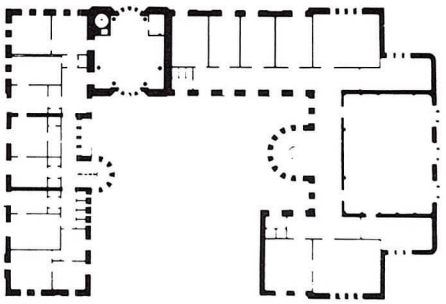
city-crown remained. In fact, after World War II and when the functionalist puritanism of the twenties was already an embarrassing disillusionment, it was through such an anachronism that Aalto re-semanticized the classical/medieval prototype of the city-crown, thus rendering visible the relative hierarchy of the council chamber in the Säynätsalo Town Hall while assigning to the whole composition the status of a civic monument. The iconographic type of the city-crown continued to exert an appeal on Aalto throughout his life and becomes, in its many variations, the unmistakable stamp of a devotedly typological mind. It features in the Seinäjoki Town Hall (fig. 9), in the Otaniemi Institute of Technology, in the Reykjavik Scandinavian House in Iceland (fig. 10), and is splendidly commemorated in the Carrara marble-clad Finlandia Concert Hall in Helsinki (fig. 11).

The tripartite elevational treatment of the Renaissance palazzo and the city-crown are only two examples from the various iconographic types that Aalto works with and which include, among others, the entry portico, the campanile, the classical orders, the classical temple, the medieval cityscape, the Miesian curtain wall, the Greek theater, the skyscraper, the Sienese marble coursing, the primitive rustic hut, the crenellated castle, and so on.[14] Entry, civic importance, bourgeois coziness, rusticity, and other qualities are thus brought to mind because the iconographic type, founded on habit and social convention, has the power to trigger associations. We witness here an inversion of the orthodox Modernist mind: for if, in its obsession to elementarize and always to refer to utility, the Modernist mind undertook the task of establishing a taxonomy of the building program, Aalto's mind seeks to establish a taxonomy of propriety. Such typological thinking becomes the sure index of a mind that has set as its task the study of propriety, that is, to establish the tactile and visual analogue of people's social mythology. Against the Modernist conception according to which the significance of form resides within the very act of constructing and using, Aalto insists that the significance of form resides not in today and now but in yesterday and then, and in its ability to bridge the "then" with the "now." Design, therefore, is but the struggle to cast our fantasies into the molds of our memories. It is such a frame of mind that allows the 'type' to become a vital tool in the internal economy of Aalto's significatory thinking. And it is this frame of mind that causes him always to search for some origin, some horizon, some established skyline, or some footprint that might be recognizable.

Planimetric and Sectional Typology

Aalto's interest in typology is not limited to the iconography that animates his buildings sensuously and visually, but reigns in his planimetric and sectional compositions as well. Throughout the memory of Western culture, the town hall has always involved a court, and there were, in fact, consistently followed Scandinavian precedents—like the Town Hall at Lahti by Eliel Saarinen of 1912 (fig. 12)—where the plan unfolded in the shape of a U with a court in the center, and with one wing devoted exclusively to a meeting hall or a council chamber.[15] This syntactic type appears consistently in Aalto's work, particularly in those instances where civic consciousness is a priority. From the original sketches for the House of Culture in Helsinki (fig. 13), a fundamental *parti* is established which is explicitly based on a U-shaped arrangement around a central court and with one wing taken by the theater.[16] This *parti* animates the Seinäjoki Town Hall (fig. 14),[17] the Avesta Town Hall competition, the Marl Town Hall competition, and in an unmistakably direct way, the Säynätsalo Town Hall (fig. 17). The U-shaped court is restated in the early sketches for Aalto's atelier at Munkkiniemi (fig. 15), while the later sketches (fig. 16), which are closer to the realized work in their indecision to complete the court, betray both the heritage of and the deviation from the court type.[18]

These examples raise two serious questions: the first concerns the very understanding of the notion of 'type'; the second addresses the role type plays in the relationship between monuments and ordinary buildings. When one compares these plans, is it the idea of Town Hall itself that emerges in all its essential depth, or does the court-type *parti* specify the *seat* of a socially recognizable species of buildings that is both 'original' and 'familiar'? Aalto writes: "As the tiny eggs of the fishes need time to grow



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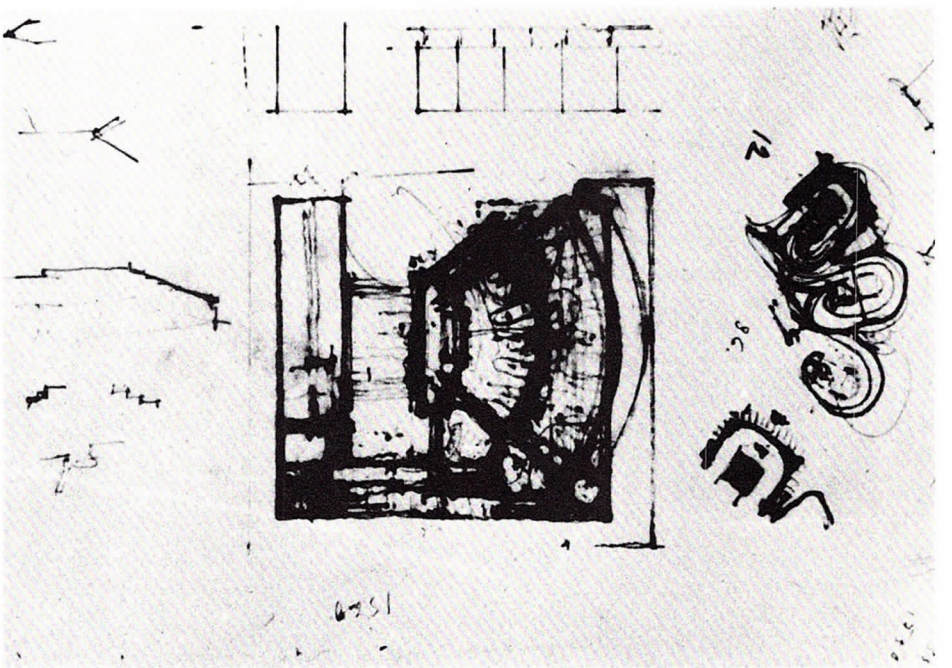
12 Town Hall, Lahti. Eliel Saarinen, 1912. Plan.
13 House of Culture, Helsinki. Alvar Aalto, 1955. Early sketch.
14 Town Hall, Seinäjoki. Alvar Aalto, 1959. Early sketch.
15 Architect's Atelier, Munkkiniemi. Alvar Aalto, 1954. Early sketch.
16 Architect's Atelier, Munkkiniemi. Alvar Aalto, 1954. Later sketch.
17 Town Hall, Säynätsalo. Alvar Aalto, 1950. Plan at court level.



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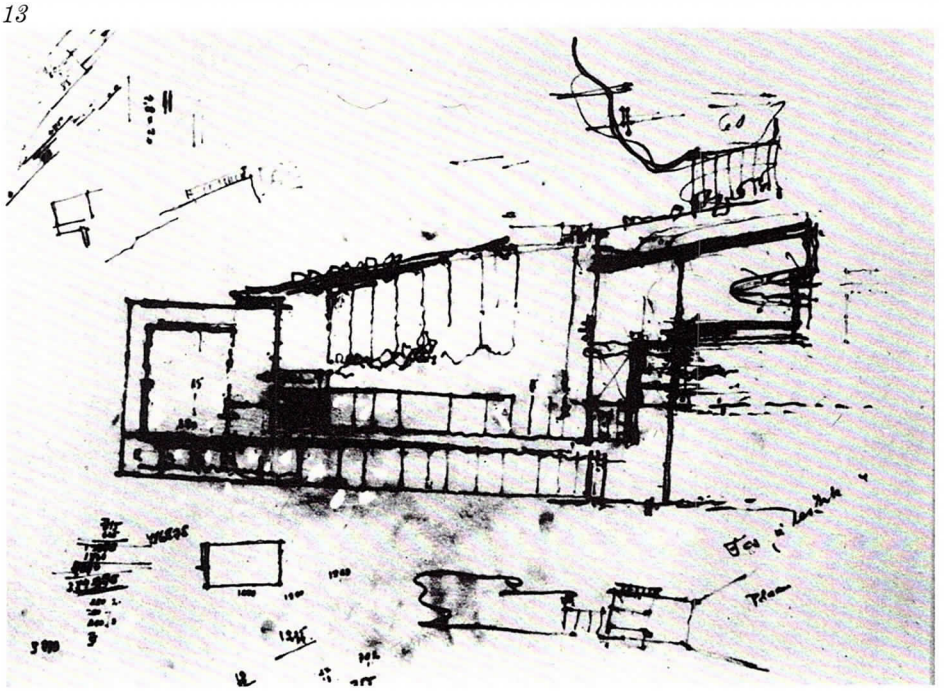

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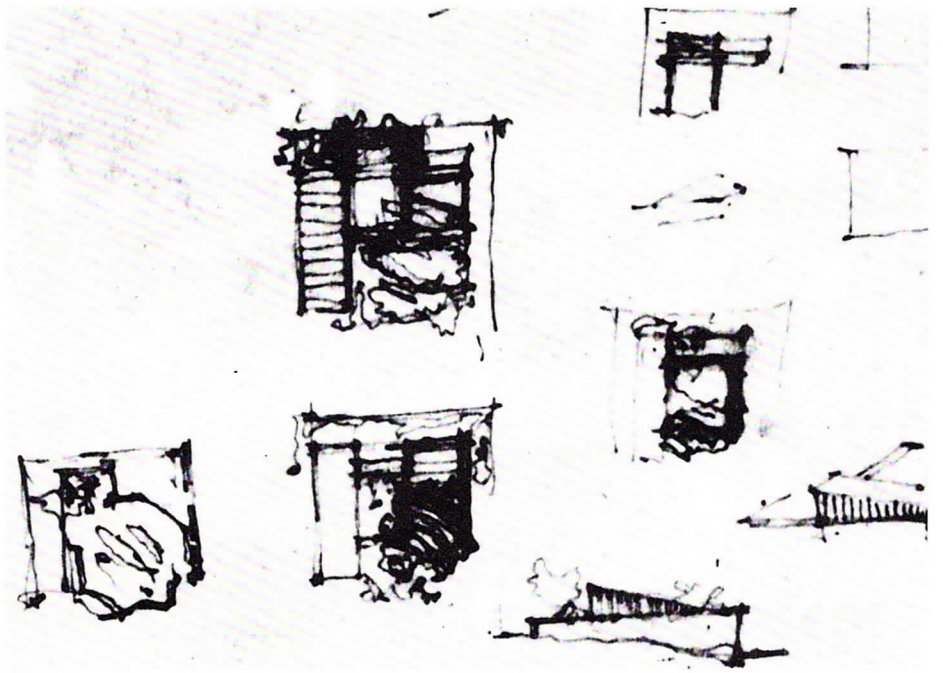

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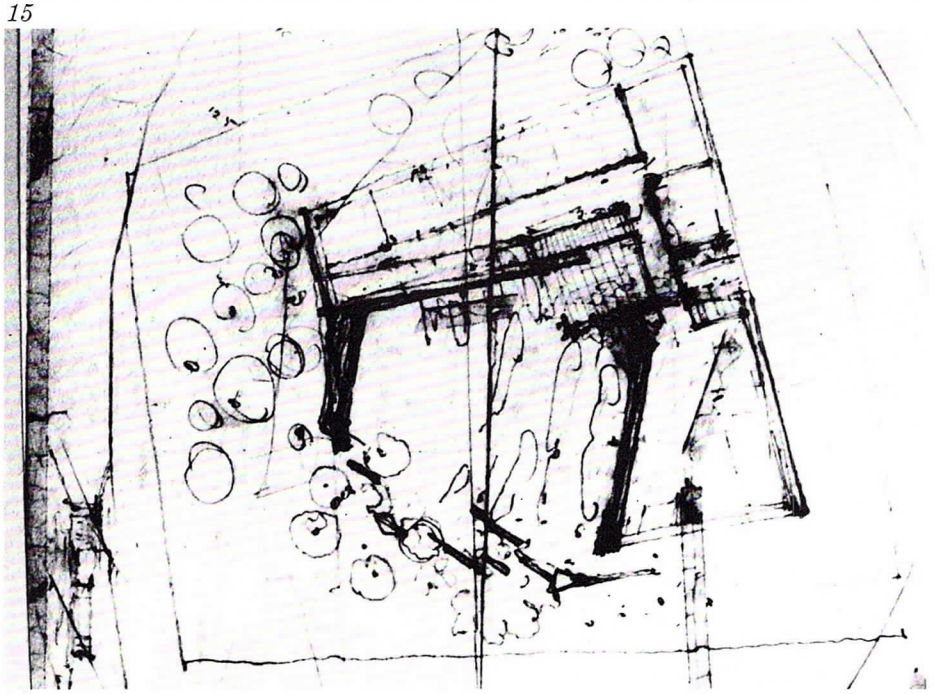

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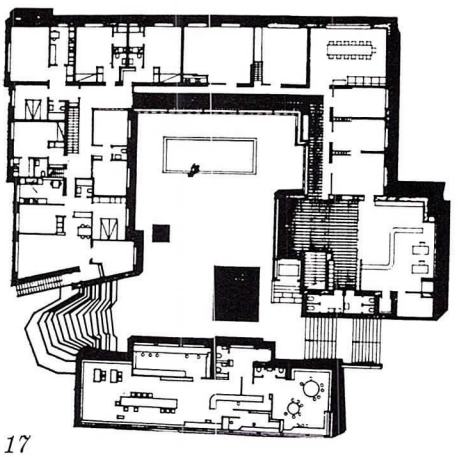

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up into mature salmons, similarly whatever the human mind gives birth to, needs time to develop. And in architecture what matters above all is time."[19] Architecture thus gains in wisdom only in relation to the series of particularizations the type traverses through in time, achieving its authority not on the basis of its individuality but on the basis of the dispersion of its individual traits. It is a similar thought that we encounter in the nineteenth-century *Dictionnaire* of Quatremère de Quincy: "the act of building is born out of a pre-existing germ; nothing whatsoever comes from nothing. . . . The type is a sort of kernel around and in accordance with which the variations that the object is susceptible of are ordered. . . . On the contrary, the model is an object which should be reproduced exactly as it is. . . ."[20] If, therefore, the world of appearances is infinite, it is not because it is made of an infinite number of types but because their combinations, deformations, affinities, allusions, and sympathies are diverse and apparently infinite. The House of Culture and the Town Halls at Seinäjoki, Avesta, Marl, and Säynätsalo reveal against the background of the remembered typology at Lahti the possibility of a general design tactic that makes possible the distribution of types over an arranged space and in an ordered and significative sequence. But they cannot succeed in doing this without each other, and it is there that the relation between them, and therefore their communicative power resides. The chain of representations that a single type hides can, in effect, by means of the power it possesses to duplicate itself (in imagination, in memory, and in the multiple associations effected by comparison), inaugurate an architectural discourse at once real and unpredictable, recognizable but not reproducible, familiar but never banal.

The second question addresses the role the type plays in the relationship between public and ordinary buildings. Discussing the role of the public building in society, Aalto writes in an article in *Arkkitehti*, "One of the most important functions of the public building is that it should act as an example to bread-and-butter buildings, i.e., to housing or housing-working groupings. Here we see our unfamiliarity with public buildings in that we strive for originality, which in itself is not wrong, on the contrary is good, but which often moves in a sphere where the public building differs from society and does not set it an example. It lacks force, influence, on the field of ordinary buildings. I, of course, do not mean that it should be a direct example, that the forms should be the same. I mean something more profound, an influence which is indirect."[21]

We witness here a conception like that which animated Palladio's decision to make a villa refer to a temple. That notion of an alluded-to imagery, whether a pedimented front facade or a planimetric court organization, is what allows buildings to belong to species, to have "little brothers and sisters," inaugurating in this manner a taxonomy of representation. In the Munkkiniemi Atelier, Aalto copies neither his own town hall schemes nor that of Saarinen at Lahti, yet he alludes to all of them—and possibly to others further back—by considering them *not* 'models' but 'types'. "This way of thinking means that public buildings and ordinary buildings should be in some kind of harmony."[22]

The instances where Aalto resorts to a planimetric type are numerous. The forecourt of the Paimio Sanatorium (fig. 19) alludes to the long tradition of the *cour d'honneur*. In fact, his teacher Sigurd Frosterus, in the Vanajankartano Manor House remodeling of 1930 (fig. 20), had attempted the profanation of the *cour d'honneur* type[23] that Aalto was to utilize systematically in both the Otaniemi Library and the Otaniemi Student Housing forecourts among others (fig. 18).

Take as a further example Aalto's codification of the library type. The Seinäjoki library (fig. 21) consists of a linearly organized series of offices, seminar rooms, exhibition spaces, and ancillary rooms, with a large *aula* springing from the central entry hall. The *parti* is close to the 1937 entry for the Karolinska Institute competition by Gustaf Birch-Lindgren and K. W. Ottesten (fig. 22),[24] while both schemes are deeply rooted in the long tradition of the *aula* school, which was in the shape of a rectangle with the main auditorium attached on one side and symmetrically opposite the entry, as in the celebrated 1828

18 Student Housing, Otaniemi. Alvar Aalto, 1962. Main forecourt.
19 Tuberculosis Sanatorium, Paimio. Alvar Aalto, 1928. Site plan showing main forecourt.
20 Vanajankartano Manor House. Sigurd Frosterus, 1927. Plan for remodeling.

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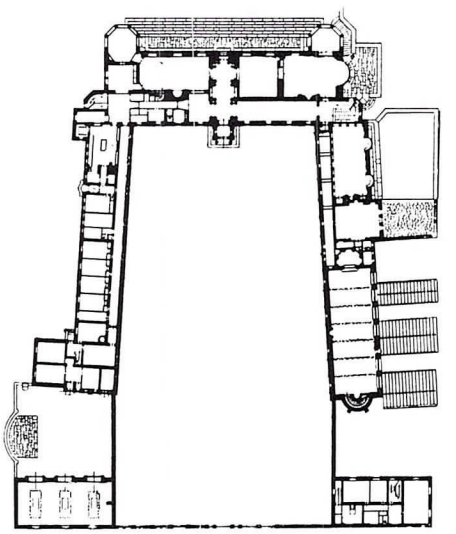

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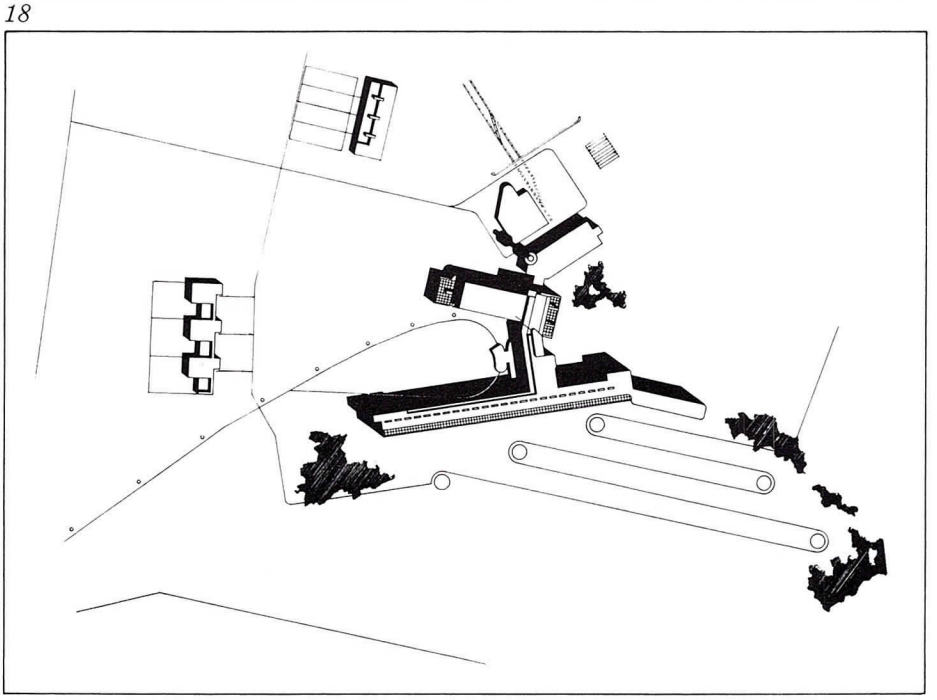

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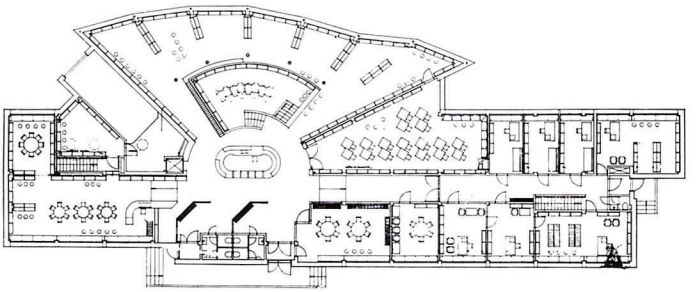
21 Municipal Library, Seinäjoki. Alvar Aalto, 1959.
22 Competition entry for the Karolinska Institute. Gustaf Birch-Lindgren and K. W. Ottesten, 1937.
23 Helsinki University. Carl Ludwig Engel, 1828.
24 Competition entry for the Katarina Elementary School. Nils Ahrbom and Helge Zimdahl, 1928.
25 Competition entry for the Katarina Elementary School. 'Plugget' group, 1928.
26 Municipal Library, Rovaniemi. Alvar Aalto, 1963.
27 Public Library, Stockholm. Gunnar Asplund, 1924. First scheme.



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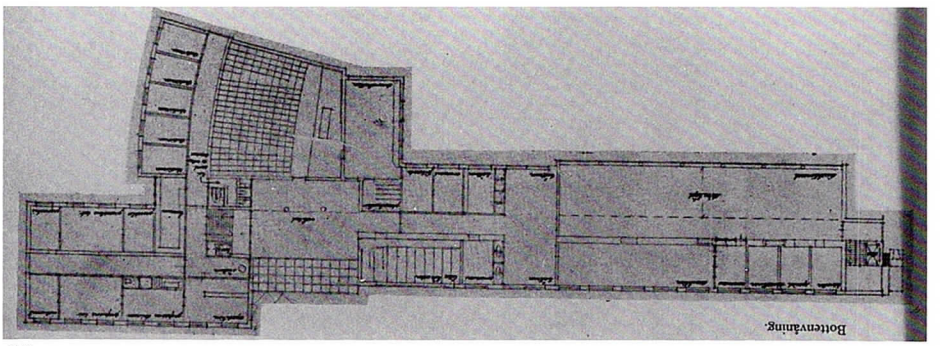

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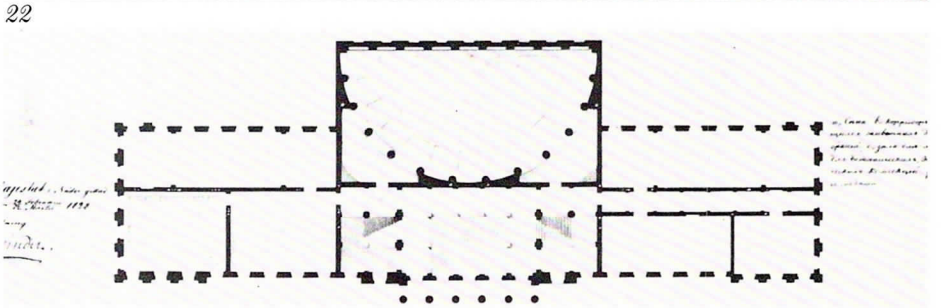

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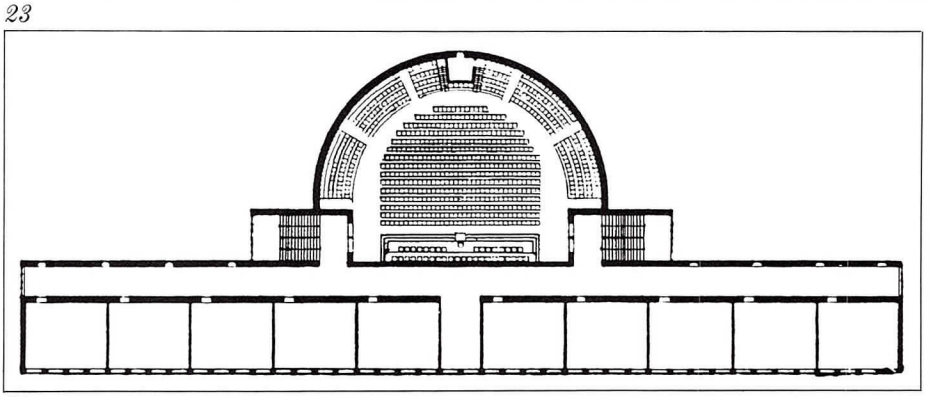

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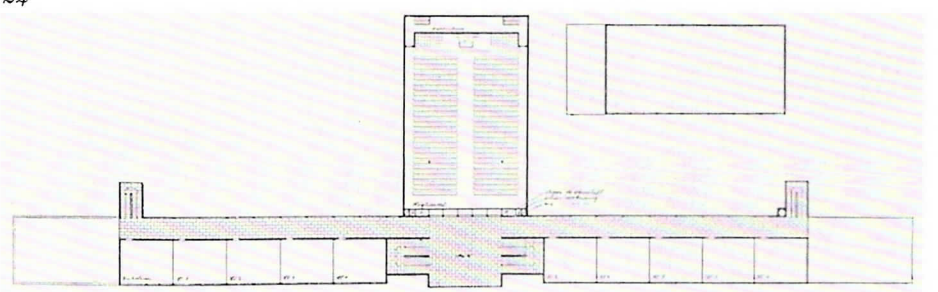

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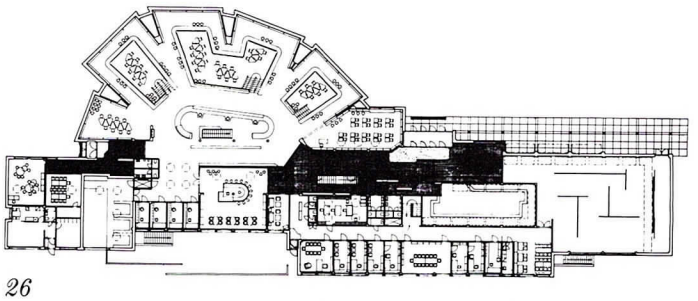

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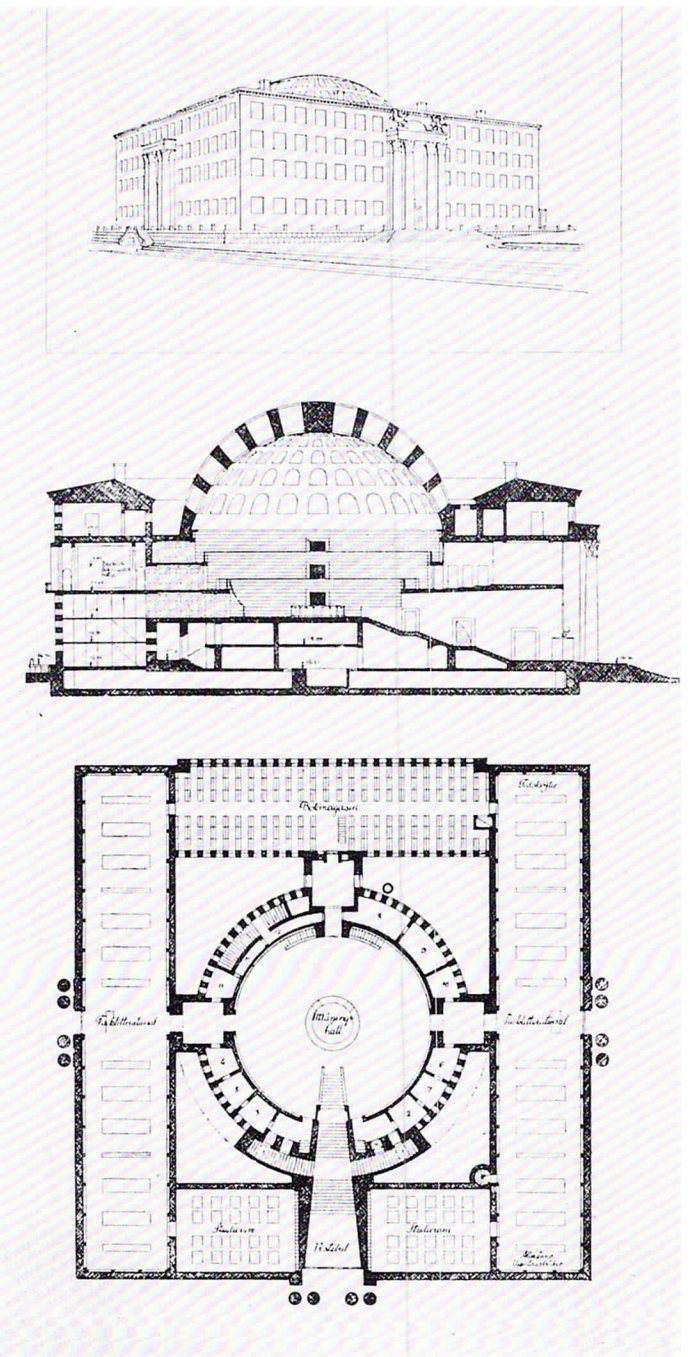
Helsinki University plan by the classicist Carl Ludwig Engel (fig. 23).[25] The Katarina Elementary School competition entry of 1928 by Nils Ahrbom and Helge Zimdhal (fig. 24) and that by the 'Plugget' group (fig. 25) point to the same typological descent[26] that informs Aalto's libraries at Seinäjoki, Rovaniemi (fig. 26), and Mount Angel in Oregon. A syntactic classification of these schemes into "classicist," "constructivist," or "accretional" does not hide their common typological progeny; in fact, it points up the transformational license that a typology grants itself when it trespasses stylistic boundaries.

However, Aalto's parallel studies concerning sectional typologies did not prove as fruitful as those pertaining to the plan or to the sensuous iconography. Perhaps the only maturely evolved sectional type remains that of the library reading room, where a finite room with depressed tiers of stacks, skylit at day and starlit at night, alludes to a confluent remembrance of Boullée's library and his starlit monument to Newton, or more directly to Gunnar Asplund's Stockholm Public Library of 1924–1928 (fig. 27).[27] The libraries at Rovaniemi, Seinäjoki, Reykjavik, and Mount Angel in Oregon reinstate in a variety of permutations the same sectional type that first emerged in 1927 at Viipuri (fig. 29) and which almost twenty years later was salvaged intact amid the floors of the Helsinki Pensions Institute (fig. 28).

Perhaps the example in Aalto's work that best shows his conscious decision to allude to a diachronically evolving type is the emergence of the final plan for the Villa Mairea. Before the well-known *parti* of the Villa Mairea was arrived at, there existed in fact two other schemes:[28] The first was a shed, a primordial cottage, a rustic hut with a pitched roof and in the concise form of a rectangle (fig. 30). Mrs. Gullichsen is recorded to have exclaimed to Aalto, "Well, we asked you to make something Finnish but in the spirit of today."[29] The second scheme was already very close to the final project, with the reception rooms in the main wing and the auxiliary spaces—kitchen, maid rooms, etc.—along the thin tail (fig. 31). The dining room was at the precarious junction of the L-shape, stabilizing it by protruding out and changing the bend of the



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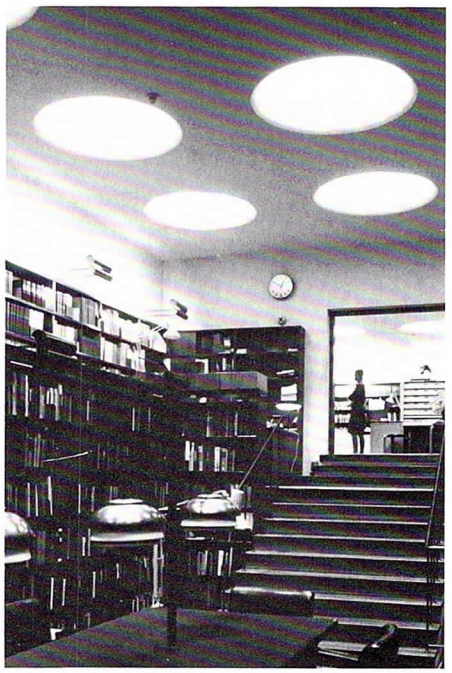
28 Public Pensions Institute Library, Helsinki. Alvar Aalto, 1948.
29 Municipal Library, Viipuri. Alvar Aalto, 1927.
30 Villa Mairea, Noormarkku. Alvar Aalto, 1937. First scheme.
31 Villa Mairea, Noormarkku. Alvar Aalto, 1938. Second scheme.
32 Barritskor Manor House, Jutland. Reconstructed by Gotfred Tvede, nineteenth century.
33 Project for a villa. P. V. J. Klint, 1905.
34 Villa at Djursholm. Gunnar Asplund, 1919.
35 Villa Abbas. Gösta Juslén, 1933.



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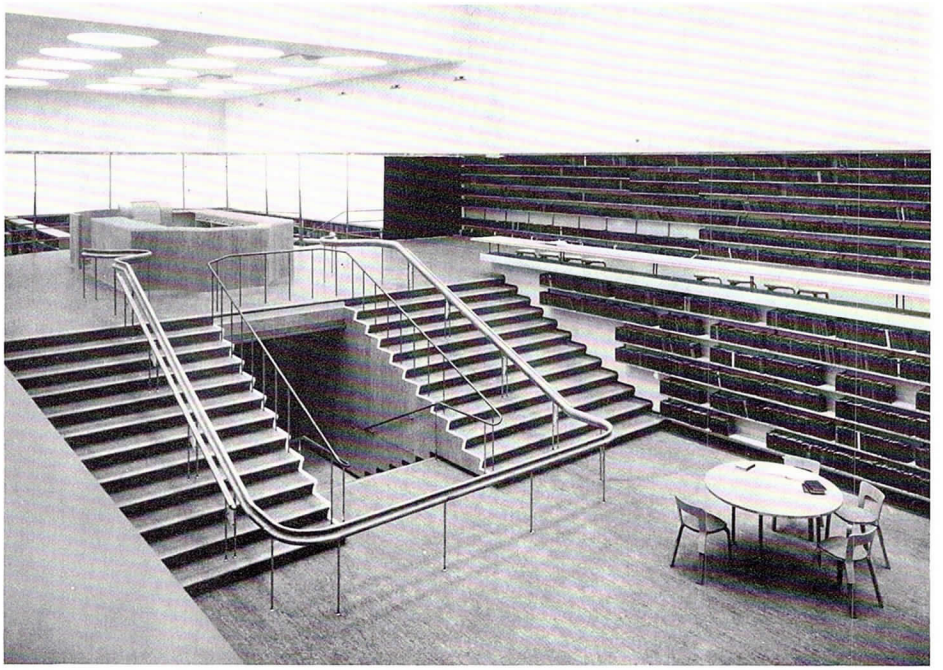

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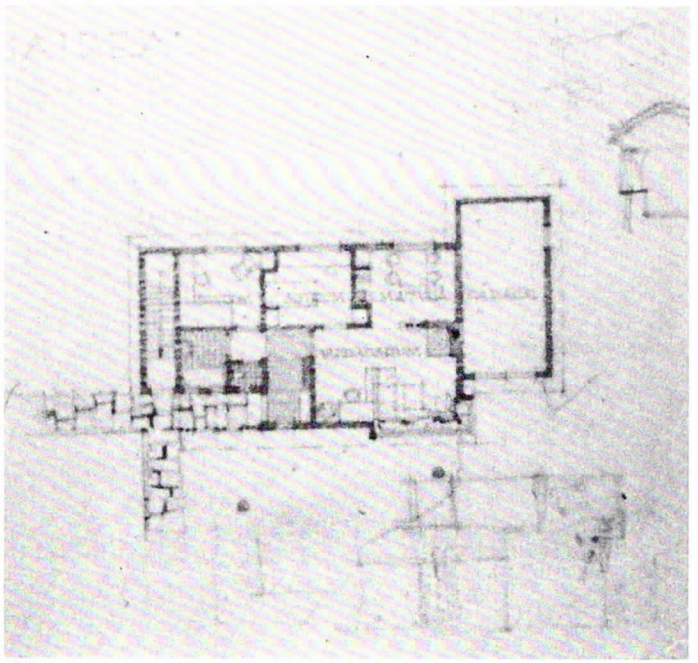

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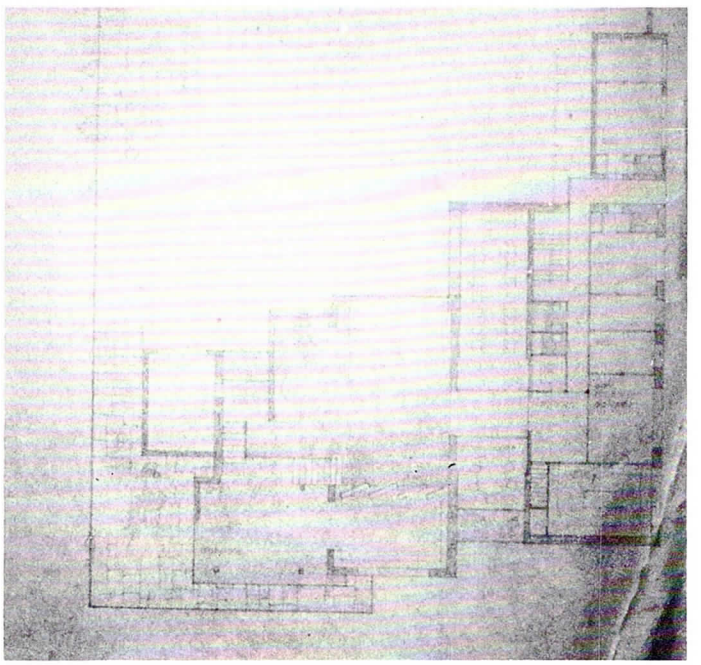

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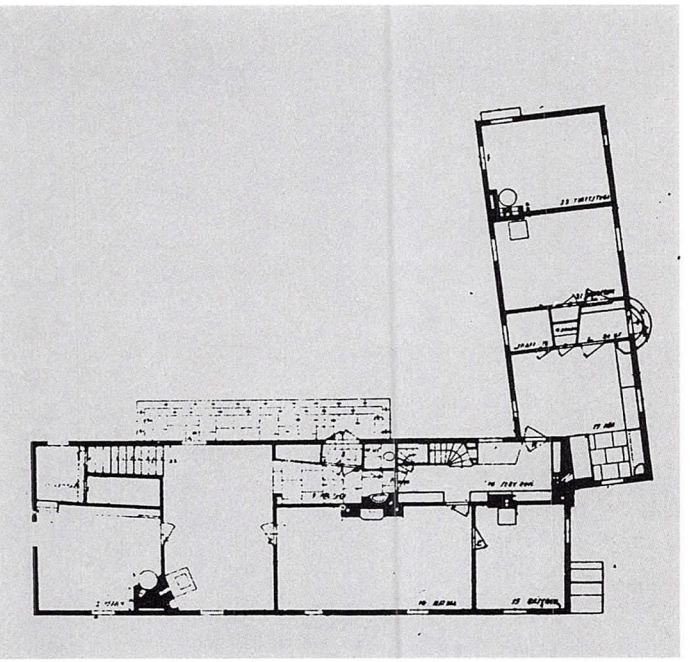

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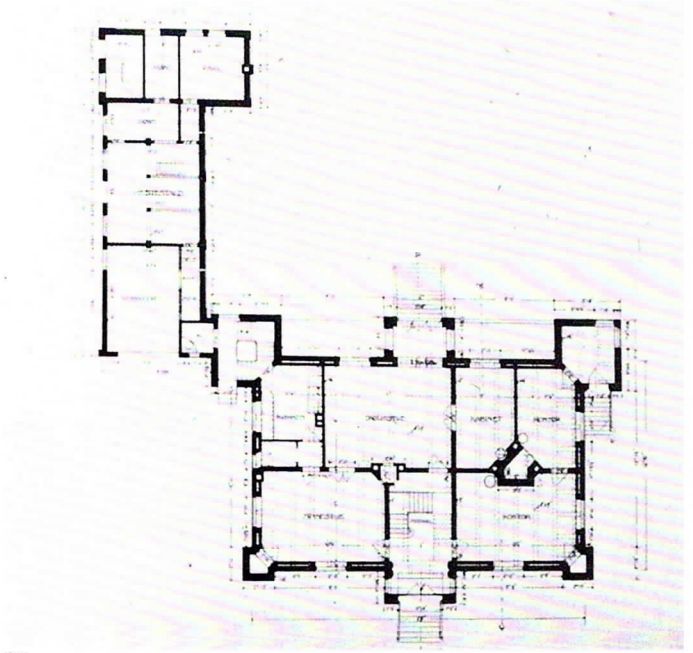

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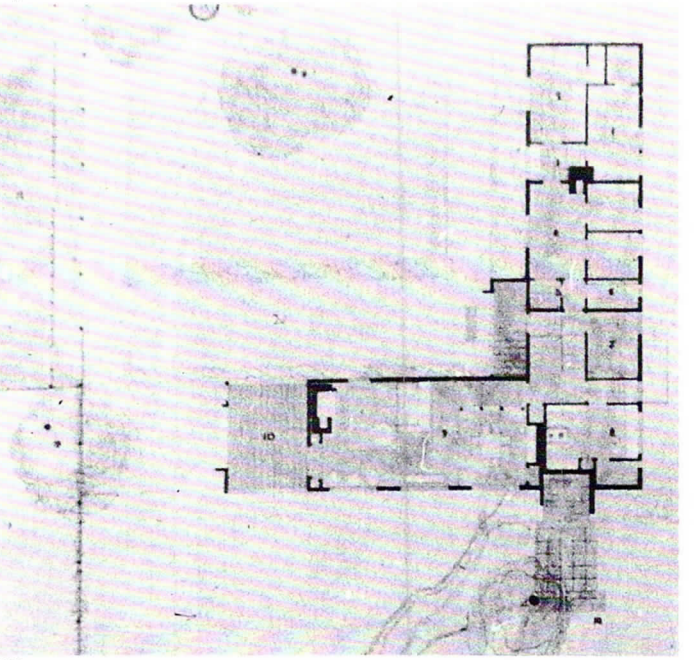

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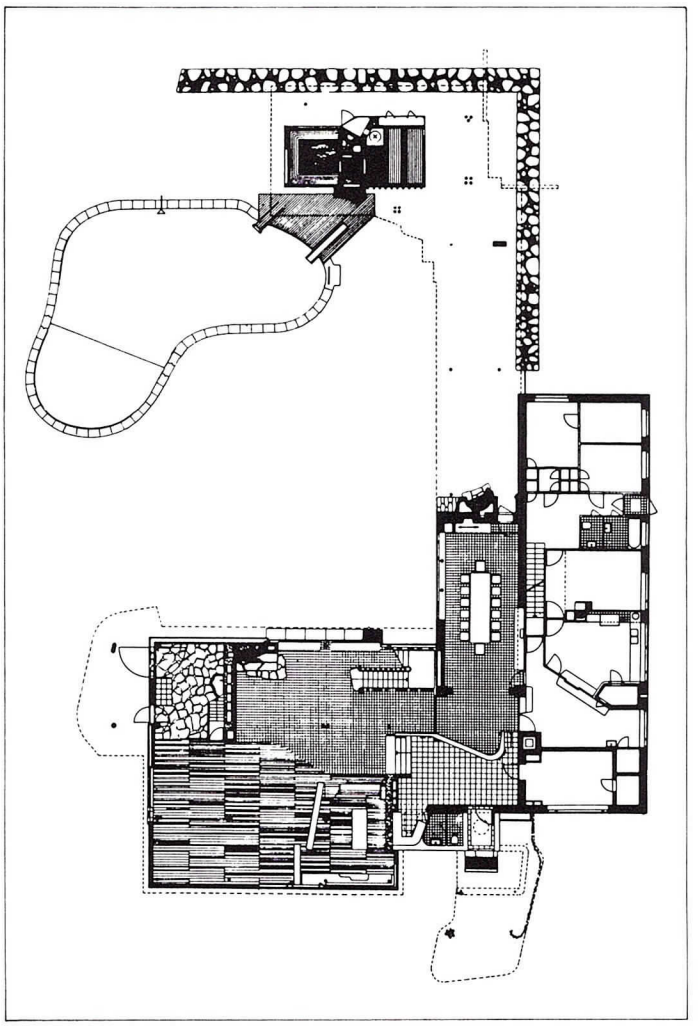
36 Architect's House, Munkkiniemi.
Alvar Aalto, 1934.
37 Kaukopää Villa. Väinö
Vähäkallio, 1934.
38 Villa Mairea, Noormarkku.
Alvar Aalto, 1938. Final scheme.



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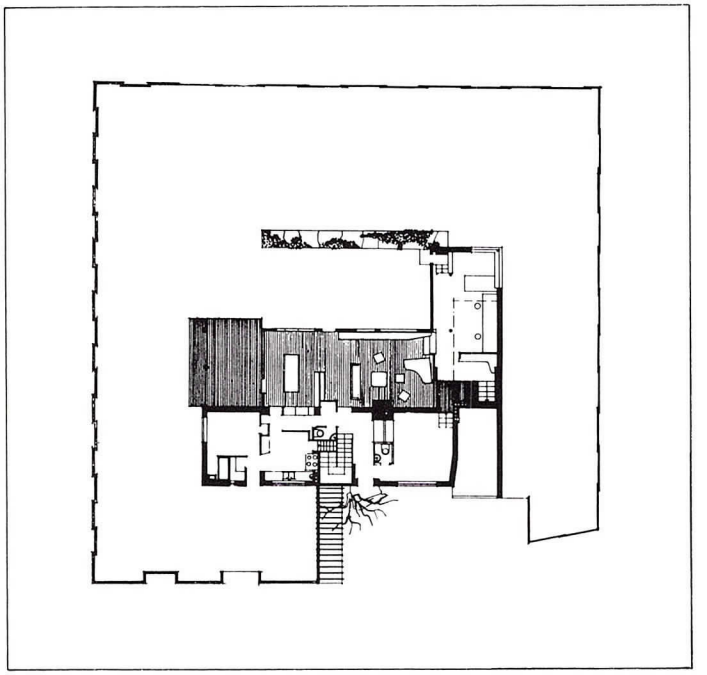

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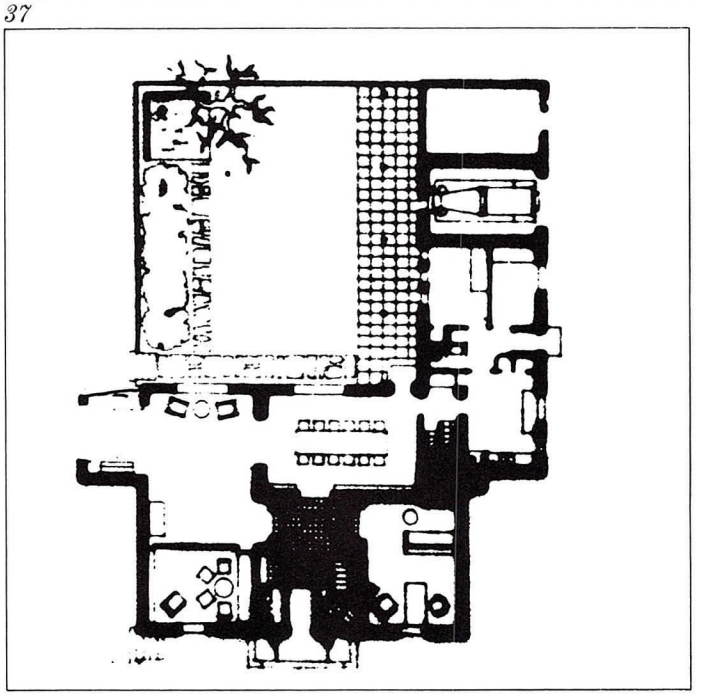

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corner, yet entry was not frontal but from the left side. These gestures, however, become significant only when one traces the background of the aristocratic Scandinavian residence and its transposition to the twentieth-century bourgeois villa. The Danish aristocratic manor, as for example the Barritskor Manor at Jutland (fig. 32), was a compact classicistic villa in plan with a wing for servants and domestic preparation added to its side. The wing was thinner, lower, more underplayed, and hierarchically inferior.[30] P. V. J. Klint, the foremost exponent of the Danish Arts and Crafts and one who consciously appealed to traditional paradigms, referred to the same type, though shifting from a classicistic to a more rural morphology (fig. 33).[31] In 1919, Gunnar Asplund utilized the type in his Villa at Djursholm (fig. 34), and although entry is from the court side, the hierarchy set up between the two blocks as well as the L-shaped plan refer vividly to the Danish prototype.[32] In 1933, Gösta Juslén in his Villa Abbas (fig. 35)[33] fused the two wings, allowing one to become a large living room, and in 1934 Aalto designed his Munkkiniemi house in the form of a compact, frontally entered block with a small finger extension for services, pushing the living room to the back of the main block (fig. 36). In 1936, Väino Vähäkallio in his Kaukopää Villa (fig. 37) attempted a profanation of the type in scale and materials, introducing a porch in the service wing while keeping the frontalized entry and the dining room at the junction of the two blocks.[34] In 1937–1938, Aalto produced the final scheme for the Villa Mairea (fig. 38). Here the planimetric type is clearly reasserted: the L-shape, the relative hierarchies of the two wings, the dining room at the junction, the vertical distinction between living and sleeping, the frontalized entry, the porch as an extension of the service wing, and the garden-court behind all indicate his typological mind.

"Nothing old is ever reborn. But it never completely disappears either. And anything that has ever been always reemerges in a new form."[35] Within this innocent notion of the type, within the questions it raises, the priorities it underlines, and the systems of notation or classification it establishes, there lies a whole rationality of thinking that is distinctly alien to the Modernist mind of the twenties and thirties. Against Hannes Meyer's "all things in this world are a product of the formula: function times economy,"[36] Aalto sets his unreserved belief in the nineteenth-century conception of the type as the tool par excellence that validates form. The planimetric, sectional, or iconographic type becomes a reference that allows qualification, a measure by which to classify, a remembrance that legitimizes. It establishes a common visibility against which the profusion of forms can be sorted out, sanctioned, or discredited, for in it merge a people's memories and daily experience.

Aalto's typological mind and his linguistic understanding of the type—his realization that it is born from an arbitrary, conventional social pact—has had a major consequence for the understanding of history which the historians of Modernism have cleverly silenced since it was incompatible with the theoretical postulations of the 'pioneers' and above all with the heavily cultivated scientistic and internationalist ideologies of the time. Orthodox Modernism and the nineteenth-century structural moralists, initiating an ontological bond between utility and representation, invalidated the designatory power of representation and set as their task a general taxonomy of the building program. The language of representation (and for that reason, style) had no evocative power over the Modernist mind, since it was neither an *a priori* nor an *a posteriori* fact but on the contrary was one and the same with honest construction and functional disposition. In the Modernist mind utility and representation were fused in an irreducible alliance; hence the ideological conceptualization of Modernism as being a stage beyond styles. And if representation had no linguistic or designatory power, it followed that history was irrelevant. The use of history for the Modernist designer was anathema, for there was nothing to seek in it; having lost his memory, he had no myths to animate his fantasies; he had demoted human existence to the singularity of today; he had confined his gaze to the monosemantic poverty of denotation. As a result, time—historical time—was invalidated. Hence the silencing of all discussions on ornament and style,[37] discussions which vividly animated the architectural discourse of the nineteenth century. Hence the silencing of

all typological thought,[38] the nineteenth-century mode of thought par excellence. Hence the tormented destiny of a never-ending frenetic innovation where novelty assumed moral dimensions.[39] And hence the unbearable emptiness of Modernism's representational codes, or better, its representational void—its inability to express, to signify, to codify, to draw, to read what was drawn, to like or to dislike. Aalto, in an attempt to avoid the impoverishment of cultural signification, reestablished the linguistic possibility of representation, set his unreserved belief in its conventional power to signify, understood that social propriety legitimizes form, adopted a typological frame of mind, and looked once again into history.

Between the inflexible determinism underlying the scientistic platform of Modernism[40] and Aalto's attempt to legitimize architecture on the grounds of culture, the difference is total. "By the word *culture*," writes Aalto, "I do not mean a kind of machine symbolism, but the balanced mentality which emerges from . . . straightforward everyday life. . . ."[41] The locus which now legitimizes architecture is no longer the laboratory where *science* accomplishes its technological strides, but *culture* conceived as an everyday consciousness, diffused in time and alert to the endless domain in which sensuous form betrays its multivalent myths.

Yet the power of typology to sanction form is not unfolded simply on the level of consciousness/representation but appears to be significantly immersed within the economic-political level. After World War II, one of the essential conditions for overcoming the ideological blockage (*cul de sac*) of capitalist production has been the idealization of its antipode: cultural apotheosis.[42] Typological thinking, carrying with it the necessary mechanisms for cultural celebration, has contributed both to a critique of capitalist production as well as to its transcendental eruption. It attempted—at a crucial point for the Modernist period—the impossible task of recapturing a demoted human mythology exactly when the reconstruction boom appeared for a moment to assure the realization of the long disputed yet ardently prophesied social salvation. Against Modernism's 'industrial plan'[43]—or rather, parallel to it and with the task of filling its positivistic lacunae—typological thinking has proposed a pluralist mythology of sensuous genres which, while not excluding the industrialized idiom, has reserved for craftsmanship the consummate cultural laurels. In short, typological thinking has functioned as the ultimate instrument in the attempt to reconcile mediated and unmediated production.

Source Note: A version of this article was originally published as "L'Eclat de la Memoire: An Essay on Alvar Aalto's Typological Conception of Design" in Architectural Design, *vol. 49, no. 5–6, 1979.*

1. A comparison between the classificatory minds of J. F. Blondel and J. N. L. Durand reveals the categorical shift that took place between the Enlightenment conception of character as physiognomy and that of character as utility of the early nineteenth-century polytechnicians. Blondel devotes the first volume of his *Cours d'Architecture* to an exhaustive cataloguing of architectural genres into so many architectures, such as "light, elegant, delicate, rustic, naive, feminine, mysterious, grandiose, audacious, terrible, dwarfish, frivolous, licentious, unpretending, uncertain, vague, barbaric, cold, poor, sterile, or futile . . ." (*Cours d'Architecture ou Traité de la Décoration, Distribution et Construction des Bâtiments contenant les leçons données en 1750 et les années suivantes* [Paris: Chez Desaint, 1771–77], vol. I, p. 412). In 1800, Durand opened his *Recueil* with an alphabetical table where the various building genres are divided into "Amphitheatres, Libraries, . . . Colleges, . . . Granaries, Grottoes, . . . Villas, Markets, Menageries, Mosques, . . . Pagodas, Palaces, Palestras, Lighthouses, . . ." (*Recueil et Parallèle des Édifices de tout Genre, Anciens et Modernes, remarquables par leur beauté* [Paris: Gillé Fils, 1800]). What changed from Blondel to Durand was the field of designation within which it was possible to describe a building and name it. To the Enlightenment, the sensuous physiognomy of a building was a spectacle. To Durand, a building owed its character to its use, its purposive destiny.

2. Léonce Reynaud, *Traité d'Architecture* (Paris: Librairie Dalmont et Dunod, 1860), vol. I, p. 10.

3. Eugène Emmanuel Viollet-le-Duc, *Entretiens sur l'Architecture* (Paris: Chez Morel, 1863), vol. I, p. 186.

4. Around the 1860s Reynaud and Viollet-le-Duc promoted the moralization of structure/construction as the sole generator of architectural form. As a consequence, the linguistic model that reigned during the Enlightenment was replaced by an ontology of construction. Following the moralization of structure/construction, a number of architectural thinkers (Viollet-le-Duc, Ruskin, Pugin) attempted to link the 'truth' of architecture with that of society by launching Gothicism as the only true style, since in the very alliance it established between construction and medieval life, Gothicism was thought to be synonymous with the building's constructional nature as well as the builder's disalienated social nature.

5. In architecture, the etymological tradition of the term "propriety" has been long and controversial. We should only mention that Aalto's conception of propriety seems to be closer to the practical-social implications of the eighteenth-century conception of *convenance* rather than to the nineteenth-century understanding of propriety as "convenience to use, fitness, or expediency."

6. "An ideology is a system (with its own logic and rigor) of representations (images, myths, ideas or concepts, depending on the case) endowed with a historical existence and role within a given society. . . . Ideology (as a system of representations) is indispensable to any society, if men are to be formed, transformed and equipped to respond to the demands of their conditions of existence . . . In fact, ideologies are perceived-accepted-suffered cultural objects and they act functionally on men via a process that escapes them . . . In short, the 'lived' relation between men and their world, including history, passes through ideology, or better *is* ideology itself." Louis Althusser, *Pour Marx* (Paris: Maspero, Collection Théorie, 1965), pp. 240–42.

7. Alvar Aalto, "L'Oeuf de Poisson et le Saumon," *Arkkitehti*, vol. 1–2, 1948, p. 9.

8. Against the Hegelian tradition of the "natural fusion of form and content," Ferdinand de Saussure proposed that of the "arbitrary" connection between 'signifier' and 'signified', stressing in that way the conventional pact that endows form with significance. In his *Course in General Linguistics* (New York: McGraw-Hill, 1966), pp. 68–69, he writes: ". . . arbitrary . . . means that it [the sign] is unmotivated, i.e., arbitrary in that it actually has no natural connection with the signified."

9. In his *Essai sur la Nature, le But et les Moyens de l'Imitation dans les Beaux-Arts* (Paris: Imprimerie de Jules Didot, 1823), p. 3, Quatremère de Quincy writes: "To imitate in the Fine Arts, is to produce a resemblance of a thing, but in some other thing which becomes the image of it. It is precisely the fictitious and the incomplete within each of the arts that constitutes them as arts." Therefore, the arts have by definition a necessary recourse to types, conceived ". . . not as image[s] of a thing to be copied or completely imitated, but as idea[s] which in themselves ought to serve as guiding rules." *Dictionnaire Historique d'Architecture* (Librairie d' Adrien le Clerc, 1823), vol. II, p. 629.

10. "For almost twenty-five years (from 1907, which saw the appearance of Vilhelm Wanscher's first articles on Neoclassicism and the founding of the 'Skønvirke' Organization by Jensen Klint and Jens Møller-Jensen, to the 1930 exhibition in Stockholm, when both the Neoclassical and vernacular devotions dissolved—at least phenomenally—in lieu of the institutionalized European Modernism) the seemingly contradictory sensibilities of classicism and vernacular reigned with equal validity. . . . This compatibility which belonged logically within the essentialist aspects of the classico-vernacular sensibility had been systematically formulated in the numerous writings on classicism and vernacular that featured in the pages of the Danish and Swedish reviews *Architekten* and *Arkitektur* (and *Byggmästaren* from 1922 onwards). . . . Having been trained amidst a spirit of artisanship and folk tradition, while at the same time having seriously listened to the teachings of the German and Danish art historians A. E. Brinkmann and V. Wanscher, the Swedes Ivar Tengbom, Carl Bergsten, Torben Grut, Cyrillus Johansson, Eskil Sundahl, Sigurd Lewerentz or Gunnar Asplund and the Danes Carl Petersen, Hack Kampmann, Edvard Thomsen, Kay Fisker, Aage Rafn, or Ivar Bentsen practiced concurrently classicism and vernacular in the ultimate hope of unveiling the 'true' and 'primary essence' of the architectural act." Demetri Porphyrios, "Facce Reversibili, Reversible Faces," *Lotus International*, vol. 16, pp. 35–41. With the occassional exception of J. S. Sirén, Erik Bryggman, and Alvar Aalto as well as Arnstein Arneberg and Magnus Poulsson, twentieth-century Neoclassicism in Finland and Norway was rather short-lived, mainly because of the dom-

inance of National Romanticism.
11. Bruno Taut, *Die Stadtkrone* (Jena, 1919).
12. The entries for the Palais des Nations competition were published in *Byggmästaren*, 1927, vol. 6, pp. 193–208 (that of Eskil Sundahl appears on p. 202).
13. Högström's Stockholm Central Station competition appeared in *Byggmästaren*, 1922, vol. 1, pp. 120–121.
14. There is no point in compiling an exhaustive list of the works where Aalto has used such iconographic references. The following selected examples are meant only as indicative instances. For the iconographic type of the entry-portico, see the library entry of the Otaniemi Institute of Technology; for that of the campanile, see his church schemes; for that of the classical orders, compare the classicizing wood column found in his early church remodeling jobs to the Doric heaviness of those in the Jyväskylä Police Station, as well as the composite ribbed columns of the Seinäjoki Church or the composite pilasters in the foyer of the Otaniemi Institute of Technology; for the iconography of the classical temple, see the professors' restaurant at the Jyväskylä Academy; for that of the Miesian curtain wall, see the connection between the Finlandia Hall and the later International Conference Center extension; for that of the Greek theater, see his fan-shaped exercises, as for example that of the House of Culture in Helsinki; for that of the skyscraper, see his high-rise scheme for the Forum Redivivum in Helsinki; for the iconography of the Sienese marble coursing, see the piazza elevation of the Wolfsburg Cultural Center; for the iconography of the primitive rustic hut, see the sauna at the Villa Mairea; or finally for that of the crenellated castle, see the modulations of the exterior elevation of the Säynätsalo.
15. *Suomen Rakennustaidetta/Byggnadskonst i Finland/ Architecture in Finland* (Helsinki: Suomen Arkkitehtiliitto, 1932), p. 14.
16. Aalto Archives, Munkkiniemi.
17. Ibid.
18. Ibid.
19. Alvar Aalto, "L'Oeuf de Poisson et le Saumon," p. 9.
20. Antoine-Chrysostôme Quatremère de Quincy, *Dictionnaire Historique d'Architecture*, p. 629.
21. Alvar Aalto, "Town Planning and Civic Architecture," *Arkkitehti*, vol. 3–4, 1967, p. 38.
22. Ibid.
23. Sigurd Frosterus, Vanajankartano Manor House remodeling, *Arkkitehti*, vol. 10, 1930, p. 193.
24. The entries for the Karolinska Institute competition were published in *Byggmästaren*, vol. 16, 1937, pp. 135–46 (the projects of Gustaf Birch-Lindgren and K. W. Ottesten appear on p. 143).
25. Carl Ludwig Engel was invited to Helsinki by Johan Albert Ehrenström (the author of the 1817 Helsinki plan) and was given full architectural control of the new capital. He was German by origin, a fellow student of Schinkel, and had studied in Italy and Berlin. See *Carl Ludwig Engel*, exhibition catalogue, Suomen Rakennustaiteen Museo and Kunstbibliothek Berlin (Berlin, October 1970).
26. The entries for the Katarina Elementary School competition were published in *Byggmästaren*, vol. 7, 1928, pp. 81-8 (that of Nils Ahrbom and Helge Zimdahl appears on p. 81; that of the 'Plugget' group appears on p. 84).
27. Gunnar Asplund's Stockholm Public Library was published in *Architekten*, vol. XXV, 1923 (article on Swedish architecture, pp. 173–95). Also see vol. XXXI, 1929, pp. 213–28. Aalto's "E. G. Asplund in Memoriam," which appeared in the *Arkkitehti* of 1940, p. 81, shows the respect he always felt towards Asplund. On Asplund see G. Holmdahl, S. I. Lind, K. Ödeen, eds., *Gunnar Asplund Architect, 1885–1940*, text by Hakon Ahlberg (Stockholm: Svenska Arkitekters Riksförbund, AB Tidskriften Byggmästaren, 1950).
28. My attention was drawn to these two schemes by Mrs. Mairea Gullichsen. Aalto Archives, Munkkiniemi.
29. Quotation from a private discussion with Mrs. Gullichsen at the Villa Mairea during the summer of 1975.
30. *Modern Danish Architecture*, Kay Fisker and F. R. Yerbury, eds. (London: Ernest Benn Ltd., 1927), p. 14.
31. P. V. J. Klint's work is discussed in an article in *Architekten*, vol. IX, 1906–1907, pp. 165–9.
32. Asplund's Villa at Djursholm appeared in an article on Swedish architecture, *Architekten*, vol. XXV, 1923, pp. 173–95.
33. Juslén's Villa Abbas appeared in *Arkkitehti-Arkitekten*, vol. XIII, 1933, p. 154.
34. Vähäkallio's Kaukopää Villa appeared in *Arkkitehti-Arkitekten*, vol. XVI, 1936, p. 123.
35. Alvar Aalto, "Painters and Masons," *Jousimies*, 1921.
36. Hannes Meyer, "Bauen," *Bauhaus*, Year 2, no. 4.
37. "I have made the following discovery and I pass it on to the world: The evolution of culture is synonymous with the removal of ornament from utilitarian objects . . . Weep not! See, therein lies the greatness of our age, that it is incapable of producing a new ornament. We have outgrown ornament; we have fought our way through to freedom from ornament." Adolf Loos, "Ornament und Verbrechen," *Trotzdem 1900–1930* (Innsbruck: Brenner Verlag, 1931).
38. "The new architecture is formless and yet exactly defined; that is to say, it is not subject to any fixed aesthetic formal type. . . . In contradistinction to all earlier styles, the new architectural methods know no closed type, no basic type." Theo van Doesburg, "Towards a Plastic Architecture," *De Stijl*, XII, 6/7 (Rotterdam, 1924), paragraph 5.
39. "This (Futurist) architecture cannot be subject to any law of historical continuity . . . we have enriched our sensibility by a taste for the light, the practical, the ephemeral, and the swift." Antonio Sant'Elia and Filippo Tommaso Marinetti, *Manifesto of Futurist Architecture* (Milan, 1914).
40. ". . . Architecture is the will of the age conceived in spatial terms . . . Not yesterday, not tomorrow, only today can be given form . . . Create form out of the nature of the task with the means of our time . . . The office building is a house of work, of organization, of clarity, of economy. Bright, wide workrooms, easy to oversee, undivided except as the organism of the undertaking is divided. The maximum effect with the minimum expenditure of means. The materials are concrete, iron, glass . . . A construction of girders that carry the weight, and walls that carry no weight. That is to say, buildings consisting of skin and bones." Ludwig Mies van der Rohe, "Working Theses," *'G' Ma-*

terial zur elementaren Gestaltung (Berlin, July 1923). In his *Theory and Design in the First Machine Age*, Reyner Banham gave to the "love it or leave it" hymns of Bruno Taut's *Frühlicht* writings a content that was meant to be both real and irrevocable. A comparison between these texts reveals the determinist legacy that ran through the first half of this century. "How day will eventually break—who knows? But we can feel the morning. We are no longer moonstruck wanderers roaming dreamily in the pale light of history. A cool early morning wind is blowing around us; he who doesn't want to shiver must stride out." Bruno Taut, *Frühlicht*, 1921. "The architect who proposes to run with technology knows now that he will be in fast company, and that in order to keep up he may have to emulate the Futurists and discard his whole cultural load . . . If, on the other hand, he decides not to do this, he may find that a technological culture has decided to go on without him." Reyner Banham, *Theory and Design in the First Machine Age* (London: The Architectural Press, 1970), pp. 329–30 (the text, as stated in the introduction, "was conceived and written in the late years of the nineteen-fifties").

41. Alvar Aalto, "The Problem of our Housing," *Domus*, 1930.

42. "Wherever technology reaches its real fulfillment, it transcends into architecture. It is true that architecture depends on facts, but its real field of activity is in the realm of significance. I hope you will understand that architecture has nothing to do with the inventions of form. It is not a playground for children, young or old. Architecture is the real battleground of the spirit." Ludwig Mies van der Rohe, "Technology and Architecture," speech delivered to the IIT in 1950, quoted from Philip Johnson, *Mies van der Rohe* (New York: Museum of Modern Art, 1954), p. 204. "Modern architecture has been rationalized mainly from the technical point of view, in the sense that the technical functions have been emphasized . . . It is not the rationalization itself which was wrong in the first and now past period of Modern architecture. The wrongness lies in the fact that the rationalization has not gone deep enough. Instead of fighting rational mentality, the newest phase of Modern architecture tries to project rational methods from the technical field out to human and psychological fields." Alvar Aalto, "The Humanizing of Architecture," *The Architectural Forum*, Dec. 1940, pp. 505–6. See also Alvar Aalto, "Zwischen Humanismus und Materialismus," *Baukunst und Werkform*, no. 6, 1956, pp. 298–300.

43. I refer to Manfredo Tafuri's argument underlying his book *Architecture and Utopia, Design and Capitalist Development* (Cambridge, Mass.: MIT Press, 1976). Discussing architecture between 1920 and 1930, Tafuri writes: "What was clear was its 'political' role. Architecture—read programming and planned organization of building production and of the city as a productive organism—rather than revolution. Le Corbusier clearly enunciated this alternative" (p. 100). Later in the book (p. 135) he continues, "Architecture as ideology of the plan is swept away by the reality of the plan when, the level of utopia having been superseded, the plan becomes an operative mechanism."

Figure Credits

1, 10, 19, 21, 26 From *Alvar Aalto 1963–1970* (New York: Praeger, 1971).
2 Courtesy the Finnish Museum.
3, 5, 13–16, 30, 31 Courtesy the Aalto Atelier.
4 From *1776–1976 Zwei Hundert Jahre Berlin* (Berlin, 1977).
6 From *Byggmästaren*, 1927.
7, 8 From *Byggmästaren*, 1922.
9, 11, 18, 28 Courtesy the author.
12 From *Suomen Rakennustaidetta/Byggnadskonst i Finland/Architecture in Finland* (Helsinki: Suomen Arkkitehtiliitto, 1932).
17, 29, 36, 38 From *Alvar Aalto* (Zurich: Editions Girsberger, 1963).
20 From *Arkkitehti*, 1930.
22 From *Byggmästaren*, 1937.
23 From exhibition catalogue, *Carl Ludwig Engel* (Berlin: 1970).
24, 25 From *Byggmästaren*, 1928.
27, 34 From *Architekten*, 1923.
32 From Kay Fisker, ed., *Modern Architecture in Denmark* (Copenhagen: The Society of Academical Architects in Denmark, 1925).
33 From *Architekten*, 1906–1907.
35 From *Arkkitehti*, 1933.
37 From *Arkkitehti*, 1936.

1

The Remoteness of *die Moderne*

Francesco Dal Co
Translation by Stephen Sartarelli

1 View of the Deutsche Werkbund Exhibition site from the bank of the Rhine, 1914.

The *distance* separating us from the writings of Adolf Behne, whose "Kunst, Handwerk, Technik" is being republished here, is far greater than that represented by the number of years that have passed since this essay was first published in *Die neue Rundschau:* it is the distance which has come between us and the *foundations of the modern*, and which still has much bearing on the absolute precariousness of our situation. "Kunst, Handwerk, Technik," written in the age of the early avant-gardes—an age much unlike our own—is in fact a rare exception, an unorthodox offshoot of the turn of the century German debate centered around *"die Moderne,"* the title of Herman Bahr's famous essay-manifesto which appeared in *Moderne Dichtung* in 1890. In this sense we should not expect to find too much contemporary "relevance" in a vestigial document so historically distanced from our own condition.

The period in which Behne wrote these pages was special, both in his intellectual evolution and in the history of German culture. In 1922, when the essay appeared in *Die neue Rundschau*, the deep wounds suffered by German culture during the war had not yet healed, although the atmosphere in intellectual circles was returning to normal. Even among the various groups which brought together artists and architects of the avant-garde, the acute tensions of the immediate postwar period were giving way to a more relaxed atmosphere. Almost a year had passed since the official termination of the *Arbeitsrat für Kunst* experiment; however its accomplishments were to have a profound influence on the subsequent developments in German architectural culture. Behne had performed important functions in the *Arbeitsrat* as one of the group's major protagonists. But by the time he wrote "Kunst, Handwerk, Technik" he had realized clearly that the "era of castles in the air" must be considered in the past, and that "residential utopias" for the future had to give way to the increasingly overwhelming intrusion of the *present*, to use terms typical of Behne's prose. In specialized reviews, as well as in journals of opinion and comment—from *Die Hilfe* to *Kunstgewerbeblatt*, from *Die Tat* to *Deutsche Kunst und Dekoration*, from *Die neue Rundschau* to *Sozialistische Monatshefte*, from *Weltbühne* to

Wasmuths Monatshefte für Baukunst, Behne became an attentive observer, as well as a penetrating analyst and an invaluable commentator, of this "present." Among these articles "Kunst, Handwerk, Technik" is representative of one of the more decisive moments in this period of intense journalistic activity, in theoretical relevance and cultural resonance. Catalogued by Janos Frecot in the first issue of the *Yearbook* of the Werkbund Archiv, this essay was published after the famous *Die Weiderkehr der Kunst*, the key work, set in Kurt Wolff typography that had been completed in 1918 and shortly before the no less important *Der Moderne Zweckbau*.

The themes of "Kunst, Handwerk, Technik" in some way all relate directly to the debates surrounding the Deutsche Werkbund since its founding in 1907. But while the essay is only one among many demonstrations of Behne's constant interest in the Werkbund, it is nevertheless the most representative.

Harmonischer Kultur?

The critical target of Behne's essay is marked at the outset: "In the preference for craftsmanship, a sentimental romanticism is revived once again before the consciousness of the time decisively turns away from the old." Such a *sentimentaler Romantizismus* was in fact one of the most recurrent themes of the German artistic-architectural debate and one which had already acquired prominence with the Werkbund. The question of re-establishing an organic unity of artistic operation and of reasserting through the achievement of such a unity the *guiding power* of the intellectual project was at the heart of its discussion. Had not Fritz Schumacher opened the guild's discussions in 1907, by speaking of *Die Wiedereroberung harmonischer Kultur*, the reconquest of a harmonious culture?

Against a long and complex cultural tradition of which the Spenglerian division of *Zivilisation* from *Kultur* represented the extreme development, the Werkbund took its stand mostly in the direction indicated by Schumacher. However, as exceptional a witness of his own time as was Ernst Troeltsch, Schumacher gave the modern world an unwaveringly pessimistic vision of itself, describing its movement as an unstoppable process of fragmentation, division, and separation, in which any hypothesis of organicity and unity seemed destined to be discarded as an impractical utopia. But unity and organicity are themselves the pregnant values of the *Kultur* which are unhinged by the multiplicity of *Zivilisation*. It was within such a dialectic that *die Moderne* delineated its own utopia, from the end of the nineteenth century on: a "vitalistic" program aimed at activating the mind in the face of the world's extreme mobility and at rechanneling artistic work back into the flow of societal evolution. In this way German architectural culture began to develop an idea of *the modern*.

Hermann Bahr's original essay was itself based on an intellectual tradition whose specific characteristics became distinguishable around 1850, and specifically in the series of World's Fairs initiated by the Great Exhibition of 1851 in London. Alf Bøe has demonstrated that the London exhibition, dominated by the extraordinary constructions of Paxton, paved the way for a new phase of theoretical work that involved questions of a purely technical and economic nature as well as more general problems of a cultural and aesthetic order. But if in England the vast journalistic and theoretical coverage following the London exhibition was optimistic for the progress of theory and experiment, the same processes manifested themselves considerably later, asserting themselves much more slowly.

Perhaps the direct precedent for the important transitions in German cultural and political debates toward the idea of *die Moderne* was Franz Reuleaux's famous *Briefe aus Philadelphia* of 1877. The first of the ten letters that Reuleaux sent from the Philadelphia World's Fair of 1876 states a theme which is to be discussed continually through the following decades within the various programs aimed at the re-establishment of a movement of the applied arts and architectural practice in Germany.

Reuleaux is highly critical of the "inadequacy" of the German entries for the Philadelphia exposition, of their "back-

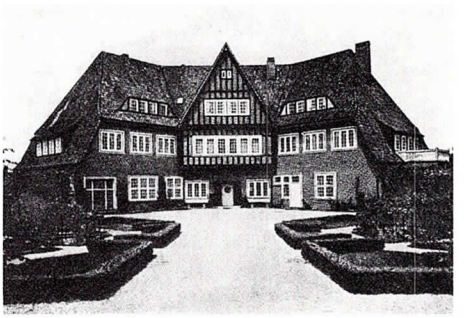
wardness," competitively or culturally as representing German industrial production. *"Deutschlands Industrie-hat das Grundprinzip 'billig und schlect'*," "the basic tenet of German industry," wrote Reuleaux in his first letter, "is 'cheap and bad'."

"Quality" and "price," efficiency of product and commercial considerations, aesthetic preoccupations and functional precision, in a word: *art and economy*—are here considered as equal, an indication of the problem around which the search for *the modern* is to be articulated. Reuleaux's *Briefe* here leads us to reconsider Hermann Bahr's "manifesto." What does it mean, in the realm of architectural research, "to activate the mind," to render it capable of reacting to the "stimuli of the age," to put artistic research back in step with society, to make architecture and applied art (*Kunstgewerbe*) measure up to the demands and inclinations of the metropolitan public, to welcome the "challenges" of metropolis (*Grossstadt*) and shortly after to confront the questions that Georg Simmel raises—what can all this mean for architectural culture except that it should become an expression of the need to overcome the economic principle of *billig und schlecht* denounced by Reuleaux? Does not rechanneling artistic research back into the "demands of the times" really mean making it a participant in a new phase of the development of industrial society, uniting its goals with the broader goals of commerce and the penetration of German goods into foreign markets, updating its modes of production and research to match those typical of large modern industry, directing its dialogue with the public according to the terms of a new discourse with the masses of metropolitan consumers? Are these not perhaps the exact terms of the question as it is posed by Reuleaux? And do we not find them again, substantially unchanged, within the debates of the Werkbund after 1907? And finally, is all this not really part of that same system of theories which considers the nineteenth-century World's Fairs to be a decisive turning point in the history of the modern Western world, as Walter Benjamin noted?

But Reuleaux's *Briefe* provides a further index to the complex tangle of problems that comprise the idea of *the modern*. His final letters contain a veritable hymn to the triumphs of America's great young industry as a model of efficiency, of productive rationality, of technical quality, of formal sobriety, and of the ability to plan by "sticking to the goal." These are, of course, the same characteristics which inspired the great German entrepreneurs close to the Werkbund, such as Walter Rathenau, to study assiduously the "American model," and Reuleaux has clearly demonstrated the origins of the fascination that America held both for the theoreticians of *die Moderne* and for the later experimentalists of the European avant-gardes.

Architectural culture accepted, only to refute the "challenges" that we alluded to earlier; to a great extent it became a vehicle for the demand for *organicity* and the re-establishment of the preeminence of *Kultur* over the precariousness of *Zivilisation*. Because of this, in hoping for the return to a *harmonischer Kultur* architecture ended up by favoring the problem of *quality* over the rest of the problems comprised in the dialectical tangles pointed out by Reuleaux. A large number of the debates in the Werkbund were devoted to the question of artistic practice and the significance of "concrete labor," to use this typically Marxian expression. From the theories of the Werkbund there emerged, often overwhelmingly, a hypothesis which posited the design function as the basis for the harmonizing power of artistic work: this function not only guarantees the survival of certain forms of labor which would otherwise be destined to disappear, it also restores meaning to handicrafts, safeguarding the fundamental *value* preserved by artisan work on behalf of a restored "harmonious culture." This value is that of skilled, experienced, widespread knowledge of the modes of production, of an organic merging of ideation and production; it is control over technique, exercised through craft; it is proven quality; and finally, as Adolf Behne would say, it is *naturalism*.

With certain exceptions, the entire Werkbund debate on the question of *Kunstgewerbe*—for example regarding such things as the organization's programs for reforming the teaching of the applied arts, not to mention the consequences that the debate generated and that exerted a



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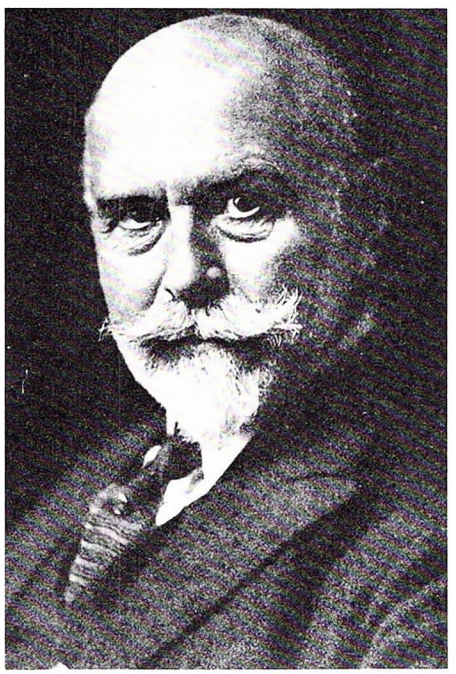

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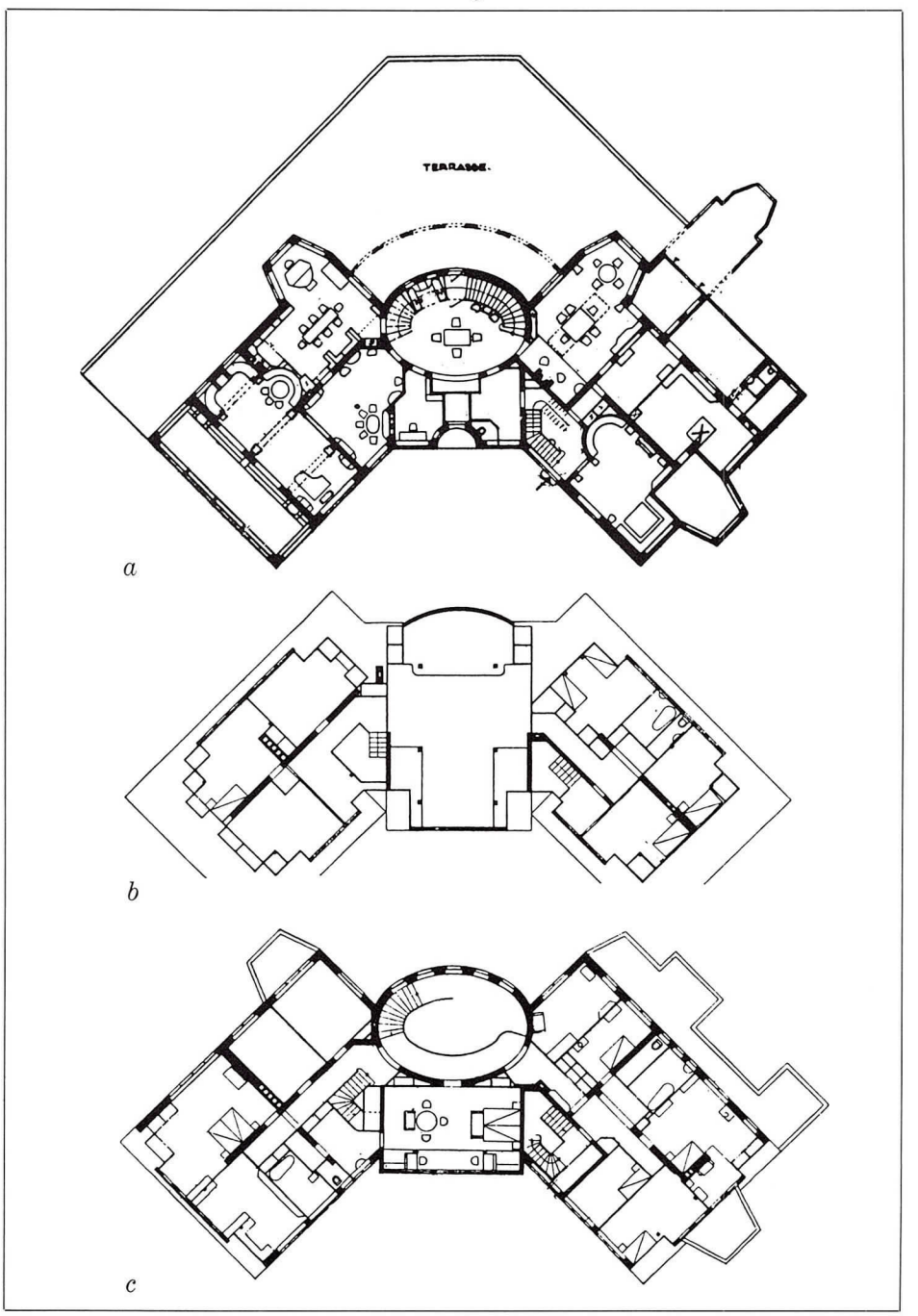

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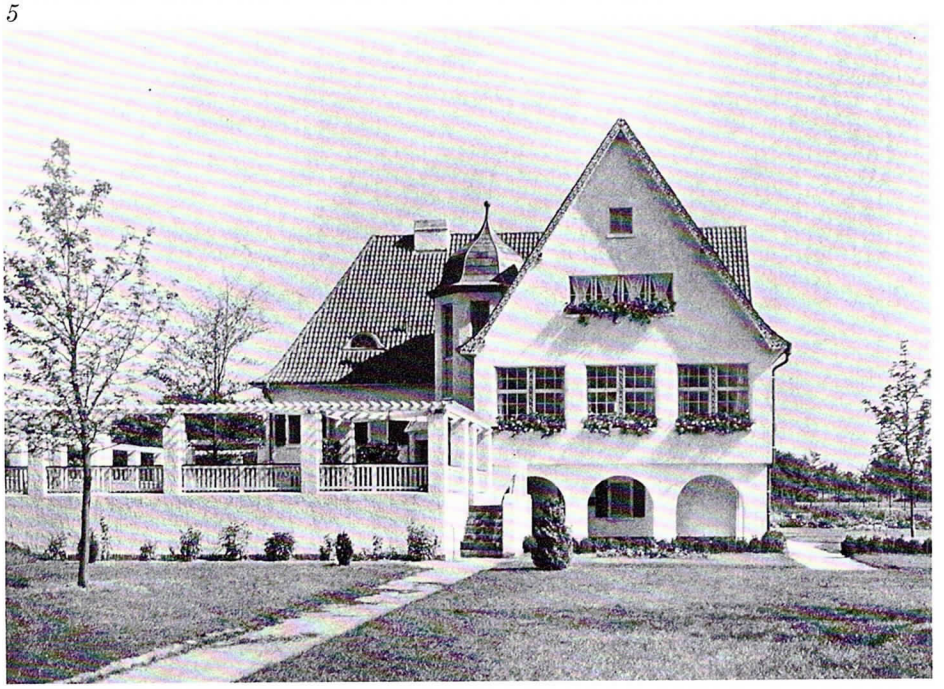

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2 Hermann Muthesius (1861–1927). Photograph taken in 1925.
3 Freudenberg House, Berlin-Nikolassee. Hermann Muthesius, 1907–1908. Front facade.
4 Freudenberg House, Berlin-Nikolassee. Hermann Muthesius, 1907–1908: a) plan of entry court and first floor, b) plan of second floor, c) plan of third floor.
5 Schönstedt House, Duisburg. Hermann Muthesius, 1911. Living room.
6 Wegmann country house, Rhede. Hermann Muthesius, c.1910.

7 Kersten & Tuteur department store, Berlin. Hermann Muthesius, c.1912.
8 Pavilion for the Hamburg-Amerika Line, Deutsche Werkbund Exhibition, Cologne. Hermann Muthesius, 1914.
9 Pavilion for the Hamburg-Amerika Line. Corridor with backlit glass photos.
10 Pavilion for the Hamburg-Amerika Line. Kaiser's suite on the steamship "Bismarck."

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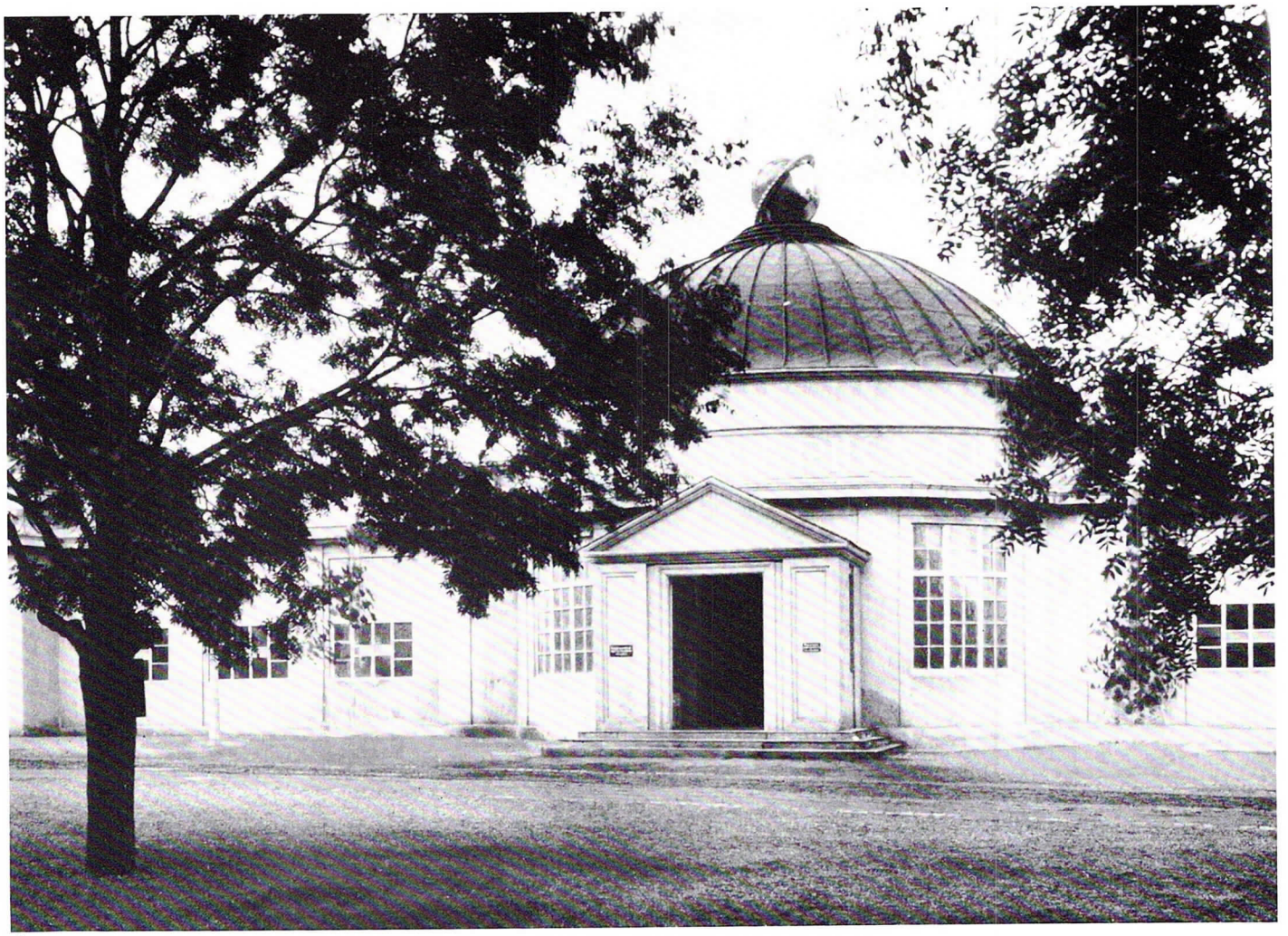

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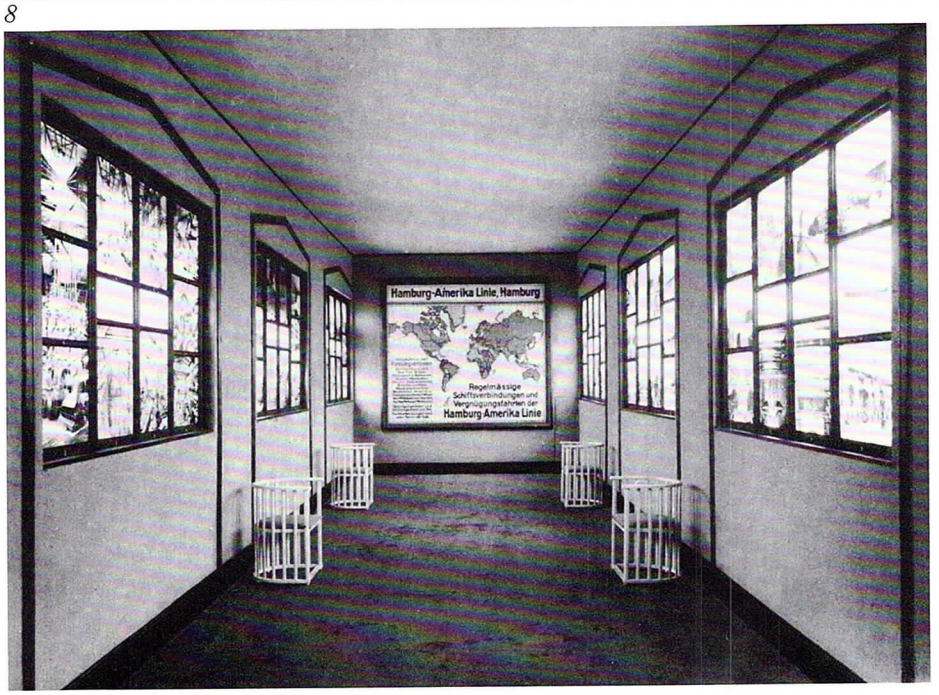
Hamburg-Amerika Linie, Hamburg
Regelmässige
Schiffsverbindungen und
Vergnügungsfahrten der
Hamburg Amerika Linie

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specific influence on subsequent avant-garde movements (as in the case of its discussions on the significance of Gothic art)—forms a dominant component of *the modern*. Even the attempt to reform the teaching of the applied arts, leading to subsequent discussions among the avant-garde over the significance of the Gothic—a debate which was also destined to influence avant-garde ideology immediately after World War I—is no more than a pretext that supports the call for a return to a *harmonischer Kultur* capable of expressing itself, under the watchful "guidance of art" and the "control of the best," in generalized forms of *gelehrt Arbeit*, of skilled labor, which is not portioned out, separated, completely abstract, but human, joyous, popular, shared—in a word, as so many of the Werkbund's proponents would say: *German*. In this sense Schumacher's original appeal is totally consistent with the subsequent success of the ideology of labor, or *Arbeitsideologie*, even though within the Werkbund this manifested itself more often than not in the form of a profound *nostalgia*.

But it is against such nostalgia, and against this formulation of a project for an organic, harmonious culture, that Behne directs his arguments. Already in the first issue of *Die Tat* for 1917, Behne had launched a fierce attack on the "aesthetic aspirations" of the Werkbund: "'Quality in all things': this is the slogan of the Werkbund. And the guild has certainly followed its maxim, although in its own way. The Werkbund is attentive to whether the baker maintains the quality of the sign on his store, whether the builder maintains that of his buildings, the shoe salesman that of his cardboard boxes. But let us stop this nonsense once and for all! Roll up the manifestoes, close the boxes, save the pretty packaging paper, and wrap yourselves up in such discussions!"

In the 1922 essay published here, Behne's arguments become more precise; what really interest him are the apparent dichotomies of *Zivilisation*, so much so that the essay's title could be reread putting disjunctive hyphens between each of the three words comprising it. What Behne denounces in the organicism of the Werkbund philosophy is precisely the logical procedure that distinguishes it, one that is characterized by a method of pitting values against conceptual and historical categories. There is no contradiction between *technique* and *craft*, asserts Behne, but on the contrary a rapport which is at once one of reciprocal necessity and logical consequentiality. He systematically dismantles the virtuous defense of handicrafts by insisting on the close dependency of technology upon the evolution of modes of production of handicraft, showing a perfect grasp of how profoundly mistaken it is to seek to judge the products of technology on the basis of artistic criteria and the anti-progressive nature of the denial of the *liberating value* of technology. Although here, Behne—who in the essay names many of his theoretical sources directly—seems to follow the arguments, common in Germany around the turn of the century, showing himself to be rather close to the optimism for technology as "progressive" no matter what, his enthusiasm must be measured against the nature of his polemical target—the debates of the Werkbund. What Behne denies absolutely is that the search for an organic unity in design based on the mutual interpenetration of the values of technology and crafts will result in the expression of a *harmonischer Kultur*. Such harmony for Behne can come about only through the very destruction of that historical organicity which can only arise when the various forms of labor establish themselves autonomously, conscious of the irreducibility of their own cognitive strategies and the *separateness*, so to speak, of their own *languages*. The ideological organicism of the Werkbund appears to Behne as a sort of incurable nostalgia for naturalism, incapable of grasping how technology is itself the disruption of any sort of natural evolutionism, in that it is *discontinuity*, division, and separation of areas of knowledge. It is therefore not surprising that among the dreams of the Werkbund we find that of a new *Gesamtkunstwerk* whose symbol is the Gothic cathedral, even though in reality the Gothic cathedral is nothing but the model of a rigorous assembly of different forms of production, and is in any case an expression of a naturalness irreconcilable with the "naturalism" of the modern advocates of a return to the virtues of crafts.

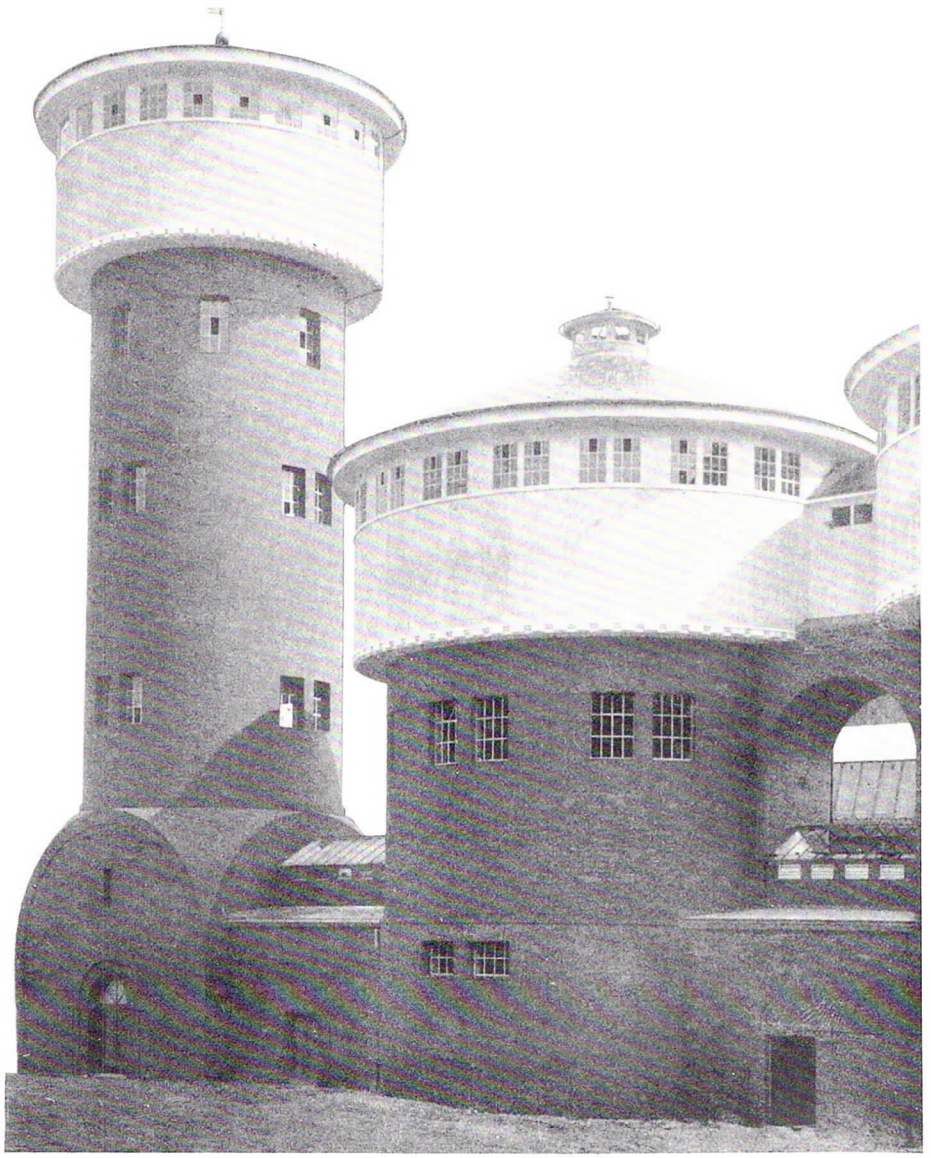
Behne's polemic indirectly attacks many themes within

German architectural culture, yet his immediate target remains perfectly clear. I am referring to the attitude which was manifested immediately after World War I upon the revival of activity aimed at the re-establishment of the Werkbund, an attitude which found symbolic expression in the Werkbund program worked out by Karl Scheffler on the occasion of the reunion of its members at Stuttgart in 1919. This program, although officially refuted by the Werkbund, did not however go unnoticed. It was published in 1919 in *Kunst und Kunstler*, was energetically defended, and, if such a thing is possible, was even further radicalized by such a prominent figure as Fritz Hoeber. Scheffler's proposal is diametrically opposed to the spirit of Behne's observations; it is inspired by a profoundly regressive vision of the future destiny of the German nation and animated by violent, vengeful tensions toward the powers victorious in the War. It tries to present itself as a purely apolitical program when it is instead inspired by an unmistakably nationalistic spirit. Its emphases are violently populistic, and the tones of its anti-industrial, anti-metropolitan polemic are no less inflammatory, with continual outbursts of strains of *Volkisch* ideology. This dispute could be summed up by stating, paraphrasing Behne himself, that the God of Scheffler is a divinity reduced to form, as static and rooted to the ground as the God representing the ideal of handicraft labor; while Behne's God, on the other hand, is the dynamic and transcendental God of the division of labor—he is anti-naturalistic.

In concluding his arguments on the differences between the organicism of a return to handicrafts and his own defense of the "higher unity" that only technology can create, Behne introduces a further distinction between handicraft and technology. He speaks of handicraft as a form of labor based on the *division of materials*, as the expression of a totally natural and materialistic norm. To this he counterposes technology as one predicated on the separation of the *various kinds* of labor and services; as reifying labor and reunifying it through the abstraction of a process, of a design, or of a program; and ultimately the result of imagination, creativity, and foresight—in a word, a challenge. But it is precisely this difference—or rather, the consciousness of this difference—which is the theoretical solution to the central problem of *the modern*: where the Werkbund is on the side of an overcoming of differences, Behne exalts difference; where the Werkbund, in the name of the supremacy of artistic creation, dreams of a power that would harmonize the artistic project and oppose the division that is the driving force of production, Behne ventures to recognize a kinship, an analogy between the abstract unity which *organizes* the technical division of labor and the absolute autonomy of artistic projects and specialized languages or disciplines. In both these forms of abstraction there lies a challenge to the "imagination"—both are the fruit of rigorous disciplines and no less severe linguistic divisions. When, in his "Kritik des Werkbundes" of 1917, Behne had counterposed the concept of duty, whose necessity the Werkbund had tried to assert in the "exercise of art," with the fact that "wherever art has unveiled its greatest wonders it has always been a matter of devotion," he was anticipating in general terms the incisive critiques and solutions that he delineates and carries out in 1922, thus demonstrating his ability to manipulate with absolute precision the very same theoretical baggage used by the Werkbund. How indeed can we fail to notice that when Behne denounces the "appreciation for imperfection" typical of not only the theorists of the applied arts but also of several members of the Jugendstil and of quite a few members of the Werkbund, he means to bring into discussion one of the cornerstones of the naturalism of *die Moderne* by seizing on its typically Ruskinian matrix? And how can we fail to hear the echo of Riegl in his explanations of the "material" nature of handicraft labor? And lastly, when he writes in 1917 that art is *devotion*, then to confirm in 1922 that the work of art represents a release from any connection to the natural, from any attempt to restore forms of organicity through itself—how can we fail at this point to recall those essential pages of Fiedler which, with their similar assertions, appear to be Behne's direct precedents?

And is it not precisely these reflections on the nature of artistic phenomena and artistic work which permit Behne to resolve definitively one of the problems at the root of *the modern* by asserting that artistic production is char-

11 Gas works, Frankfurt-am-Main. Peter Behrens, c.1912.
12–14 High tension works, Humboldthain, Berlin. Peter Behrens, 1910.
15 Main exhibition hall, Klingspor Bros., Offenbach-am-Main. Peter Behrens, 1914.
16 Main hall of Munich bookbinding exhibition. F. H. Ehmcke, 1914.



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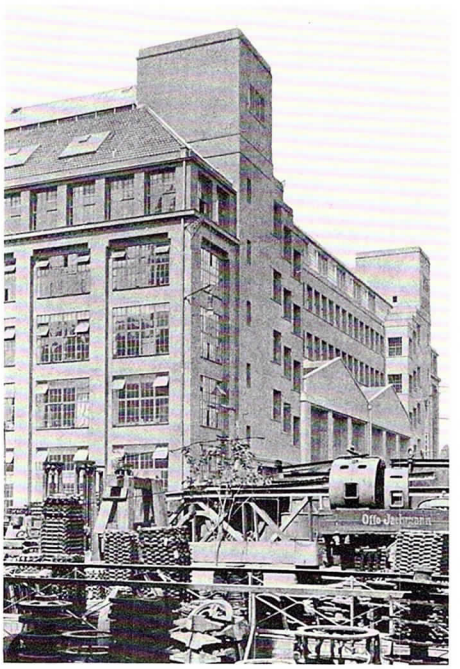

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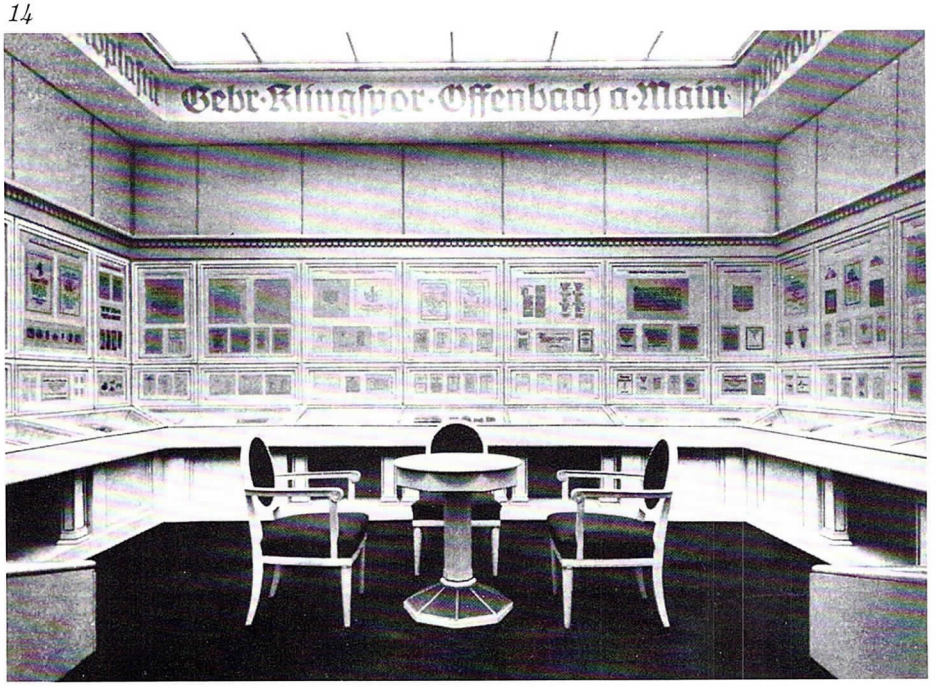

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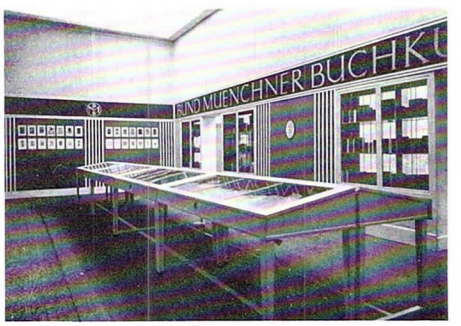

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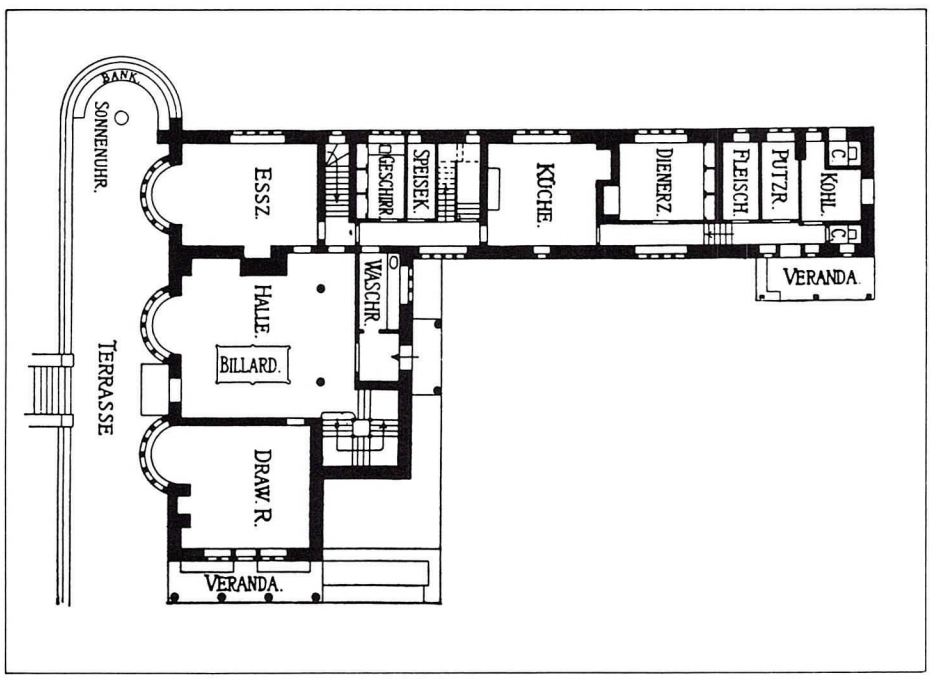

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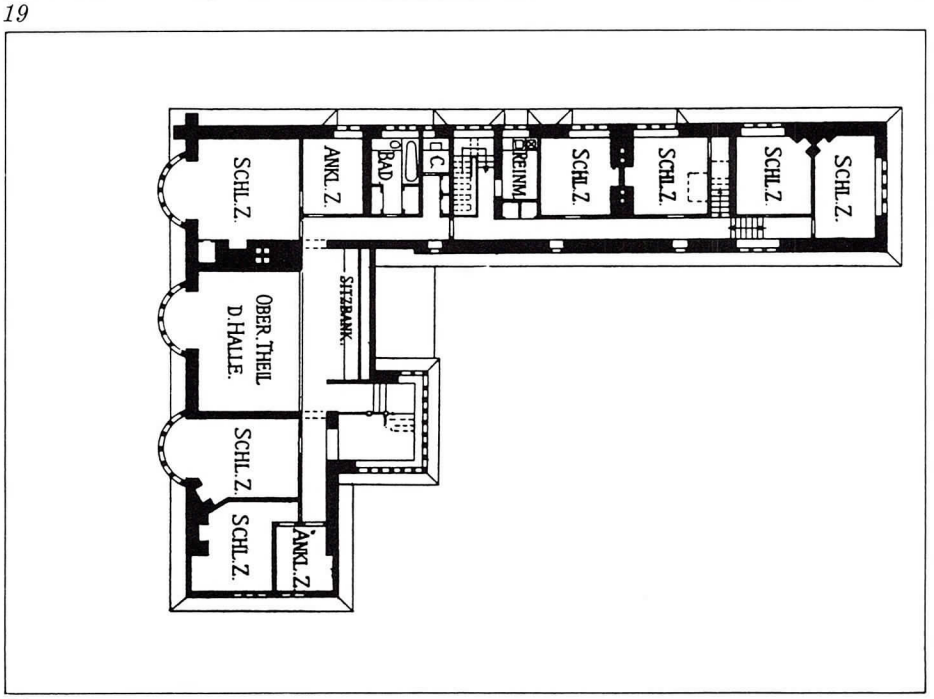

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17 Broadleys, Windermere Lake, Westmoreland. C. F. A. Voysey, 1898.
18 Country house, Luffenham. C. F. A. Voysey, 1901.
19 Broadleys, Windermere Lake, Westmoreland. C. F. A. Voysey, 1898. First floor plan.
20 Broadleys, Windermere Lake, Westmoreland. C. F. A. Voysey, 1898. Second floor plan.

acterized by procedures very similar to those of technology, procedures indeed rather unlike the mythic organicism of handicrafts?

In this way, however, Behne's argument falls into a contradiction opposed but also complementary to that which he intended to denounce. In criticizing one of the more evident aspects of *die Moderne*, Behne does not in fact exhaust all of its possible variations; if anything he resolves one of its internal weaknesses. Hence it turns out that the object of his criticism emerges from it stronger than before: his essay dismantles in part its object's ideology, negates its more intricate superfetations, exposes its largely regressive features—but precisely by virtue of the critical tools used and the results attained, it ends up presenting itself as a solid buttress to the extreme *utopia* which lies at the heart of *die Moderne*.

For Behne does not directly refute the program of *harmonischer Kultur*, but instead discusses its historical formulations, taking the Werkbund as their culmination and stressing within this perspective the sequence of problems extending from Schumacher's speech of 1907 to Scheffler's proposal in 1919. But precisely because his observations strike concrete, exact targets, they place themselves directly within the "program" of *die Moderne*, thus confirming its validity and bringing to light its essential aspects. Such critiques, insofar as they have themselves contributed to the utopia of *the modern*, force us to locate on the map of history the place where this utopia acquires a recognizable *form*.

Wohnkultur

What is the object through which *the modern* expresses its utopia? Where is the *place* destined to house the *realization* of the values of a "harmonious culture"? As far as architectural culture is concerned, the problem of *habitation* is fundamental to *die Moderne*. It is *the* central theme of the Werkbund, although the Werkbund's ideological constructions, like the subsequent "histories" of modern architecture, have diminished its absolute prominence. It is the one theme that Behne does not discuss, the "point" at which his "Kunst, Handwerk, Technik" is left hanging. It would suffice to quote at random from von Bodenhausen (in the 1890s) to Waeting, to the essential pages of Karl Joël, to Van de Velde himself, to the best writings of Hermann Muthesius, to see that at the heart of the most important research which issued from the "movement" and from the Werkbund circles one always finds the problem of "contemporary habitation." Today we hardly remember those writings which, apart from a few adaptations that we might say were of a "diplomatic" nature, pour forth their disdain for the banalizations of the "modern style," the contortions of the Jugendstil, the insufferable pinchbeck of the bourgeois home, the liberties taken in the "applied arts," the "acquiescence to fashion." It is truly ironic that historians should have focused their attention on precisely these aspects, creating from the debate on *die Moderne* so many pillars for this bridge without parapets that it has taken on the name of "Modern Movement."

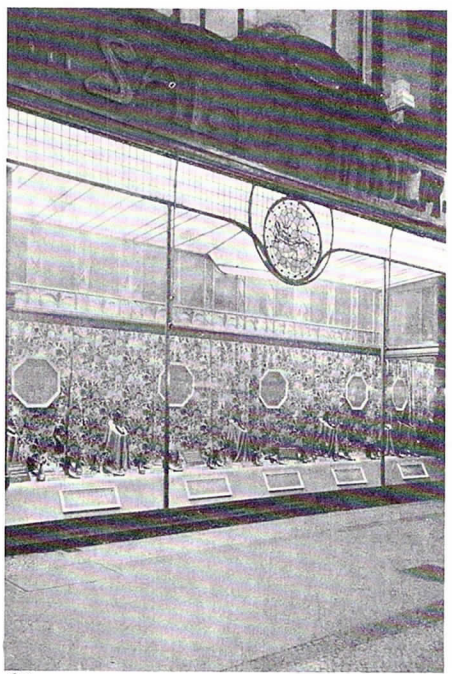
The entire modern commitment to organicity becomes translated in the field of architecture into the concept of *Wohnkultur*, a plan for balanced inhabiting and a new mode of dwelling. The principal German theorists never cease to reconfirm this notion, setting great store by it and by the English experiments. This is the utopia that Muthesius lucidly elaborates in his most successful works, and it is this goal which animates his long misunderstood preachings. Only by undertaking to *serve* a new culture of inhabiting, he suggests, can architecture act as a "guide" (an expression typical of prewar German literature) for the other forms of artistic research, for the *Kunstgewerbe*, for the otherwise disorderly fumblings of the "masters" of the applied arts, for the process of the "formation of taste." Moreover, as one can often infer from Muthesius, only a new mode of habitation can guarantee—beyond any fruitless discussions of the need to resuscitate the lost soul of the medieval guilds—the survival of refined forms of handicrafts and skilled means of producing; only the *individuality of the house* can really preserve these values. Architecture is thus a very fragile bridge which mediates between the infinite multifacetedness of the contemporary world, its endless possibilities, its indefatigable dynamism, and that point of tranquility,

of subjective withdrawal, represented by the house, by habitation, *the* place where the human being can again find his roots. But precisely because this mediation is based on such a fragile structure, to function architecturally in a modern sense implies first to adopt standards so rigorous that they approach the point of renunciation. In as much as it is both a *component* and an expression of a modern culture of the house, architecture must dominate its own imagination, regulate its own formal impulses, restore design to a more healthy (a key word ultimately derived from Muthesius) level of appropriateness, to a clear practicality, to an attentive regard for needs, materials, techniques, means, and instruments. If there is anything foreign to the spirit that pervades the essay "Wohnkultur," printed by Muthesius in the publication of the Dürerbund in 1905, it is precisely that spirit of transgression which will later characterize some of the early avant-garde movements; but curiously enough Muthesius's attitude shows unexpected similarities to Behne's call for a return to the rigor of each form of artistic expression, to the disciplinary spirit of collective work, to respect for the specificity of distinct languages.

On the other hand, Karl Scheffler, in commenting on the project for the Freudenberg house before the war, manages to evince real "operating procedures" from Muthesius's planning method. But it is a moral commitment that characterizes the more impressive passages in Muthesius, as we can see in the short 1907 volume published by Eugen Diederichs, *Kunstgewerbe und Architektur*, where in the chapter "Das Moderne in der Architektur" he asserts that "the new movement in the field of architecture has remained more or less caught up in concerns for external appearance, whereas innovations in architecture never arise from new forms, but only from new demands: by giving in to the desire to be modern, one gains nothing but a compromising adherence to the fashions. The modern is not at all a 'point of view', and truly modern achievements are not born simply from the desire to be modern." Karl Joël, an author widely read in Werkbund circles, echoes this assertion in his *Antibarbarus* of 1914, where he writes: "a great artist, for us, is not someone who surprises us with unheard-of curiosities, but rather someone who knows how to touch the deepest level of our soul, and in whose words we hear the echoes of a thousand vanished voices."

In the modern utopia of an organic blueprint for dwelling we hear only the echo of a very remote condition bouncing off of the mighty walls of metropolitan civilization. To this situation one could apply the ingenious witticisms of Hans Sedlmayr in *Verlust der Mitte* (1948), where he says that if, within the dimensions of the room, Biedermeier "succeeds in creating a new unity of all the arts," then it is in the *Wohnkultur* of *die Moderne* that "the point of reference of all the arts becomes man, understood as a private entity: the private man who renounces public life, but who is not however solitary."

The "culture of habitation" therefore also implies the *style of the age*, an expression to be understood not so much according to the various uses to which it was put in the Werkbund debates, but in the sense of Boetticher, as a manifestation of well-founded, long-lasting values. In the more serious theories of *die Moderne*, the "style of the age" is not at all a metaphor for qualities such as "functionality," "technology," "industrial forms," etc., or for the harmony of forms and functions, to use a customary expression—it is on the contrary the expression of the effort to harmonize the most fundamental characteristics of modern civilization—which is *in itself* functional and anti-decorative—with the values of a harmonious and subjective mode of habitation. When von Bodenhausen, foreshadowing Muthesius, illustrates the unique characteristics of a "culture of the house" based on the English model, he is speaking above all of a "life style," of a mode of behavior consistent with the essential meaning of the times, respectful of the requirements of collectivity, averse to any form of ostentatious display, capable of preserving the intimacy of the house by respecting absolutely individual needs, and animated by a profound dislike for the "tastes of the parvenu"—an ever-recurrent expression in the literature of the period from Sombart to Muthesius and which we find again in Rathenau's recriminations against the sophisticated consumption of the society of Kaiser Wilhelm.



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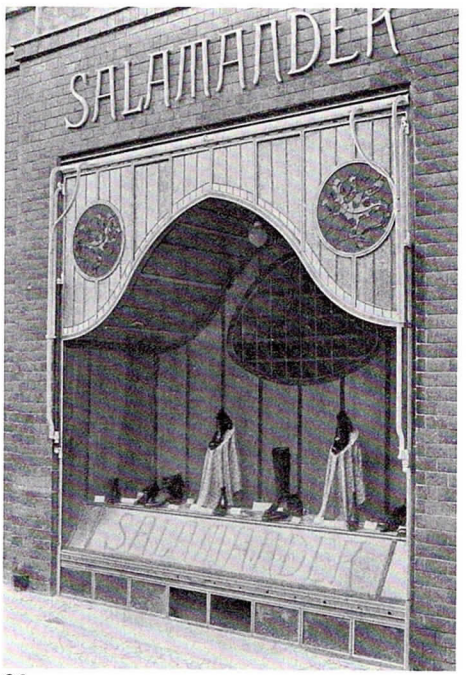

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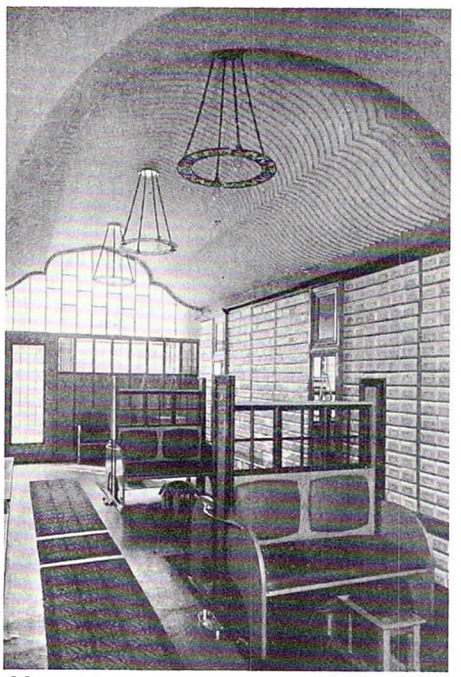
21, 22 Display windows for Salamander Shoe Company, Berlin. August Endell, c.1912.



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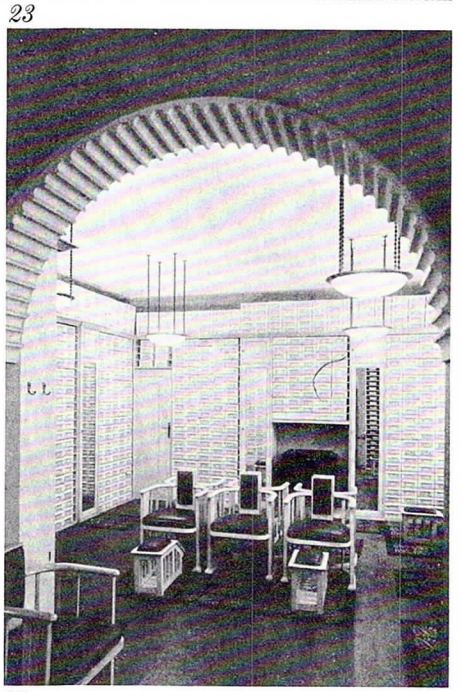

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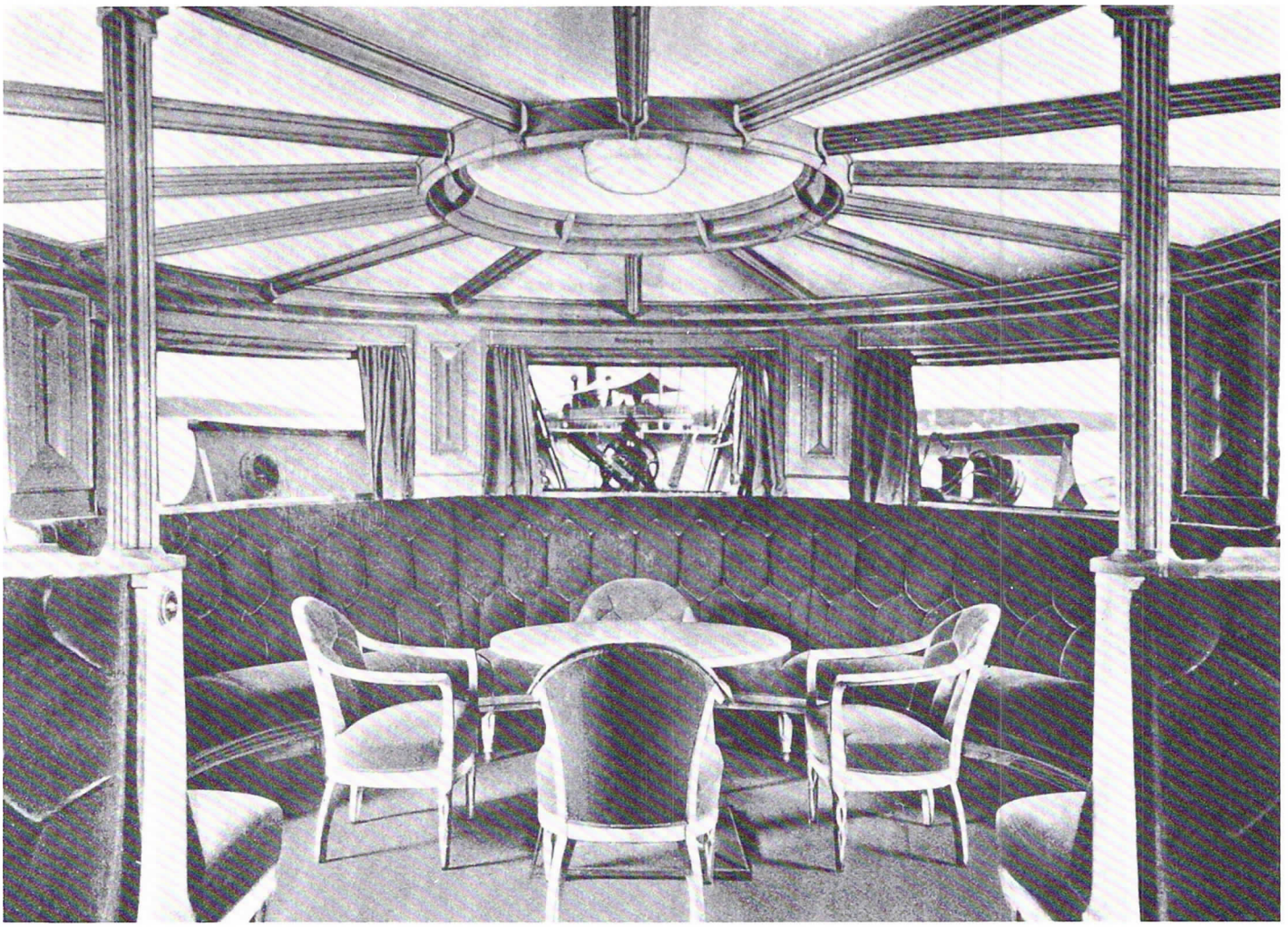
23, 24 Salesroom and fitting room of Salamander Shoe Company, Berlin. August Endell, c.1912.



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25 1st-class cabin, "Friedrichshafen," Lake Constance steamship. Bernhard Pankok, c.1913.
26 Interior of "Hansa" dirigible. Bernhard Pankok, c.1913.

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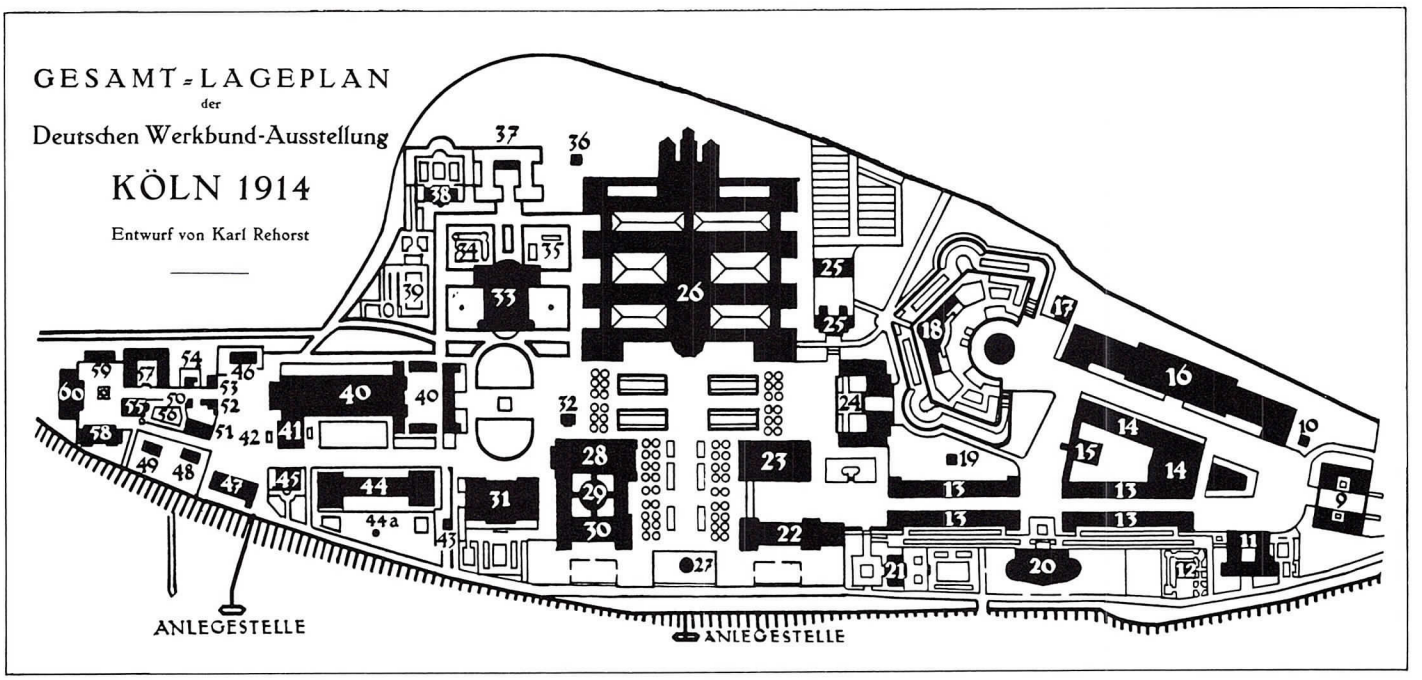
27 Blackwell House, Bowness, Windermere Lake, Westmoreland. M. H. Baillie Scott, 1898–1899. View from the garden.
28 Hohenhof House, Hagen, Westphalia. Henry Van de Velde, c.1911.

29 Map of the Deutsche Werkbund Exhibition, Cologne, 1914. 15) Hamburg-Amerika Line pavilion (Muthesius); 23) Austrian house (Hoffmann); 26) main hall; 28) banquet hall (Behrens); 33) Werkbund Theater (Van de Velde); 40) office, information building, and model factory; 44a) flagpole of the Norddeutschen Lloyd Shipping Co.



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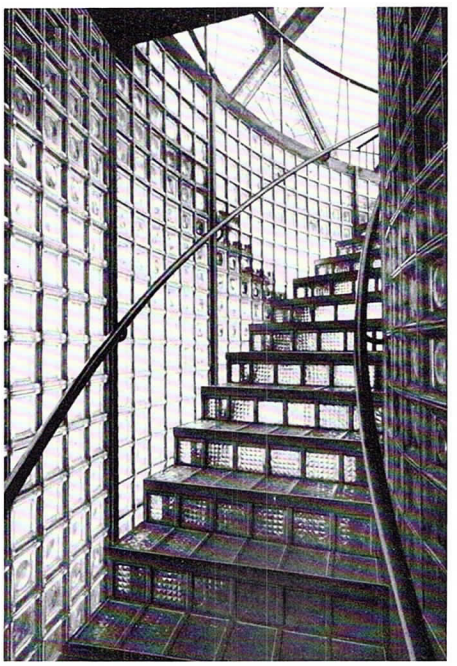

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30 Poster for the Deutsche Werkbund Exhibition. Peter Behrens, 1914. The figure was also used on the top of the German Embassy, St. Petersburg, 1912.
31 Glashaus, Deutsche Werkbund Exhibition, Cologne. Bruno Taut, 1914. The glass walls were manufactured by the German Luxfer-Prismen Organization.

Nothing is therefore more contrary to this intellectual position among the architects of *die Moderne* than any concession to external appearance and ostentatious display: *inhabiting* means finding a *place* in which to realize an *intérieur*, an alternative space, although one which is not incompatible with the metropolitan environment. Such a space, according to Sedlmayr's perceptions, is not a place of solitude but of private retreat, far from public and external appearances. The metropolis, on the other hand, in as much as it is a *natural*, "spontaneous" product of *Zivilisation*, exists as external appearance—and as such it is the privileged space of *surprise* and artifice, the adoptive country of *Kunstgewerbe* consumption, of Jugendstil artifice, of taste and of fashions. The rhythm of life in a metropolis that has not yet known the regulatory task of a harmonious work of planning, of *Städtebau*—such is also the title of an excellent essay of Muthesius published in *Kunst und Künstler* in 1909–1910—imposes practical alternatives to the self-assertion of a true style of life and an austere taste for inhabiting.

Just as the house is no more than a harmonious design of the functions necessary to the exercise of privacy, so, according to Muthesius among others, "urban planning" is also nothing but an interpretation of the metropolis's need for order, an order capable of dissolving its perverse mechanisms of accumulation. On this matter nothing could be more mistaken than to misinterpret the enthusiasm of such "founding fathers" of the Werkbund as Friedrich Naumann for the toppling of the prodigious monuments of contemporary cities by the new technological advancements as an essential mark of *the modern*. It would be no less erroneous to pay too much attention to the hymns raised to the "objective beauty of machines," of large factories, of purely technological objects; such hymns resound continually in the German literature where the tradition of *die Moderne* is embraced, just like so many other manifestations of the significant aesthetic inclinations of this culture. The only substantial value of such pages lies in the fact that they provide us *a posteriori* with the chance to meditate upon the meager inventive capacity of all those happy slogans which, in more recent years, have come to characterize the ideology of what has superficially been defined as the "Modern Movement." Such positions, indeed, represent only *one* of the aspects of *die Moderne*, and certainly one of its less significant ones. They nevertheless demonstrate that, in venturing to unravel this tangle of European culture, it is completely out of place to place one's trust in tested strategies or already proven methodologies: the tangle is so complicated that one continually risks being led astray in the very act of choosing the opening through which to penetrate it.

But in the end the one fact that emerges from this debate with any clarity is the fundamental polymorphism of *the modern* in architecture. This tradition conveys a rather ambiguous message to subsequent research. The great organicist program of *die Moderne*, aimed at creating the symbol of a re-established *Kultur* from the scattered fragments of *Zivilisierung*, is expressed in the utopia of a new *Wohnkultur*. With regard to the practicalities of the project and of architectural work itself, this position implies an acknowledgment of the inevitability of a prevailing spirit of renunciation. This is in fact what Muthesius has in mind in his attacks against the superfetations of the Jugendstil; and it is also against such a position that Behne directs his polemical comments on the projects of the Werkbund. In this light the utopia of *die Moderne* has not at all faded into obscurity; Ludwig Wittgenstein himself, among others, reminds us of this fact in a note written in 1930, which today we can read in *Vermischte Bemerkungen*: "The difference between a good architect and a bad one lies in the following: the bad one gives in to any temptation, while the other resists it."

But another fundamental aspect of *die Moderne* is its attitude of deep-rooted suspicion toward the contemporary milieu of architecture, the inhospitable milieu of the city. And this attitude goes on to become part of the heritage of the so-called "Modern Movement." However, in the developments which followed World War I, the original suspectness loses its tension and, above all, ceases to justify itself as the expression of a primitive renunciation, becoming *tout court* an anti-urban ideology.

The inimitable greatness of the utopia of *die Moderne* lies

in its having instinctively understood that the great achievements of *Zivilisation* presented a mortal danger to the survival of a true, established *Wohnkultur*, an organic, *decent* mode of habitation. The lesson that can be drawn from this utopia is precisely that of renunciation: architecture is the renunciation of all the false promises of *Zivilisierung* and the ideal of the *Baumeister* (builder, not architect) is that of a harmonious habitation that is neither chaotic nor mechanical. The modern house could never have been termed a "machine à habiter."

At the start of this essay we discussed the historic distance separating us from *die Moderne*; but as we have seen, not all the messages which this remote past continues to convey to us vanish once we cover the space separating us from them.

One issue in particular deserves to be reconsidered in more sober terms. It is fashionable these days to say that architecture has entered a new age, as it ponders the actuality of a "post-modern" condition. Among the characteristics of such a condition one finds in particular those represented by the desire to go beyond "ancient" linguistic accumulations, old semantic devices, and now obsolete aesthetic-functional canons. Consequently, post-modernism would like to be free of dialogue, an uninhibited approach to history, a realistic utilization of linguistic signs and systems meant to exorcise definitively the paralyzing Leviathan of the tradition of the "Modern Movement."

Behind such hypotheses as these there lurk not a few dangers. One of the more extravagant of these is that of mythifying the adversary that is supposed to be exorcised, and in so doing reconfirming the historical role of the ideology that was built around the concept of the "Modern Movement"; that is, the function of obfuscating for too long the lesson to be learned from *the modern*. And all this, put in more general terms, should be taken as a warning against the fascination of history's hallucinations, for precisely in the context of the relation between *die Moderne* and the "Modern Movement," Wittgenstein's observation still holds true: "One could say that the epic poet of the culture of progress must come before the events of which he sings. In the same way, one can foresee and describe one's own death only by contemplating it beforehand; one may not tell of it as a witness."

In spite of everything the utopia of *die Moderne* possessed sharp thorns; the history of modern architecture attests to this. However distant and worn-down such thorns may now be, they remain nevertheless sharp enough to warn us of how binding are the games of solitaire that history compels us to play, and of how mistaken it is to expect from such games the discovery of a new promised land, an Eden where languages lend themselves to every manipulation, light as feathers, like materials available to any fancy whatsoever. We do not inhabit such an Eden nor will we ever witness one: every word we have to use is indeed "heavy as a stone," as Nietzsche used to say—and it is quite mistaken to dream that they offer themselves to the architect's pencil like fragile and weightless soap bubbles.

Source Note: This essay summarizes some of the critical hypotheses in the first part of Francesco Dal Co's book Abitare nel moderno *(Milan: Feltrinelli, 1981).—Ed.*

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1, 8–10, 15, 16, 29, 31 From *Deutsche Form in Kriegsjahr: Jahrbuch des Deutschen Werkbundes 1915* (Munich: F. Bruckmann, 1915).
2–4, 18–20 From Julius Posener, *Anfänge des Funktionalismus* (Berlin: Ullstein, 1964).
5, 6, 12, 13, 28 From *Die Durchgeistigung der Deutschen Arbeit: Jahrbuch des Deutschen Werkbundes 1912* (Jena: Eugen Diederichs, 1912).
7, 11, 14, 21–24 From *Die Kunst in Industrie und Handel: Jahrbuch des Deutschen Werkbundes 1913* (Jena: Eugen Diederichs, 1913).
17, 27 From Hermann Muthesius, *Das Englische Haus*, vol. I (Berlin: Ernst Wasmuth, 1908).
25, 26, 30 From *Der Verkehr: Jahrbuch des Deutschen Werkbundes 1914* (Jena: Eugen Diederichs, 1914).

Art, Handicraft, Technology (1922)

Adolf Behne
Translation by Diane Blaurock

96 The control which the artist exercises over his material has as often been cited as proof of his craftsmanship as of his technique. "He has mastered his craft" conveyed the sense that he had good technique. But recently the two expressions have taken on different meanings. If one speaks of "craftsmanship," one implies praise. If one speaks of technique, on the other hand, one implies criticism, or at least reservation and doubt. Leibl, therefore, has wonderful craftsmanship, while Lenbach possesses superb technique.

The notion is that craftsmanship is something inspired, technique something superficial and mechanical.

This notion has become widespread and is responsible for many false conclusions.

Craftsmanship has become a catchword.

In the preference for craftsmanship, a sentimental romanticism is revived one last time before the consciousness of the times decisively turns away from the old order. Society's view of the relationship of the artist to his material accurately reflects its own attitude toward its own work methods. The resolve to usher in the new order from its modest, fragile beginnings through conscious endeavor is so difficult that a last attempt is made to take refuge in the (presumedly!) beautiful, good, and simple past. Only when this attempt has proved hopeless will the task of the times be recognized and dealt with. Words will be cleansed of the prejudices which cling to them—including the two words "handicraft" and "technology."

Today we have ascribed everything positive to the word craftsmanship, everything negative to technology. But as telling as these sympathies and antipathies are of the mood of the times, they still have nothing to do with the matter at hand. Craftsmanship is not the good angel, nor is technology the evil demon of art and culture. Of course, to listen to the champions of the former, craftsmanship is in itself the guarantee of artistic quality, while technology has the monopoly on artistic rubbish. Craftsmanship is equated simply with loving, inspired, conscientious, engaged work; technology with the hasty, mechanical, and soulless.

But why? Can one really dispute the fact that there are innumerable handcrafted products which are loveless, indifferent, banal, and superficial? Is there not also mechanical work in handiwork, and can one maintain that work aided by technology cannot be exceptionally inspired and conscientious?

If the difference between craft and technique is not a simple, qualitative one . . . what is the actual difference?

In principle, there is no difference. Technology is nothing but perfected craftsmanship. At least, the distinction is a fluid one. With every instrument introduced between hand and material, craftsmanship approaches technology. In this way, is there not a tendency toward technology implicit in every craft? Is not the technological process in principle one of stronger, more intense intellectualization? This is not to deny of course that misuse often enough produces the opposite.

General opinion distinguishes technology from craftsmanship at the point where the formerly unified work process is made subject to the principle of the division of labor. In craft the unity of invention and execution is in one person; in technology, it is split between the one who invents here and the one who executes there.

This new work method is held responsible for all kinds of disastrous effects. We are concerned, however, not with whether such bad effects occur in great numbers or not—no one would deny that they do—but rather, if they must inevitably occur.

Here two viewpoints which are absolutely and radically opposed confront each other. The tendency of craftsmanship is to be naturalistically disposed. In fact, it was the naturalists who began to use the word "craft" instead of the word "technique" for the mastery of a trade. This way of thinking is unable to recognize that the breaking of the natural unity in which the inventor is simultaneously the

executor can open the way to a higher intellectual-artistic perfection. As self-proclaimed individualists, they see the destruction of unity of person primarily as the destruction of art.

We, however, maintain that the removal of this personal, natural, organic unity is progressive and that the healthy impulses of craft are misunderstood if their implicit tendency toward division of labor is not seen. Evolution seems to us to be in the direction of division of labor, that is, collective, suprapersonal labor, and the attempt to return to the unity of the person seems a romantic utopianism.

Wherever craft took a step toward its evolution and perfection, it was a step on the way to division of labor, to technology. We already have sufficient proof of this in tools.

What is the meaning of tools? Simply, the extraction of a certain regularly repeated function from the universal organism of the natural hand (pounding: hammer; gripping: pliers; tearing: saw, knife, etc.).

One would think that these inorganic objects could only perform work inferior to the corresponding functions in the organic, sensitive, living universal hand, which is able to move at will. To be sure, tools are above all a stiffening, an inflexibility. The moving spirit has been taken out of them. And yet we accomplish more with them. The secret of productive work is polarity. The work process splits, removes from itself the dead, hard, general part—and by working cooperatively with it, wins heightened vitality. Natural-organic unity is destroyed in order to win a more active, passionate, higher unity. The unity of intimacy is sacrificed for a unity derived from tension. For this new unity to come about, of course, the conscious, active, human intellect is needed.

An example: a hiker intimately enjoys the organic, thriving charms of nature, the landscape. This is a great, delectable pleasure. But this intimacy is by no means a prerequisite for penetrating nature. In order to experience nature more intensely and on a higher level, the undivided organism—the naturalistic—is ripped apart, split. The express train and the airplane take away from the observer the motion which formerly was united with seeing. This motion becomes mechanized, intensified as never before. The natural connection is broken.

For the passive man, nature is thus destroyed. He races by her. But for the man who can recreate unity with an active intellect and full passion—and this requires a higher degree of love than the passive, intimate enjoyment of nature—the landscape achieves beauty and life. Even as the express train so mechanically and imperturbably follows the dead-straight track in the interest of speed alone, seeming to take no part in the movements of the landscape, the movements of hills, cliffs, streets, forests, valleys, and rivers take on a breathing life, which appears closer to us in the train than if we had followed every movement step by step ourselves. This is certainly to say nothing against the boundless enchantment of intimacy with nature; but nature becomes a unified, breathing, living entity in a modern vehicle more than in hiking. Estrangement becomes the point of departure for a much stronger bond.

In short, the natural state is one of connectedness. Very few men progress beyond its enjoyment. But for passionate spirits, organic and material connection do not suffice. The strength of their love destroys the natural, intimate connection, tears it apart, introduces a radical, contrary element: in contrast to the shifting data of sensations, the impersonally hard, cold mechanism, which forces a new and higher unity created by the intellect, by human consciousness. The more mechanically perfect the one element, the more passionate, intellectual the other—assuming that the man in question is adequate to the demands of his intellectual consciousness.

As in so many other things, that which is loved today in craft is not the thing itself but an attitude whose existence derives from a misunderstanding. One cherishes in handicraft that which the proud and perceptive craftsman sees as a flaw. The skilful craftsman always strove for the most

precise work possible, and in order to attain it welcomed every improvement in technique. Craft enthusiasts, however, seize on the imperfections, the unmastered hitches in the work process as a positive value, and construct an "ideal" out of them. In the final analysis, they do this because they are unfree and uneasy in their own work. Because of a limitation in their consciousness, they have arbitrary, dull spots in their own work—spots which evade ultimate accountability—so they preach the dogma of creation out of a dark feeling and mystical impulse, which are not subject to the responsibility of consciousness. This is why the invocation of everything which is natural and organic, which has grown and become, is so dear to them. This is why the concept of technology, like everything having to do with measure and number, is repugnant and "inartistic." This is why they have formed a romantic idea of craftsmanship which is closely related to enthusiasm for the Middle Ages and the Orient. There would be no cult of crafts if a certain interpretation of art, strong even today, did not extol the casually direct, intimate, fortuitous, material, natural aspect of craft in order that the weaknesses of its own doings would be acknowledged as mysticism, irrationality, divinity, all of which shun control.

If naturalism, in the final analysis, is that which shies away from subjecting its accomplishment to intellectual responsibility, that which does not dare recognize itself as the product of the conscious human intellect, then the enthusiast's handicraft is "naturalism." We can formulate the opposition: craft is naturalism, art is the work of the mind.

The law of art is not the "connectedness" of the natural-organic, but unity—a unity of the sort we have been speaking of, which can only arise out of the schism of connectedness. And so it is much more appropriate to relate the artistic work process to technology than to crafts.

The reference is often made to the painters' workshops of the fifteenth and sixteenth centuries, in which the new generation learned its "craft" from the bottom up. But could it not be that craft is spoken of here only because the economic form of the times was one of guilds and crafts? One cannot very well describe the artistic production of a Meister Francke or a Multscher or Konrad Witz as craft. It is of a thoroughly constructional character, and the division of labor in the arts at that time is well known. One can speak of craft in the artistic sense in reference to Charles Schuch, and in the fullest sense in reference to Leibl. The craftsmanship is often exceptionally good in precisely those pictures which are artistically weak. Very logically so. Craft as unity on the level of the organic connectedness of things is materialism, and it is here that the appropriateness of materials is justly praised. That would mean that in painting (which we take as an example for all the arts) a good picture would display the character of its material, in this case, oils. But is it not precisely such pictures which are unbearable? Is it not in the case where the material character of the pigment, the brush stroke, the hand—the hand working the material with bravura—stand before us, that the achievement is artistically inferior? In craft it is good and proper to display the material: leather, silk, metal, glass, clay. The work of art, on the other hand, is immaterial, intellectual, structural, technical. There are paintings—and there are oils!

The painters of the fifteenth and sixteenth centuries learned more in their guild- and craft-oriented workshops than craftsmanship. They learned the pride of creation!

It is very instructive to see how the opposition of craft-technology in the work process repeats itself in the two opposing concepts of the relationship of the individual arts to each other. On the one side stands the champion of the "natural connectedness" of the arts; on the other side the champion of a "structural unity" which only comes from the destruction of the "connection." On the one side is the total work of art, erected out of architecture, sculpture, and painting, all permeating each other like elements of a single organism, grown according to the example of nature; on the other is the conscious separation of the disciplines in order to make unity possible at all. There intertwining labor, here division of labor.

But the intermingling of the arts leads only superficially to unity. One might call it unity—but in it none of the arts survives. Architecture is no longer architecture, sculpture no longer sculpture, painting no longer painting, and the combination is a bizarre formation that can neither live nor die—something of the impossible nature of Klinger's Beethoven.

The model which is invoked with reverence is the Gothic cathedral. But as romantic feelings and a certain expressionism ebb, this uncritical admiration for everything Gothic will also recede. Even in the Gothic cathedral, the connection is very often an inorganic imitation of the organic.

We must remember this: within each individual artistic genre, any attempt to imitate the connectedness of the natural-organic leads to an artistic surrogate, a hybrid which is everything—except art. In the same way, in the relationship of the genres to each other, every appropriation, every invocation of the natural-organic, leads to impossibility, to the death of the individuals as well as the whole. Like each individual work of art, the work that encompasses several elements is a new creation according to its own rules and requires that the creator does not confuse—or couple—the laws of growth with those of conscious creation, which is his profession. Every such unnatural coupling results in a glued-together formation without inner articulation. And the enthusiasm for the *Gesamtkunstwerk* of the cathedral is, as odd as it sounds, yet another refuge for a secret materialism.

The more strictly, the more strongly, the more purely architecture becomes architecture, sculpture becomes sculpture, and painting becomes painting, the sooner will it be possible for them to work cooperatively and for each of the arts to become a pillar of the whole. Until each discipline has returned to its own unique basic law, there can be no unity. Each must follow its own thoughts through to their conclusion, and the farther this contemplation of their own being seems to lead them apart, the more surely it will lead them to each other in reality. In this way, the remarkable double meaning of the word "discipline" comes to coincide. In fact, joint, collective work—"discipline" as training—is only conceivable under circumstances which try to be nothing but what they are, totally and without compromise—with "disciplines" in the sense of separate systems of knowledge (rather than "inseparable components of the structure").

The total work of art is individualism. Art as totality is collectivism.

The ban against all specialization is, after all this, not far from the mark, especially where specialization is self-sufficient and knows only itself, as if it were already the whole. But where it is self-contemplation in the consciousness of a suprapersonal higher unity, in service to the totality, it deserves another valuation. And here it becomes clear that the two opposing concepts, of the notion of superior artistic unity or of the social behavior of the arts relative to each other, repeat themselves exactly in the opposing concepts of work methods in the human community, so that we can rightly say that the antithesis of crafts to technology is a general and radical one.

Again and again, the debate revolves around the division of labor forced by technology; and it is obvious that division of labor leads to the atrophy of mankind if it is, or remains, bound up with the isolation, constriction, and confinement of men who become stamped according to their bare utility. Division of labor which becomes division of men is absolutely deplorable. Division of labor can only be morally justified when it does not produce men of first, second, third, fourth, fifth, etc., class.

Previously, the division of labor was bound up with human classification, and so it is perfectly understandable if a justified reaction of embittered feeling against this classification turns against specialization in general. "Specialization is the lot of the times. It is a capitalist battle cry. Specialization is the prerequisite for large-scale industry, and large-scale industry is the prerequisite for enriching the individual. All great fortunes are made in large-scale industries. The people do not care for specialization: it is the contemporary means of setting the mark of slavery on

100 their foreheads and nipping their wakening souls in the bud. Nothing human can grow where a worker spends his life producing the head of a pin." And further: "The small-scale operation forces man to multi-faceted work, both physical and intellectual. It makes him human. It is a wonderful way to ennoble work" (Martin Andersen Nexö).

This must be flatly contradicted. The harm is not in the principle of division of labor, but rather its misuse in times of transition. Let us for once observe the problem less emotionally, more objectively.

The relationship of man to God always reflects the relationship of man to work. The pure craftsman in his individual inclusiveness—determining beginning, end, and every phase between by himself—only produces an individually inclusive, self-referential product, a personal creation. He then parts from his work. It lives only through him, but when he has finished it, it is an individual like himself, leading its own life. There is a natural and clear mother-child relationship. The self-contained man produces self-contained works, and as he parts from them, so he parts from God. His personal God and his unequivocal relationship to the God-child accords with his personal achievement. The personal God is invested with omnipotence and is the object of solemn, even unbounded and unconditional veneration. But all the sacerdotal splendor cannot disguise his total impotence. God remains in his transcendence. He is impotent because each man bases his understanding of him only on himself. He receives ceaseless veneration from innumerable individuals, but he never becomes reality. Just as all the strength of the individual artist is focused on the work taking shape under his hands, that work which is the center of the closed circle, the focus of all radii, so men all focus themselves as individuals on the distant point God. God must distribute himself, for men, all individuals, are indivisible—and yet each demands total attention.

If God emerges from his ineffectual role as a character of simile into reality, the private behavior of the individual to "his" God stops. God is no longer the Father, the highest judge of the deeds of man, assuming part of the responsibility for weak man. This God has become dumb and has lost his form. If he was until now form, sublime form but ineffectual, he now has relinquished form totally in order to become effective. The deeds of man become his new insubstantial body. Apart from this he is nothing. The static God becomes a dynamic God. Before, he was the total God for each individual; now the total becomes immediate God and the individual becomes a function. No one may *have* the whole anymore, but to be even the smallest function of the whole means to *be* more. The whole which the individual was able to *have* was a distant form; the whole of which he can *be* a member is unmediated life, life which conquers rigid form. He who *had* could be an individual. He who *is* must unbar the boundaries. He forfeits the prized character of *in*dividuality. Only to the "dividualists," God becomes reality. The reality of God is indubitably bought at the price of individuality. The individualist can have an impotent God totally. The dividualist can exist directly out of God's power. He gains necessity.

The human work form which corresponds to the transcendental, whole-form God is craft; that which corresponds to the formless, dynamic God is division of labor.

The principle of division of labor is the higher principle. All its perversions into a meaningless specialization cannot change this. Meaningless specialization has precious little to do with a profession of collective labor. It is mostly egoistic, while collective labor demands utmost responsibility for the whole. What leaves the involuntary specialist, who, as Nexö says, makes the head for a pin his whole life long, humanly impoverished is simply that he has no responsibility for the whole, and that, contrary to the true condition of things, he is stamped according to this single, perhaps most visible function: his "work." Max Cohen has seen in the establishment of the Work Council a means of leading the worker to the point "where he himself has a spiritual connection with the work—where he has an overview of the total process, perceives his own work as a necessary component of this process, and in its execution assumes total responsibility for the end product" (*Sozial-*

istische Monatshefte, 1919, p. 1044). On the other hand, we must break ourselves of the habit of identifying man simply with any one of his functions or evaluating him according to it. That is a view which may have been justified during the reign of handicrafts, but not today when each man performs a multitude of functions. He cannot simply be identified with a single one. Man today has no circle around him in the center of which his work stands. He is a link, not in one, but in many chains which run in various directions and make various demands on him. In himself he is nothing, open on all sides, carrier of functions—impressed directly into a working whole! The craftsman created a whole, but was himself rootless, a rolling snowball, without connection to a whole. And the whole which he created was less than, or at most as much as, himself. It was never able to be more. This "more" requires sacrifice of the personal element. The present situation is such that division has prevailed, but the old circular view still obtains. The joining of man with his work is the old craft concept, the material concept of work.

In the days of handicrafts, material was distributed and each craftsman worked on all stages of development. Today, the work is distributed. In each stage of the work, the material passes at a determined point along one of its pathways.[1] In this way the work becomes dematerialized and functional.

It would be myopic to complain that work is thus made dull and loveless. It has so often become so because of the difficulties and contradictions in every transition, not because of the process itself. To be sure, in modern labor the "natural, material connection" is removed. The unity is no longer concrete, but abstract, if one will, intellectually constructed. To see this requires an effort of imagination. In handicrafts, the unity in the development from crude material to shining bowl, etc., is present and visible; in technology this unity must be created intellectually by the individual, and I believe that this presupposes a greater, not lesser, measure of involvement and love.

Naturally, as long as the stigma of slave labor lies on divided work and on piecework, that is, as long as labor is made the measure of the man, we cannot well expect this inner involvement.

It may be that man felt better working in the intimate, unbroken style of the craftsman, and that this intimate, unbroken work style is still seen by many as a lost paradise, as more agreeable, we might say more peaceful and pleasant. But we must reject the notion of "work robbed of spirit by division." The opposite is true. Work is absolved of materiality and given spirit. For this reason we must further reject the belief that workers must be protected from division of labor out of social sentimentalism. "As far as the product is concerned, an apology for machines which typecast would be appropriate. But as for the production workers, the task is to provide the victims of the division of labor who are tied to specialized, mechanical work with an activity that allows all of their abilities to unfold. We do not need to point out that mechanized industries cannot be turned overnight into handicraft production; nor that one cannot readily turn industrial workers into artistically thinking, inventive craftsmen. The task is not to make plans for the far future, but to do what our social conscience demands for us, to work with all our energies so that workers can take and demand the same part in the spiritual-intellectual life of the times that the medieval craftsman-artist took in his time" (Paul Renner, "Künstler und Gewerbe," *Das Werk*, 1920, p. 22).

I find this thoroughly romantic view unacceptable. We should hope that the modern industrial worker demands a much larger part in the spiritual and intellectual life of his times than the medieval craftsman-artist was supposed to have taken in his. The more concentrated work becomes through rationalization, and the shorter working time becomes, the greater the possibilities for every other occupation. But aside from this, the anxious consideration for the sentiments and welfare of the human soul seems out of place. Even if the new work process required the sacrifice of values of intimate enjoyment of nature and life, it should be permitted. In the end, according to Renner, it does not depend upon the man, but on the matter . . . one could say not on the man, but on mankind. Was the highest scientific, artistic achievement ever arrived at

without men suffering under the demands of work? But the new unity is not even against man.

If the divine order is to become immanent, if human labors are not to be only a weak echo from situation to situation, each without relationship to the other, but divine harmony itself, then man must give up his limits. No longer a symbol for but an image of divine order, work can only be community labor, collectivism; and thus the individual becomes a function in the suprapersonal work plan. He loses the master's role over beginning and end of his work, and he wins necessity. His work does not have meaning, it *is* unmediated meaning.

The means of getting working men to relate to each other is the machine. It is disliked by the romantics, who maintain that the machine has destroyed the art of the people. The fact is that folk art died generations ago. Efforts to revive it are destined to failure. Friedrich Baumann-Hildesheim suggests, in *Pelikan*, how one might get "from trade school to folk art." What is this bridge made of? "I am thinking of good bolts of wood, as I have found them on doors in the Lüneburger Heide. The latches I saw on garden gates would also be worthy of imitation. There are towel holders, wardrobe hooks, and utensils in exemplary forms which each could add to and change after his own fancy. . . . Nothing is so simple, not even the handle of a hoe, that creative powers could not gain strength from its beautiful and useful fashioning. . . . In regions with rich growth of willow, we can make use of that. In marshy regions, on the other hand, where alder grows, this material can be used to produce comfortable chairs. If we remain on native soil, we can still find people here and there whom we can draw on for help. I knew a shepherd who carved skilful spoons out of hardened, dried pine root; I would ask him to help us. Above all it would be useful objects which we would have them make, attractive and functional furniture which would greet the maker daily in sitting-room, bedroom, and hall, and be companions for him. Their appearance or utility would create a sense for other things which artisans and artists offer for sale at Christmas and other occasions."

Does this folk art not bear a fatal resemblance to kitsch? Does anyone long for it other than a few fanatics? Should we not be glad that the machine can provide these useful objects much, much more practically and in a much better and more pleasing form? Folk art can only gain a completely new meaning with and through the machine, technology, and the division of labor. Folk art in the old sense, the art of those not touched by the great stream of consciousness of a time, the groping, naive, heavy art of "the people" in a limited, limiting sense, will come to an end. In replacement, the entire activity of a whole people will become a conscious, light, lucid form-making—art! Art is not made by a low, uneducated people—only "folk art" is. It is the life of the community which is art.

What always makes it difficult to see the relationships correctly is the unfortunate fact that the machine, this alleged despot and slave-maker, has up to now been a slave itself. The despot to which it is still beholden is the class of egoists. As long as the machine is their instrument of power, it will always appear as the enemy of the worker. And yet, in spirit, it is their very own tool. "The machine cannot be abolished with the capitalist dictatorship, but rather will only then be exploited by the entire community to its full capacity. . . . The more plan, beauty, meaning, and pleasure are created in the immediate environment of man, and the more his daily life, all the vessels of his life, as it were, are transformed from the rough form of the moment into the pure, honest, functional form which can reflect a content, a character, the more the art of exhibitions—art for art's sake—will of necessity be overcome, and the more this art, or what remains of it, will be drawn into the general sphere of needs. If the pure arts survive, they will cease to be art, but will instead become more accessible and intelligible to the sensuous experience of larger circles of people, as they can only evolve through the living, rational, objective, and personal expression of things" (Lu Märten, "Die Diktatur der Maschine" in *Das neue Reich*).

The undivided, unbroken labor of crafts, which was always work for one individual, divided men into classes, ranks, guilds, individuals. The division of labor, with the

help of the machine which works for all, binds men together. The machine will thus contribute to the formation of a new human community. The exact motions of the machine will become the performing joints of the new unit of man. "We are approaching a new dependence of man on man unknown to earlier generations. Surely, each higher stage of culture brings with increasing division of labor a growth of human interdependence. Qualitatively, the technological age does not differ from earlier periods. But quantitatively it does. The tempo of reciprocal ties accelerates rapidly. . . . The increasing dependence of man on man, which technology sets beside a dizzying freedom from nature, shows us the innermost core of the new culture. In technology lies a spiritual problem which, through the recognition of ever-advancing dependence, is raised to an ethical problem. In my opinion we find here the true goal of the human will, freed by technology from the bonds of a purely causal view of nature. Technology does not need to borrow its aims. It finds them within itself. And what is more, technology finds in its own workings aims and goals which point far beyond itself and into the future. New values must be found, new values which raise the dependence of man upon man into the highest and purest sphere" (Victor Engelhardt, *Technik und soziale Ethik*).

The fact that technology above all accomplished the opposite, that it brought workers into a one-sided dependence on the "captains" of industry, etc., and trampled them into an amorphous, dull, undifferentiated mass, is rightly explained by Engelhardt as owing to the fact that the young technocrats' sense of conquest developed in extremely materialistically oriented times. "The proud feeling of mastery unconsciously narrowed the circle of humanity and made the proletariat into a lump of material like iron and steel. This recovery of human freedom (through restricting humanity to the sphere of higher intellectuality) was no deceit, for consciousness lived and could only live in this sphere. Without consciousness of himself, man is not man and can in fact be treated as material" (Engelhardt).

The notion that this mass does not remain mass, however, and the question of which powers will overcome the concept of mass and lead us to a new community are articulated with exceptional clarity in an article by "L" entitled "Masse and Führer" in *Freideutschen Jugend*, February 1921. "Just as the European can only imagine in the mass of a moving body an obscure lump of material, so in his picture of the mass of people it is primarily the indication of the accumulation of unknown and uncontrollable elements which conditions his imagination. . . . This statement is not an assertion that the sociological notion of mass originates in the physical concept of mass, or vice versa. Rather it is both: the natural concept and the view of the community emanate from the same attitude toward world and life. . . . We must progress beyond this unclear and fruitless concept of mass. It would be unhistorical and unrealistic to try to force it before the right conditions are created. But we already find ourselves in the middle of the historical disintegration of the concept of mass. Physics devotes its energies to laying the foundations of the new mechanics, and the world view of relativity corresponds to a completely new concept of the community of man. . . . A new culture can only spring out of a process of new socialization."

Toward this new socialization—and here our views differ slightly from the essay just cited—technology, freed to fulfill its actual purpose, labors. Technology misused produced the dull, amorphous masses; technology implemented with consciousness and responsibility will free the masses and make them articulate through the necessity of collectively interlinked labor, which more than anything else leads to the recognition of strong reciprocal dependence and conditionality (relativity). But this means allowing the community of the masses to crystallize. "We must depersonalize ourselves. The masks must fall from our faces, and the conceit of being something different from the rest must yield."

This depersonalization, which is logically an objectivization, will not bring the artistic renewal of handicrafts and folk art, but only the new, technological concept of labor. A glance at the new and decisive European art—at Léger, Malevich, Archipenko, Schlemmer, Baumeister, Tatlin,

Mondrian, Doesburg—is sufficient. Does this art still have any inner connection with craft? It is anti-craft, intellectual-constructive, technological. The Expressionist phase could still foster a cult of handicraft. But now, after the young European art has finally reached a state of harmony with the time and place of its creation, the enthusiasm for handicraft (which, as the Dutch architect Oud rightly says, flourishes in times which take delight in the unitary form) is done for.

"Architects, sculptors, painters . . . we must all return to handicraft"??? No, we must proceed—to the stern service of spirit and intellect!

Notes

Source Note: This essay was first published in German as "Kunst, Handwerk, Technik" in Die neue Rundschau, *vol. 33, 1922, and was translated into Italian for the second part of Francesco Dal Co's book* Abitare nel moderno *(Milan: Feltrinelli, 1981).—Ed.*

1. Friedrich Dessauer's description of the Ford automobile factory in Detroit in *Auslandsrätsel, nordamerikanische und spanische Reisebriefe* (Kempten: Kosel & Pustet).

Reviews and Forum

The Castellated Home

Hermann Muthesius. *The English House*. 1979, New York, N.Y., Rizzoli International Publications, Inc. 246 pp., $75.00. Originally published as *Das Englische Haus*. 1904, Berlin, Wasmuth.

Kenneth Frampton

1

It is one of the ironies of history that many of the finer points of the English Arts and Crafts Movement would have vanished without a trace had it not been for the painstaking documentation carried out by Hermann Muthesius during his seven year stay in England, from 1896 to the end of 1903 (fig. 1). Muthesius was not the first German to have taken an interest in British domestic architecture; in fact, one Richard Dohme anticipated his concern with his own *Das Englische Haus* of 1889. However, once Muthesius's more comprehensive study was issued in 1904, it became the fundamental reference in the field and the main ideological text which informed the foundation of the Deutsche Werkbund in 1907. While frequently cited in one architectural history after another, Muthesius's *magnum opus* on English domesticity has only now, seventy-five years after its initial publication, been translated into the English language, with appropriate introductions by Dennis Sharp and Julius Posener.

The sudden appearance of Muthesius in English is not without its polemical point, for clearly the Sharp/Posener circle has long since looked askance at the late Neoclassical tradition in European culture; they have, one might say, maintained their distance from the taint of "authoritarianism" that still clings to the baseless Doric. That the English Free Style was to give way in the decade that followed Muthesius's publication to the Edwardian Neoclassical reaction is remarked on by Posener in his preface: "While English free architecture—or, as Lethaby more often calls it, building—was producing results, English critics did not very much care for it. And at the very moment somebody did care, someone from abroad, the cognoscenti dismissed this new architecture (or building), which was the architecture of Philip Webb, Norman Shaw, of Lethaby himself, and of Voysey. Ten years later, Geoffrey Scott's book *The Architecture of Humanism* disposed of the remains. Countryhouses were built in bankers'

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1 Hermann and Anna Muthesius taking tea at the Priory, Hammersmith, 1896.

Georgian, while Voysey, in protest, reverted to Neo-Gothic. By 1930, the International Style reached England from the Continent; after World War II, the 'New Brutalism' emerged; but the efforts of two generations of English architects to free building from Architecture (with the capital 'A') had been almost forgotten."

Muthesius's *Das Englische Haus* was originally issued as three separate volumes. The first dealt with the development of the English Arts and Crafts Movement, the second treated with the social mores, that is with the proprietal legalities and the constituent elements which determined the generic country house. Then came the third, which was fittingly given over to an account of the interior, above all, of course, to Morris's furnishing principles and to traditional Arts and Crafts methods for dealing with walls, ceilings, floors, fireplaces, doors, and windows.

The second volume is perhaps today the most fascinating to read, with its description of those programmatic appointments whose destiny it was to minister to such social activities as dining, withdrawing, reading, smoking, game-playing, and last but not least, resting and bathing. As Muthesius makes clear, even the most mundane elements served to sustain the hierarchical structure of family life. Thus if the first volume dealt with the origins of the style, the second treated with society, that is, with the *modus vivendi* lying behind the style; while the third followed up with the finer points of surface treatment and equipment. In sum, the three together served to articulate the sense and sensibility of the English house. In this respect Messrs. Lethaby, Webb, and Voysey could hardly have wished for a finer chronicler of the cultural impulse in which they played their seminal roles, and indeed they were to find none, not in their own lifetime or after. Thus the history of British culture is indebted to Muthesius in a unique way. This much is hinted at in slide collections throughout the world which always feature Arts and Crafts house plans labeled in German, images which needless to say were taken from *Das Englische Haus*.

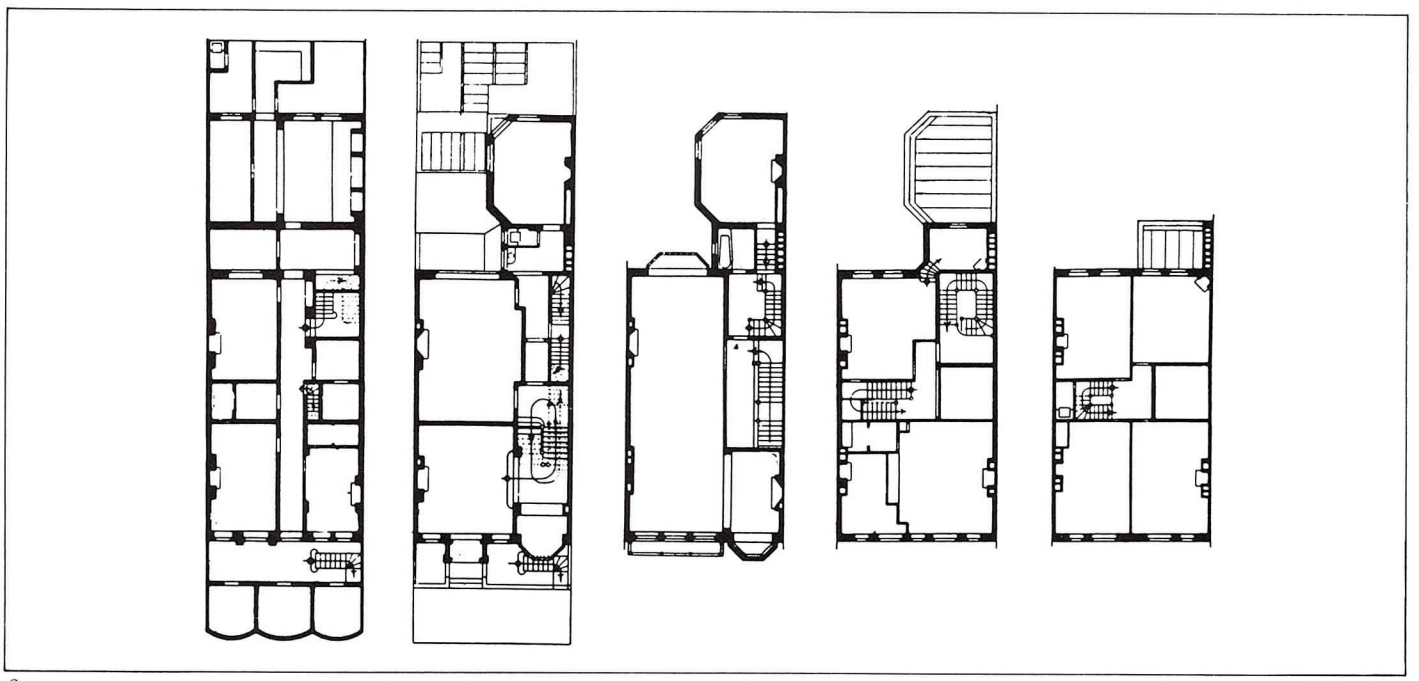
What were Muthesius's critical reactions to the culture which he made so universally known? While discreet in public to a fault, Muthesius nonetheless seems to have perceived the subtle detours and disingenuities by which this cultural complex had come into being, together with the social and architectural consequences of its triumph. Thus we find him writing of the work of Richard Norman Shaw and Eden Nesfield in 1903:
"If one looks more closely into their two careers it becomes clear that Norman Shaw moved with easy brilliance along his glittering path of progress, but Nesfield was close at his heels. If this relegates Nesfield somewhat to the background by comparison with Norman Shaw, it must be said that Nesfield was the only architect of his day who was capable of following Shaw so closely . . . . As regards their influence on their period, . . . Nesfield may possibly have been the more influential, at least during the 1860's.
"The main reason for this was probably that he had the opportunity to build on what might be called the beaten track, whereas Norman Shaw's first buildings were rather remote. In 1864 in Regent's Park in London and in 1866 in Kew Gardens, near London, Nesfield built a few small lodges that became very famous and immediately and quite specifically showed the young generation the path they would have to follow in the future. The little building in Regent's Park was an adaptation of laborers' houses in Surrey, while that at Kew Gardens was modelled on the architecture of the early eighteenth century with its strong Dutch influences. These little houses were found not only to be worth imitating but they also opened the eyes of larger numbers of architects to their prototypes . . . many of which still existed in the country. There was now general eagerness to study them and the fate of the so-called 'Italian villa' in English domestic architecture was sealed."

Muthesius is here referring to the Italianate villa popularized by John Nash in the 1820s. Of its subsequent typological degradation he goes on to add:
"It is revealing to note that since then the term 'villa' has become debased in linguistic usage, for until that time it had denoted something rather exalted and distinctive (roughly the meaning that it still has in Germany); today the term is used only to describe the class of poor, jerry-built speculative housing that is provided for an ignorant public and, indeed, in every day parlance the term possesses comic and contemptuous overtones. The Englishman is proud to be able once more to call his dwelling place his 'house', which . . . one can regard as a triumph over Italian taste and foreign influence."

The density and range of this short passage is quite remarkable, and notwithstanding the subtleties of present scholarship, it is doubtful whether anyone has ever written of the English Free Style with such understanding. Unlike the many historians who have followed in his footsteps, he recognized the importance of Nesfield, while still acknowledging his dependence on Shaw. Above all Muthesius understood the extent to which Nesfield's houses were derived from the "living prototypes." While we have always known that Webb worked in this way, that is to say, from the grass roots up, one has always tended to misread Nesfield (perhaps because of Shaw's urbanity) as having been detached from the true spirit of the English vernacular. Muthesius not only suggests our error in this regard but also goes on to show the wider repercussions of this development.

Last but not least, by way of surprises, one cannot help noticing certain omissions. There is no reference, for example,

2 Terrace house, 68 Cadogan Square, London. R. Norman Shaw, c. 1885. Plans of cellar through third floor.
3 Small cupboard showing Japanese influence. E. W. Godwin, 1877.
4 Stanmore Hall, near London. Room with frieze by William Morris, 1891.
5 Modern cantilevered WC as illustrated in Das Englische Haus. *It is surprising to note that this rather advanced type of fitting was available by 1900.*



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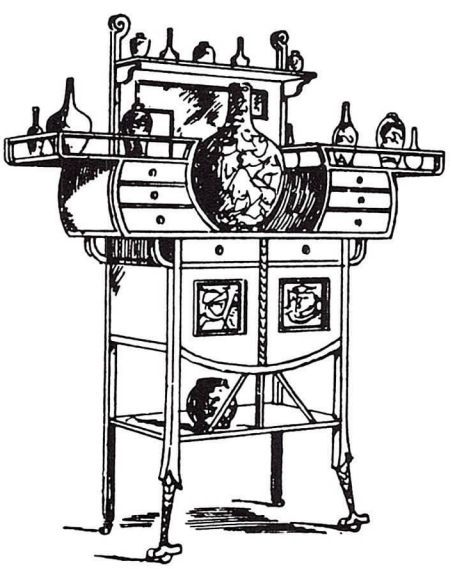

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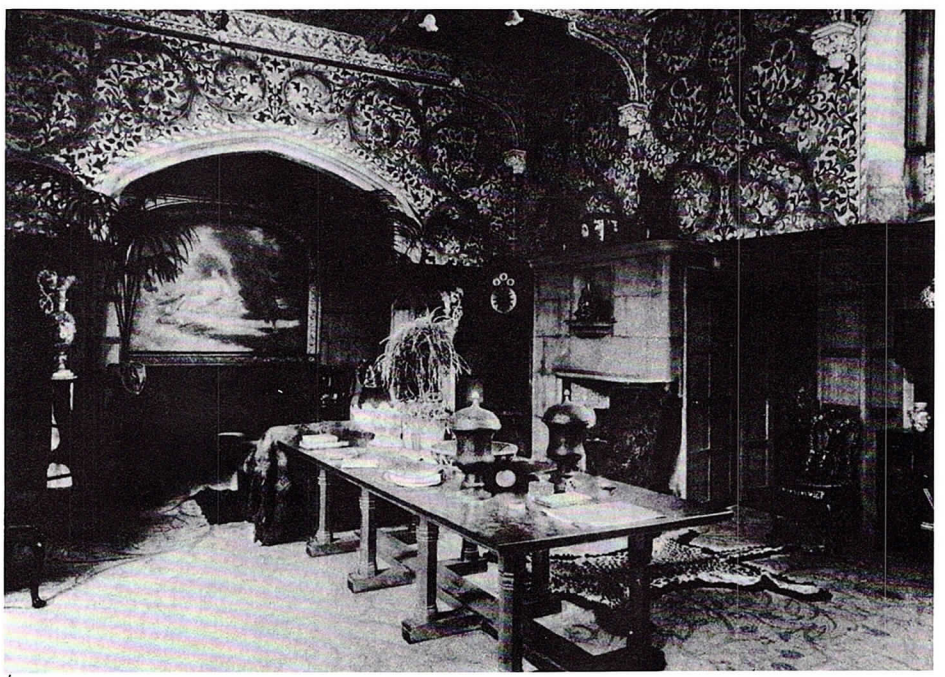

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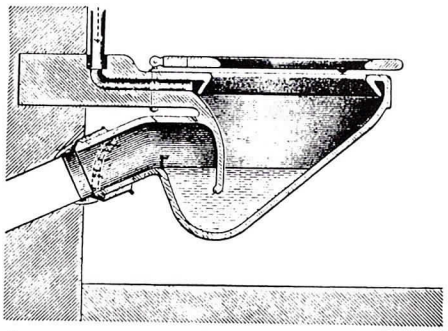

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to Henry Hobson Richardson's Lululand, built posthumously in 1894 for the mysterious Herbert Herkomer, and little attention given to the eccentric architect and designer E. W. Godwin. One notes above all the absence of Godwin's Tite Street houses, built in Chelsea around 1880, for such distinguished aesthetes as Oscar Wilde and James McNeill Whistler. While such omissions could be a reflection on the slightness of Godwin's contribution, Muthesius's temperament—his evident attachment to the cult of the gentleman—is sufficient to suggest that he would have had little sympathy for the aesthete architect and his equally rarefied clients.

Muthesius depended to a great extent on Robert Kerr's encyclopedic book *The Gentleman's House*, first published in 1864 and reissued in 1871. Much of what he sets out in the second volume derives from Kerr, although the progressive spirit is evident from Muthesius's refusal to endorse Kerr's praise for the more perverse aspects of English country life. And yet he expressed his reservations with great delicacy when he wrote, "the book has, however, lost some of its value since it does not include certain recent ideas, especially those concerning sanitation and others that have similarly changed" (fig. 5). Nonetheless Muthesius covered the same ground, expatiating with relish upon the eccentricities of English upper middle-class life:

"The commonest form of entertaining among the middle-classes is the 'At-Home', which takes place either at nine in the evening or in the afternoon (when it is attended mainly by women). Refreshments are of the simplest, even the most primitive, kind, indeed, a German would pronounce them positively inadequate: they consist of coffee, tea, fruit-cup, cakes and sandwiches. But one has the feeling that no one would come on account of the food or attach any importance to it . . . . The nursery in the English house is always run and served quite separately. Except when they are driven out or taken for a walk, the children spend the whole time in the nursery under the supervision of women engaged for the purpose, and contact with their parents is far less frequent than in continental households . . . . But extreme punctiliousness . . . and constant supervision and guidance ensure that a generation will rise that will be sound in body and mind and whose strength will lie in stability, toughness and steadfastness of character."

At times Muthesius's critical Anglophilia is tempered by disapproval bordering on disdain, as, for example, in the mild sardonic tone assumed when writing of the provisions made with regard to door swings:

"The rule known to every Englishman says that the door must open toward the main sitting area in the room, which usually means toward the fireplace; in a study it opens toward the desk, in a bedroom toward the bed. The idea behind this is that the person entering shall not be able to take in the whole room at a glance as he opens the first crack of the door but must walk around it to enter the room, by which time the person seated in the room will have been able to prepare himself suitably for this entry."

And yet he was to approve unequivocally of the English practice of isolating the water closet:

"But we must stress the fact that in England a lavatory is never actually in the bathroom. Fifty years ago it may still have been permissible to put both in one room, but today it would be considered barbarous and is, we repeat, totally inadmissible. It is to be hoped that we in Germany will also soon begin to question the rightness of the custom. Even in its most splendid form, a lavatory is an appliance that one would prefer to keep out of sight, as far as possible, primarily for aesthetic reasons. It is therefore also entirely out of place in the bathroom. Even there its presence evokes unpleasant associations of ideas even assuming that the closet is entirely odourless, which can never be taken for granted."

All in all, the small part played by bathing in English upper middle class life (explained away by Muthesius as an aspect of English puritanism) is testified to in a surprising way by many of Shaw's town houses, where a five floor, six bedroom townhouse with two water closets and only one bathroom is the rule rather than the exception (fig. 2).

Despite this evident reluctance to bathe more than once a week, it is nonetheless clear that the Arts and Crafts house reflected the domestication of the English male, above all with regard to the rites of dining, drinking, and smoking. Thus Muthesius writes:

"It used to be the custom in England to remove the tablecloth from the gleaming polished mahogany table even before the dessert; and after the meal the men embarked on a drinking bout that, as in the eighteenth century, . . . not infrequently ended in the whole company being drunk . . . . The English gentleman of today no longer drinks and he smokes only very moderately. So there is no longer any reason for him to ensconce himself at the dinner table for considerably longer than the women, whom, as we have said, he follows into the drawing room, after a speedily smoked cigar, and with whom he converses without smoking or drinking. He has in fact entirely departed from his former ways and has become 'fit for the drawing room'."

Of the contractions which have been necessary in order to present *The English House* in one volume, the original volume dealing with the interior has been the most drastically curtailed, for previously it treated at length with the evolution of the British interior, including the Neo-Palladianism of Adam, Sheraton, Chippendale, and Heppelwhite. In the shortened version most of the space goes to the

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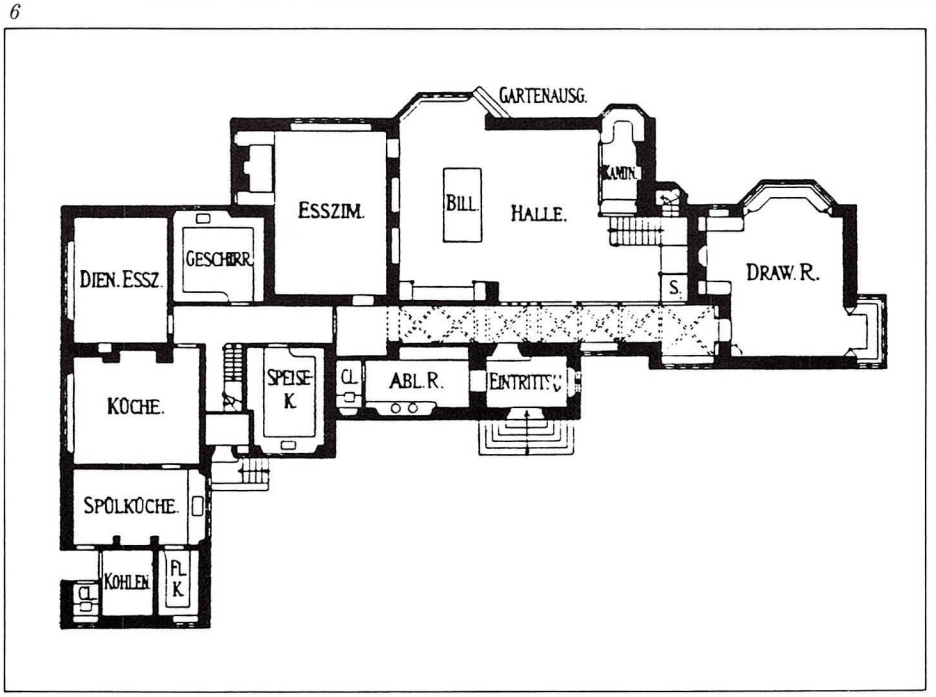

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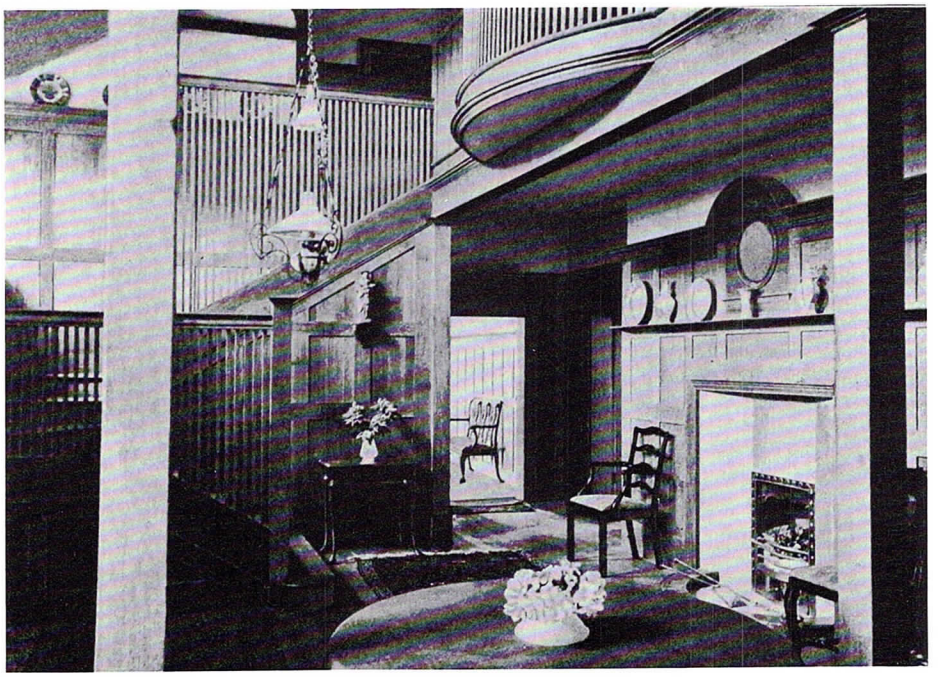
Free Style reformers, to Burgess, to Godwin (fig. 3), and above all to Morris, for the extravagant Pre-Raphaelite interior that he designed in 1891 with Lethaby for Stanmore Hall (fig. 4).

Das Englische Haus also includes a number of extraordinary interiors and plan forms which have somehow come to be repressed in the received accounts of the period, above all, of course, houses by M. H. Baillie Scott, whose posthumous reputation has been growing ever since the 1972 monograph written by James D. Kornwolf. As Kornwolf was to remind us, Baillie Scott's masterwork, Blackwell, built at Bowness, Westmoreland, in 1899, is to be classed among the proto-modernist spatial compositions of the period (fig. 7). It is clear from Muthesius's treatment that the central hall of Blackwell, with its Tudor gallery, inglenook, and mezzanine smoking "loft" was spatially unusual (fig. 6), and as Kornwolf implies it may be seen as anticipating the galleried triple height entry hall of Le Corbusier's Maison La Roche of 1923 (figs. 10, 11). If modernist layered space is latent in Blackwell, then it is equally present, as vertical displacement, in Voysey's Norney Grange, Godalming, of 1897 (fig. 8), and above all in the central hall of George Walton's The Leys, built at Elstree, London, in 1901 (fig. 9). Apart from Muthesius in 1904 and Pevsner in 1939, Walton remains the unsung "other" architect of the Glasgow School, not only for The Leys, but also for his textiles and his work for Kodak in London and Brussels (fig. 12). Like E. S. Prior's The Barn, Exmouth, of 1897 (figs. 14–16) (a work which exercised an influence on Muthesius's Freudenberg house of 1907), Walton's double height central hall, within the rather blocky massing of The Leys, is patently proto-modernist. From the Mackmurdo-like screen to the main stair and gallery, which jointly serve to articulate the triple-height volume of the hall, to the ingenious spiral stair connecting the maid's bedroom to the scullery, Walton is already engaged in spatial

6 Blackwell House, Bowness, Westmoreland. M. H. Baillie Scott, 1898–1899. View of hall.
7 Blackwell. Plan of first floor.
8 Norney Grange, Godalming, Surrey. C. F. A. Voysey, 1897. Hall with staircase.
9 Maison La Roche, Paris. Le Corbusier, 1923–1925. Axonometric.
10 The Leys, Elstree, near London. George Walton, 1901. Plan of first floor.
11 Blackwell House, Bowness, Westmoreland. M. H. Baillie Scott, 1898–1899. Diagram of hall.



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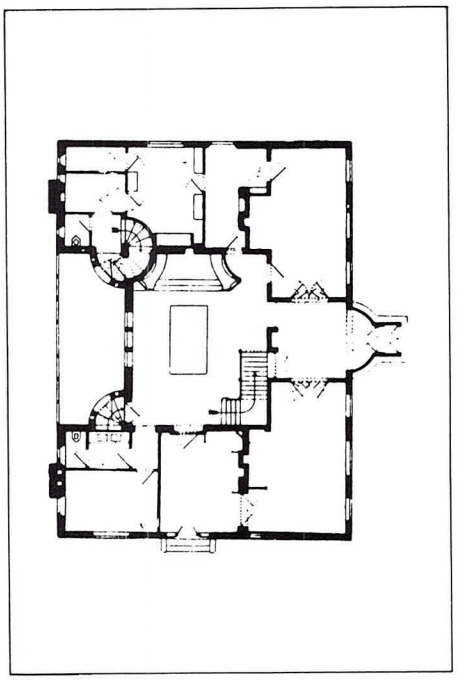

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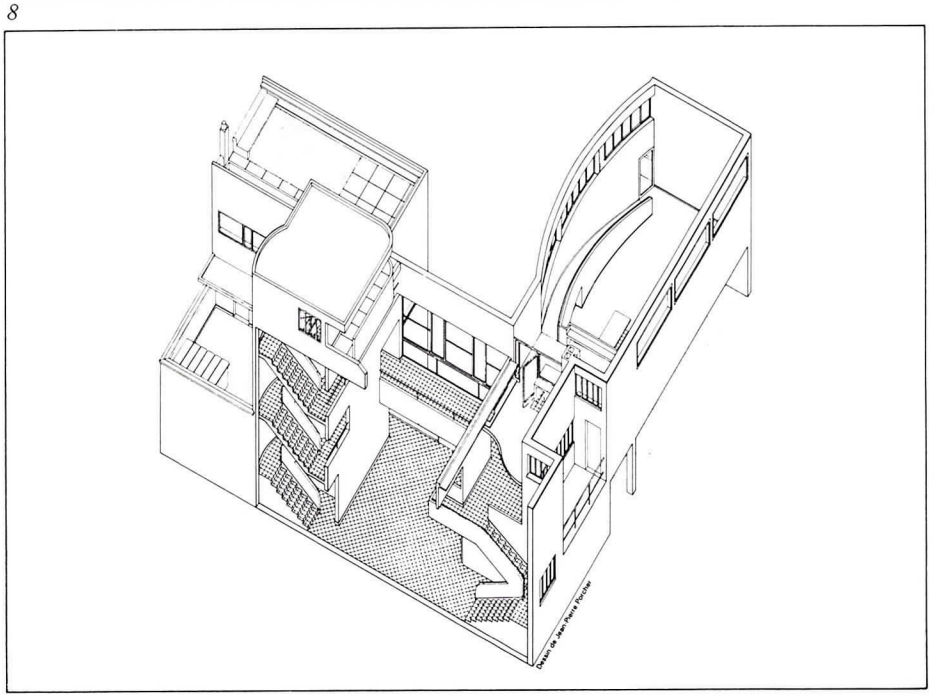

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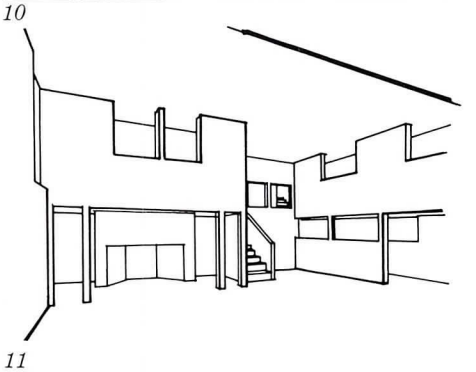

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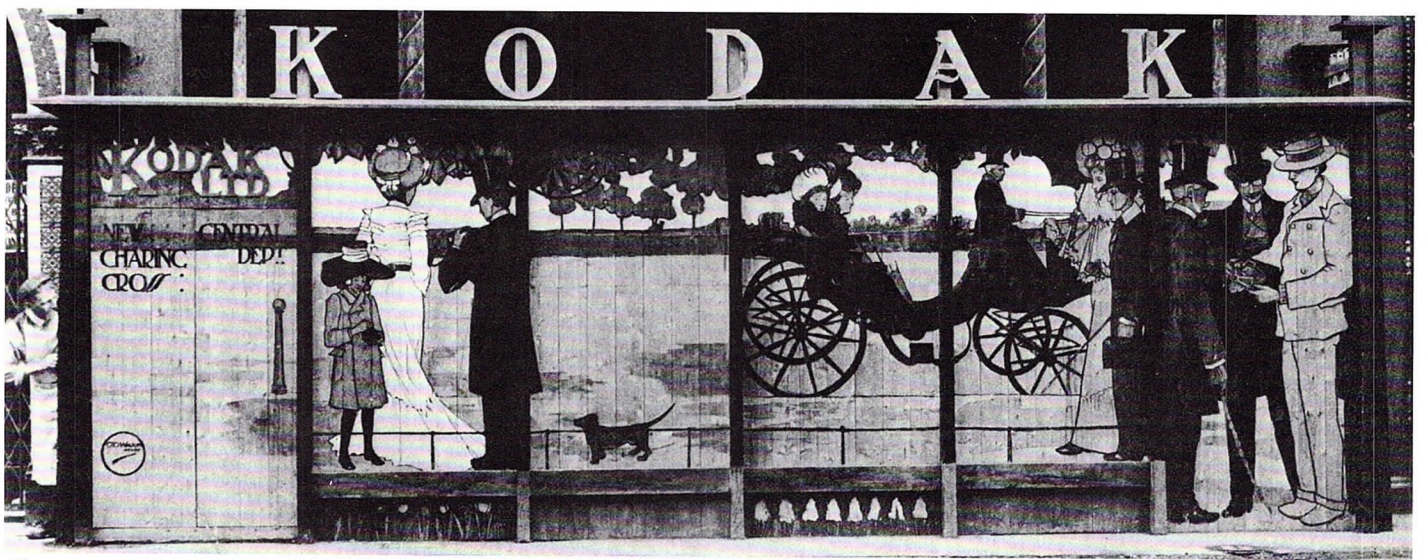
12 Hoarding during construction of Kodak shop, the Strand, London. George Walton, c. 1900.
13 The Leys, Elstree, near London. George Walton, 1901. Billiard room.
14 The Barn, Exmouth, Devonshire. Edward S. Prior, 1897. Entryway.
15 The Barn. First floor plan.
16 The Barn. Second floor plan.



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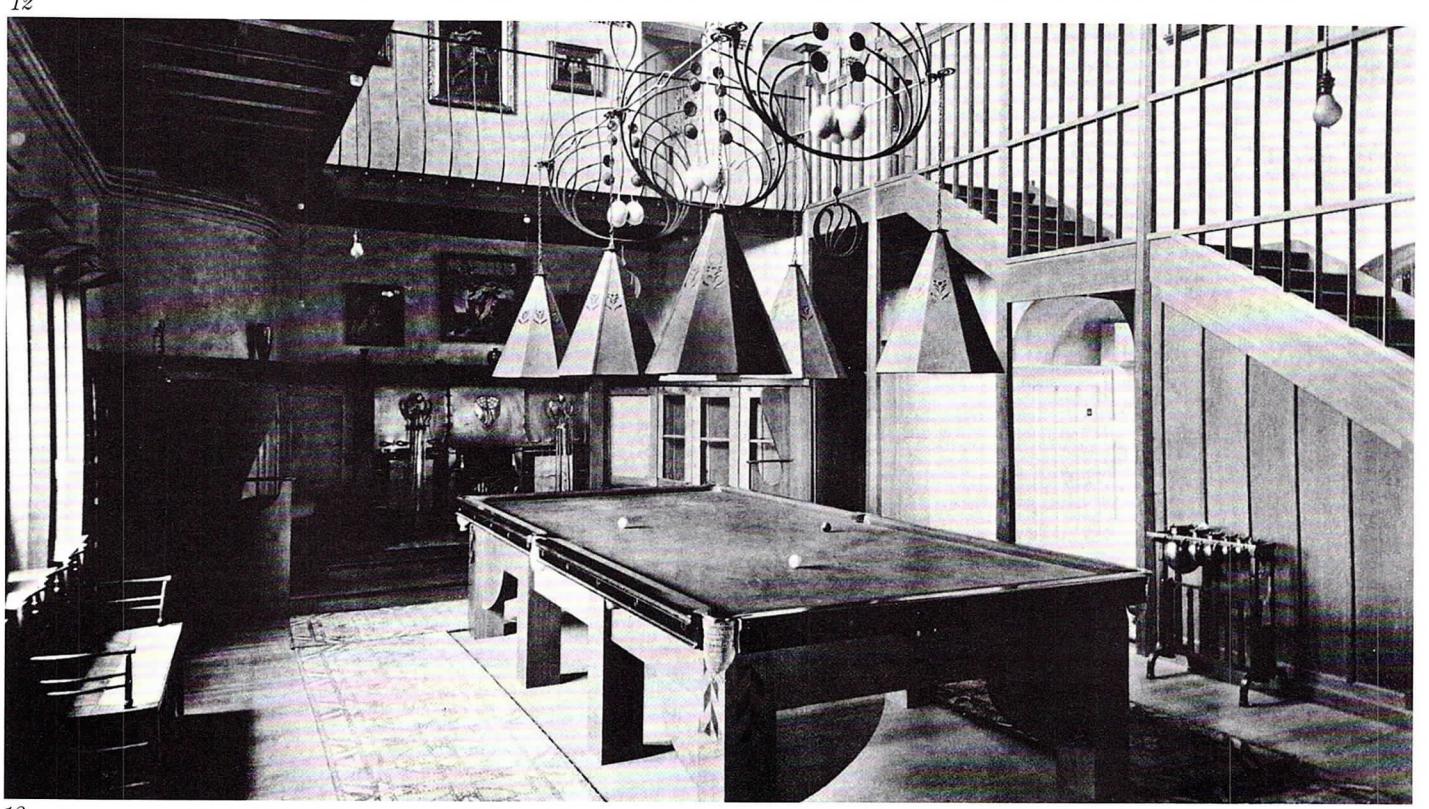

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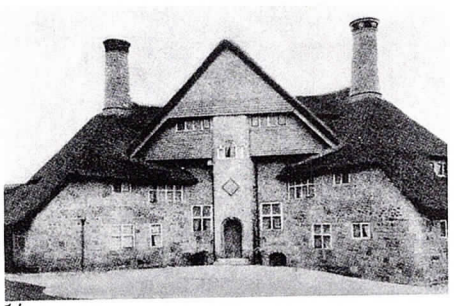
17 Flower garden in a house near Bedford. C. E. Mallows and Grocock. This drawing of around the turn of the century epitomizes the urbane unity of house and garden which was the apotheosis of the Arts and Crafts.



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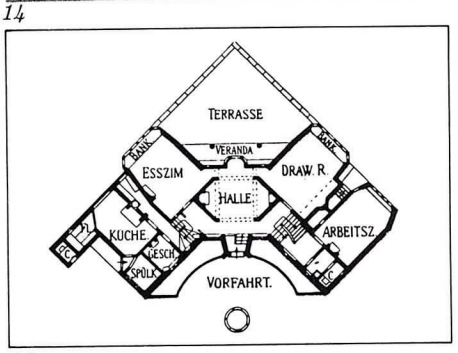

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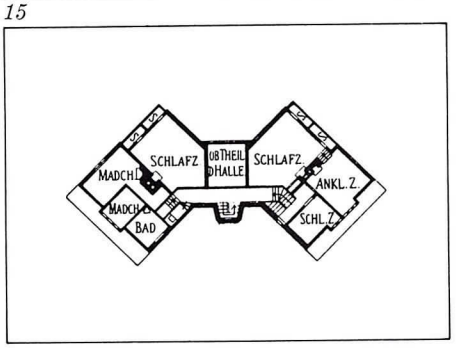

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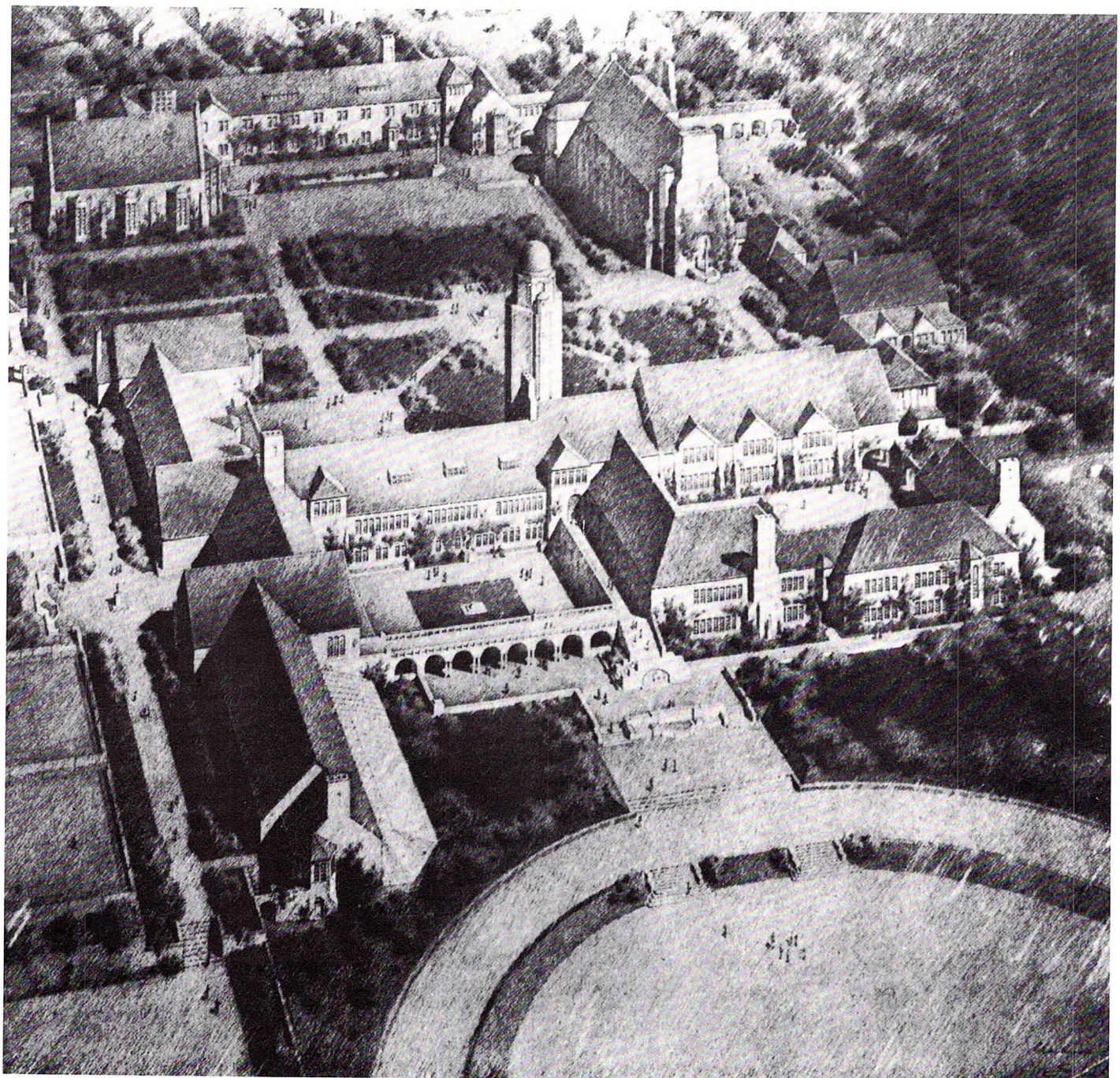
strategies which we will later recognize as modern (fig. 13). It is significant in this context that both The Barn and The Leys are relatively small and compact houses—a butterfly plan in one instance and a U-plan in the other, The Barn having six bedrooms and The Leys mustering no more than five. These works surely presaged the end of the *rambling* English country house.

Turning the pages of *The English House*, reading the measured observations of Muthesius's meticulous text, one cannot help being struck by the fact that this was the last occasion (at least in English history) when there was a close correspondence between the aspirational ethos of the architectural professional and the traditional yet evolving mores of the society (fig. 17). It would seem that by the turn of the century, a wide range of social classes were beginning to be housed according to the ethos and the precepts embodied in Muthesius's compendium—from W. H. Bidlake's Lutyensian extravaganzas built for *nouveau riche* businessmen to Ralph Heaton's cottages erected for Cadbury's workmen at Bourneville, from the grandiose Scottish Tudor settings achieved by Sydney Mitchell and Wilson to the Free Style, six-story walk-up flats built in Webb-like brick syntax by the L.C.C. in Pimlico and Bethnal Green.

It is sobering to reflect how World War I destroyed this egalitarian culture. The depredations of the war not only eliminated a generation but also disrupted the stability of an economy which was beginning, on the eve of hostilities, to build well for a wide strata of society. Admittedly Scott's reactionary text published at the outbreak of war already moved to undermine the movement, as did the fact that the Midland and Northern slums were to remain as "great national wens" for another fifty years; but this state of affairs was certainly not improved by the loss of confidence that succeeded the war and by the confused planning policies which led to nothing more elevating in the interwar years than the introduction of the "By-Pass" as the forerunner of the modern freeway, and the endless proliferation of vulgarized stockbrokers' Tudor—the "three up and two down," semidetached, petit bourgeois, builders' villa—which became the pre-Depression instrument for the degradation of the Arts and Crafts. These endless strip suburbs are surely among the more depressing developments that the twentieth century has produced. It is sobering to realize that the "cultured" environments of Bedford Park and Bourneville could not be repeated without detrimental results, except in the seemingly endless pine stands that skirt the western periphery of Berlin where, thanks to Muthesius, the poetic of the Free Style suburb was to attain its more elegant and lyrical expression.

Figure Credits
1, 2, 3, 7, 9 From Hermann Muthesius, *The English House* (New York: Rizzoli, 1979).
4, 8 From Hermann Muthesius, *Das Englische Haus*, vol. I (Berlin: Ernst Wasmuth, 1911).
5, 17 From Hermann Muthesius, *Das Englische Haus*, vol. II (Berlin: Ernst Wasmuth, 1910).
6, 11 From James D. Kornwolf, *M. H. Baillie Scott and the Arts and Crafts Movement* (Baltimore: Johns Hopkins Press, 1972).
10 From *AMC*, no. 49, Sept. 1979. Special issue, "Le Corbusier, 1910–34."
12, 13 From Nikolaus Pevsner, *Studies in Art, Architecture and Design* (New York: Walker & Co., 1968).
14–16 From Julius Posener, *Anfänge des Funktionalismus* (Berlin: Ullstein, 1964).



1 (frontispiece) Cranbrook Academy of Art, Bloomfield Hills, Michigan. Eliel Saarinen, 1926–1930.

Monuments in the Wilderness

Albert Christ-Janer, *Eliel Saarinen: Finnish-American Architect and Educator.* Revised edition, 1980, Chicago, Illinois, University of Chicago Press. 169 pp., $25.00, hardback.

Peter Anders

Peter Anders is presently studying for his Master's degree in architecture at Columbia University, New York.

One glance of the trained eye, and instant judgment comes; that judgment which flashes from inner experience, in recognition of a masterpiece. . . . The Finnish master-edifice is not a lonely cry in the wilderness, it is a voice, resonant and rich, ringing amidst the wealth and joy of life.
Louis Sullivan, 1923.[1]

Because the works of Eliel Saarinen are often seen as romantic or picturesque, they are frequently overlooked in favor of the radically utopian (but also romantic) schemes of his contemporaries. Although his projects seem less imposing than the visions of Le Corbusier, Wright, and Mies van der Rohe, they are admirable for their sensitivity toward landscape and users' needs. His attitude toward architecture was an acceptance of the past, and it did not require the leveling of cities for its implementation. Other issues, such as the role of the monumental in architecture and the question of nature as a source for design, were addressed by Saarinen and are at present being revived. In this regard, the re-publication of Albert Christ-Janer's *Eliel Saarinen: Finnish-American Architect and Educator* is both fortunate and timely.

Two themes are dominant in Saarinen's work: nature as a paradigm for design and the monument as the embodiment of a culture. In the best of his works, these two themes complement and reinforce one another. His awareness of both themes as well as of the needs of a community allowed him to form a coherent philosophy of urbanism. This philosophy was pronounced in his influential book *The City*, published in 1943.

Eliel Saarinen was born in 1873 in Rantasalmi, Finland. Finland's greatest inspiration for its artists has always been its natural landscape. Fields, forests, and lakes play as crucial a role in the Finnish national epic, the *Kalevalla*, as do the people who populate them. As the cultural identity of the Finns is so involved with its natural setting, it is not surprising to see that nature plays a salient role in Saarinen's designs.

Thus, among his earliest works as an artist we find realistic watercolors of the landscapes and farm buildings of his youth. In this connection it is important to note that Saarinen's early education was in science and it was in this field that he developed a fundamental basis for his natural studies.

The concurrent development of National Romanticism, a movement created in reaction to the imperial Helsinki style, brought Saarinen in contact with the leaders of Finnish nationalist culture. National Romanticism's intent was to establish a cultural identity separate from that ordained by Russian authority. The informal and the natural were symbols of this independence, and Saarinen's love of natural motifs was to play a critical role in the evolution of the national style. The pervasive influence of nature in his design ranges from pure ornamentation to large-scale buildings and urban projects:
"Just as any living organism can be healthy only when that organism is a product of nature's art in accordance with the basic principles of nature's architecture, exactly for the same reason town or city can be healthy—physically, spiritually, and culturally—only when it is developed into a product of man's art in accordance with the basic principles of man's architecture."[2]

Saarinen's representation of nature changed in the course of his career. His earlier Villa Hvitträsk exemplifies the early Finnish National Romantic style in both the informality of the plan and expression of materials. The competition for the Helsinki Railroad Terminus signaled the end of this romanticism and the beginning of a new international sensibility.

Saarinen won the competition with an entry done in the National Romantic style. This design was never built owing to the strong and persuasive arguments made by Sigurd Frosterus and Gustaf Strengell. Frosterus's own entry to the competition was stylistically indebted to his teacher Henri Van de Velde. Strengell, a renowned journalist, denounced Saarinen's indulgence in romanticism and promoted a Finnish architecture based on function and clarity.

The Late Jugendstil forms of Saarinen's final design indicate the degree to which he responded to these arguments (fig. 3). The terminus's symmetrical massing, its two wings projecting from a vaulted central bay, is altogether a more lucid assembly of parts than his earlier solution. The overall scheme somewhat resembles Frosterus's design in style, though the subtle flowering mass of the building's profile and plantlike quality of the tower maintain Saarinen's link with nature.

Since many of Saarinen's projects both in Finland and the United States were placed in a rural setting, it is possible to study the challenging relationships between building and site. In all cases the building is involved with the site, whether in the literalness of his romantic layouts or in the powerful dominance of his tower compositions. Even when the realism of his early use of forms and materials became abstracted to prisms, the siting and circulation within the buildings maintained a connection with the site, as exemplified by the Wermuth House in Fort Wayne, Indiana (fig. 6).

Even in his most formal works, Saarinen sought out nature as the inspiration for his design. The motif of the massive tower setting off a long, low element demonstrates this. This balancing of the vertical and horizontal was symbolic, as far as he was concerned, of the elemental balance in nature and was the compositional motif for many of his projects. The tower, in most cases, became a tapered, almost

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Gothic structure, as in his prize-winning Chicago Tribune Tower project (fig. 2), which, taking its origin from natural form, represented the organic properties of growth and strength.

This preoccupation with growth found its way into his philosophy of urbanism:
"In order to approach our problem [urban planning] from the right angle, it is important to go down to the mother of things, to nature, so that we may find there such processes as can be considered analogous to the process of town-building. Now, the process of town-building—by means of town design—must be to bring organic order into the urban communities, and to keep this organic order continuously vital during the growth of these communities. Fundamentally, also, this process is analogous to the growth of any living organism in nature, and, inasmuch as there is no difference of underlying principles between one living organism and any other, we would do well to study these principles in organic life in general. In doing so, we find ourselves in much the same position as a doctor, who, to be able to maintain organic functioning in the human body, must be familiar with organic processes in general."[3]

Throughout his book *The City*, Saarinen likened the city to an organism, extending this metaphor to "circulation" (traffic) and "cancer" (urban blight):
"This is true, no matter whether it happens in the microscopic tissues of cell-structure where cancer causes disintegration, or in the hearts of the large cities of today where compactness and confusion cause slums to spread."[4]

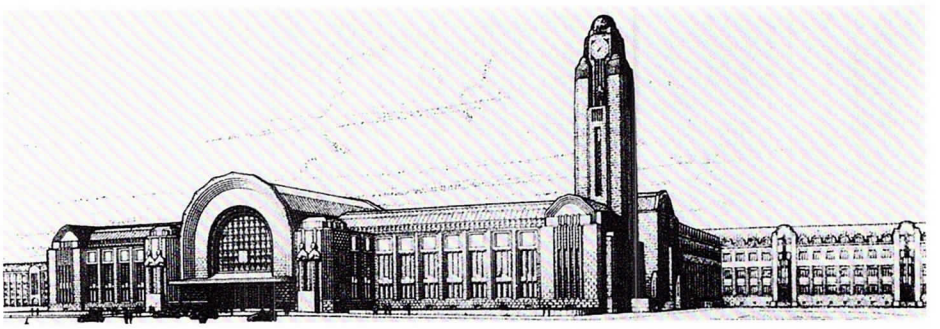
The tree becomes the natural counterpart of the city. Although his urban schemes for Munksnäs-Haga in Finland of 1915 (fig. 5) and Reval, Estonia of 1913, resemble Berlage's schemes for Amsterdam in their orthogonal geometry, they may also be byproducts of the biological metaphor. Saarinen's definition of "organic decentralization," a program of urban development, is based upon organic growth. The cells of residential blocks form an "urban tissue" which connects a skeletal system of monuments and public spaces. Saarinen's use of the natural ideal and the Gothic archetype give his city plans their dense, organic quality (fig. 7).

Unlike Frank Lloyd Wright and Le Corbusier, Saarinen did not create insular, utopian cities. His projects were largely annexes to existing cities and so dealt with an established context. Saarinen's projects were to contrast with both Broadacre City and Ville Radieuse in this specific sense: they were intended as solutions to urban problems. He maintained a uniform density yet opened up the block layout with courtyards and avenues to provide sunlight and ventilation. This attention to urban hygiene is comparable (and at the same time superior) to Haussmann's solutions for Paris, and Saarinen's plans correspond to advanced proposals by Stubben and Sitte. In *The City* he writes:
"Sitte was dreaming of the future town primarily from the point of satisfactory disposition of space enclosure so as to fit both form and rhythm to contemporary demands, and not as a preconceived idea in mediaevally narrow terms. In other words, Sitte's primary endeavor was to further such organic order in the town as grew from contemporary problems of life. . . ."[5]

Saarinen's admiration of the urbanism of Sitte and also Otto Wagner is evident in the homogeneous formality of his plans for the decentralization of Helsinki. But his insistence on the informality afforded by natural landscape shows itself in the breaking up of the urban mass into districts, with amorphous parks filling the interstices:
"Organic decentralization must first of all satisfy the old and obvious maxim that 'the primary purpose of the city is to provide adequate living and working accom-

2 Project for the Chicago Tribune Tower. Eliel Saarinen, 1922.
3 Railroad Terminus, Helsinki. Eliel Saarinen, 1905–1914.
4 Project for Kalevalatalo Museum, Munksnäs, Finland. Eliel Saarinen, 1921. South elevation.
5 Plan for Munksnäs-Haga, Finland. Eliel Saarinen, 1910–1915. Aerial view.
6 A. C. Wermuth House, Fort Wayne, Indiana. Eliel Saarinen, 1941. First floor plan.
7 Plan for Munksnäs-Haga, Finland. Eliel Saarinen, 1910–1915.

modations for its population', and this must happen to such an extent and in such a spirit as was set at the beginning of this introduction. However, to metamorphose the overgrown, compact, and disorderly city, with its dilapidated areas and slums, into this kind of idealistic state, cannot be done in short order. It calls for vision. It calls for openminded decision. And it calls for a long period of time, during which the compact urban body must be transformed, through a gradual evolution, into a group of individual communities separated from one another by a protective belt system of green land. During this gradual evolution, the mission of organic decentralization must be to produce new values by changing rural land into urban land, to rehabilitate decayed values by proper replanning, to bring all values to normal level and to protect all values, old and new, for times to come."[6]



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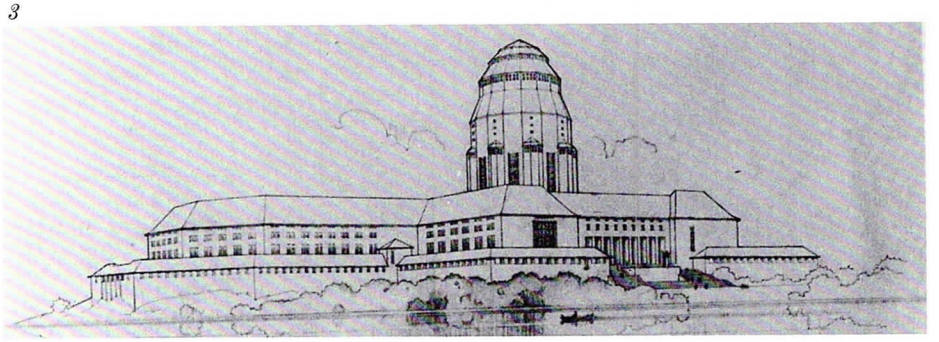

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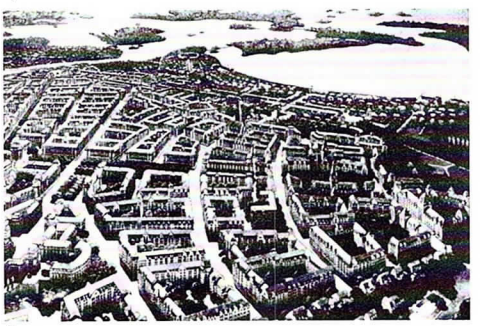

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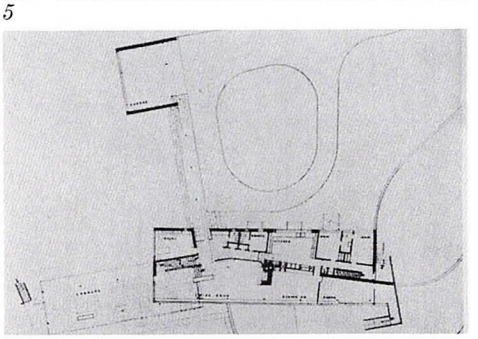

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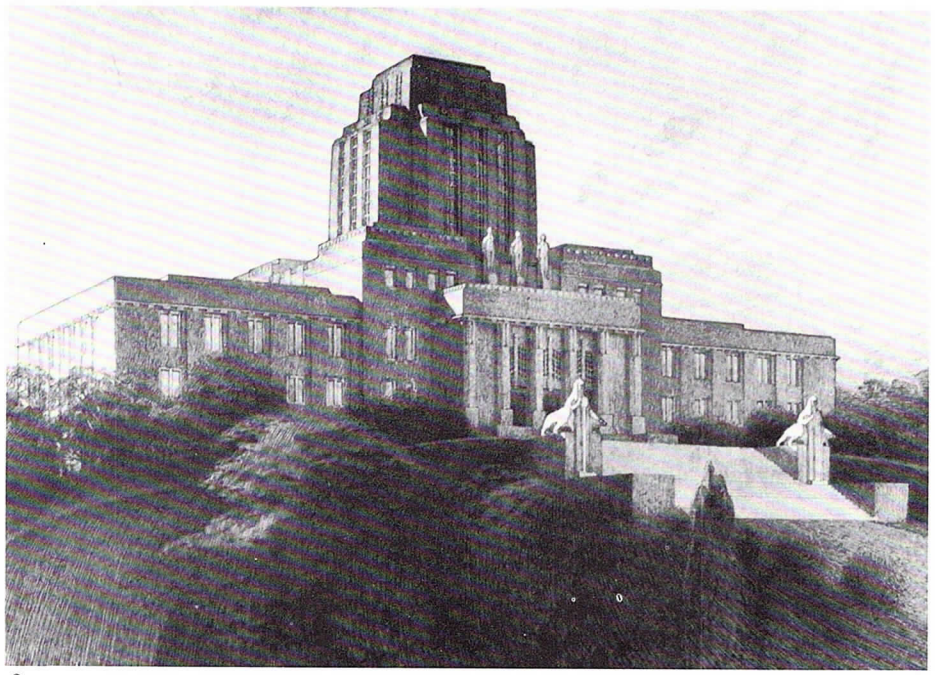
Saarinen's success with monumental architecture is related to the societies within which he worked. Both Finland and the American Midwest had a need to establish their identities. Finland's cultural independence was declared by the National Romantic movement; the Midwest had its Chicago and Prairie School to distinguish itself from Eastern influence. The use of a monumental, formal architecture to identify a culture had well-established precedents, and Saarinen's Helsinki Railroad Terminus and his Chicago Tribune Tower project are heirs to this tradition. His use of the dominant tower theme, influenced in part by Van de Velde, was a precedent for Raymond Hood's Radiator Building, and certainly influenced visionaries like Hugh Ferriss.

In a rural setting Saarinen's honorific buildings seem self-conscious. The Kalevalatalo project wraps itself around the central tower, giving a fortress-like impression (fig. 4). This internationalization of the building refers to the urbanism of Sitte, whereby built form provides its own space for public viewing. Later proj-



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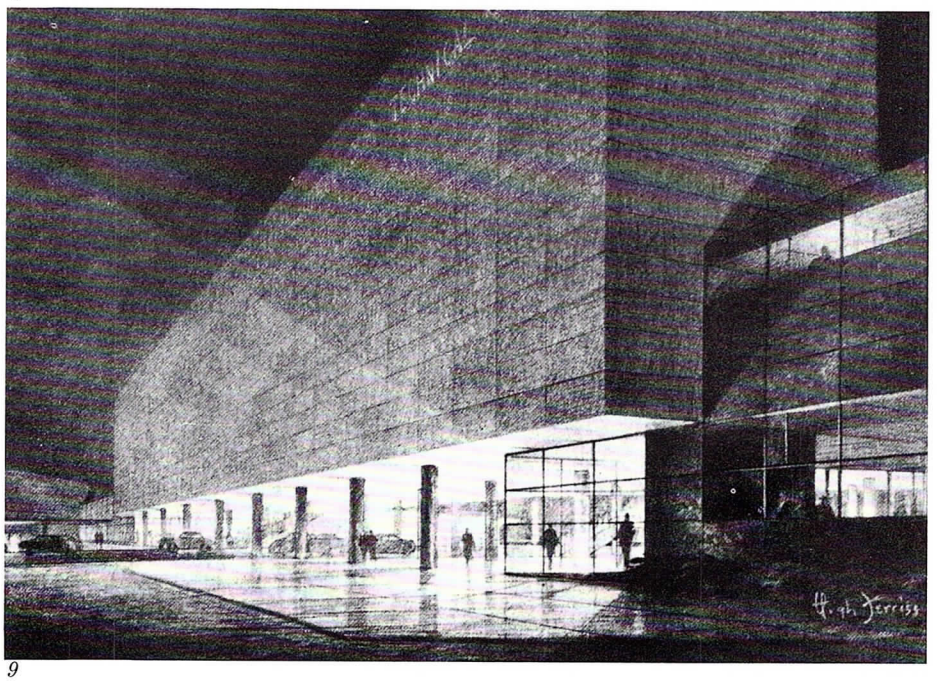

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8 Project for Landtdagshuset, House of Parliament, Helsinki. Eliel Saarinen, 1908.
9 General Motors Technical Center, Detroit, Mich. Eliel Saarinen, 1945. Main entrance of Administration Building. Rendering by Hugh Ferriss.

ects and buildings such as the Cranbrook Academy of Art and the Edmundson Memorial Museum twist both the building and site to create a series of picturesque views within the entire complex. While there is always a contact with the site and nature, the role of the monument is never undermined. The interplay between rustic settings and powerful formality is always exploited to the building's advantage.

Saarinen's use of public buildings and spaces in cities serves another function. To implement his decentralization schemes he used monuments to create a network of subcenters. This network served both to orient the city-dweller as well as to provide a formal unity in relation to the informality of the plan. An examination of his city plan for Munksnäs-Haga reveals yet another aspect of the city, that of growth. The reciprocity between the city's housing blocks and its monuments indicates that any future growth would develop from the former's orientation and relationship with the public buildings. This evolutionary (as opposed to revolutionary) attitude toward the dynamics of urban growth bears resemblance to the concepts of city planning recently asserted by Rossi or the Krier brothers.

Saarinen's skill at both formal and informal planning is best demonstrated in the buildings and plans of the Cranbrook Academy of Art in Michigan (fig. 1). Taking cues from farm buildings in the local landscape, Saarinen developed a community of school buildings which turn in upon themselves to enclose parts of the site into loose quadrangles. The introduction of formality subtly unifies the scheme without dominating it. Even the great colonnade of the Fine Arts Museum is counterpointed by an asymmetrical placement of sculpture. This delicate sense of balance between formal and informal, monumental and natural, makes the campus one of Saarinen's finest achievements. Cranbrook's formal elements are used to iden-

tify the institution, yet their configuration on the site suggests Saarinen's concept of education. The romantic intimacy created in conjunction with the site recalls his earlier Villa Hvitträsk in form and intent. Saarinen here implies a connection between education and the guild tradition, a didactic synthesis of the arts with nature. This campus was a model for the decentralized community he proposed, where a symbiosis between man and nature would create a cultural environment.

Saarinen's careful integration of building with site and his sense of monumentality transcend the various styles in which he worked. Despite obvious stylistic differences, these principles pervade such diverse projects as the National Romantic Villa Hvitträsk, the late "international-styled" General Motors Center, the Helsinki Railroad Terminus, and above all, the Cranbrook campus. To an extent, his styles may have been adopted to express a building's image (i.e., that of speed in the General Motors Center, or of the medieval ideal in Villa Hvitträsk.) But it is more likely that changes in the Saarinen style reflect the influence of various ideologies on his work. At various times, one finds in his work the influence of Pre-Raphaelite Romanticism, Van de Velde's abstraction of nature, and finally, the planar clarity of the International Style. While it is tempting to see in his career the development of a modern architecture, the underlying issues of context and monumentality prevail throughout. These preoccupations and the use of natural paradigms characterize the essence of Saarinen's contribution.

The revised edition of *Eliel Saarinen* by Christ-Janer is an elegant, understated book. Described by Saarinen as the definitive biography of himself, its intent was to introduce the reader to this architect's work. Each of Saarinen's buildings and projects are described chronologically and accompanied by numerous excellent reproductions of his drawings. Saarinen's draftmanship was dramatic and convincing. After viewing the frontispiece rendering of the Finnish House of Parliament (fig. 8), one finds Hugh Ferriss's renderings for the General Motors Technical Center (fig. 9), illustrated later in the book, to be quite comparable with Saarinen's style.

Christ-Janer takes great pains to give the reader all the information about Saarinen's life which pertained directly to his work. This is at once the book's strength and weakness. *Eliel Saarinen* begins with the original foreword by Alvar Aalto and a new preface by Christ-Janer, both of which are intended to introduce Saarinen's work. Part One of the book describes Saarinen's Finnish past. This is well written and informative inasmuch as it gives us sufficient biographical information to flesh out Saarinen's personality. Saarinen was a worldly figure. In Finland, his home, Villa Hvitträsk, was a place of gathering for such luminaries as Jean Sibelius, Gustav Mahler, and Gallen Kallela. Later in his life there was a close contact with Wright. However, this information is hardly sufficient in itself since we never learn very much about the interaction between these personalities. Instead, the book slowly dissolves into a banal documentation of individual works and a discussion of the corresponding activities of the architect.

In his preface, Christ-Janer writes, "this text is pared and expositive; it depicts the subject with outline strokes, with some risk of adumbration; no final judgments are attempted." While succinctness is a quality to be admired in architectural historians, this disclaimer should not excuse the author from interpreting his subject. Christ-Janer does little to set Saarinen's activities in their context, whether among themselves or the concurrent production of other architects. Certain comparisons with Wright's work at least would have been welcome, as the architects knew each other. There is no serious discussion of the formal changes that Saarinen's style underwent from his earlier works to his collaborations with his son Eero. In this book, Saarinen's development seems ill-defined; no attempt is made to provide an overview of his work for fear of "passing judgment." This is ultimately disappointing, for among the various questions which might have been addressed are these: What influences affected Saarinen? How did his reference to nature change during his career? How did his affinity for the traditional and evolutionary relate to the works of the Chicago School or to the emerging European avant garde?

Saarinen's work is relevant to our time as it comments on monumentality and establishes a philosophy of urban design, both of which are lacking in the works of contemporary "post-modernists." It also develops the role of nature and individuality so underplayed by the Italian Rationalists. Christ-Janer's book serves as a reintroduction to Saarinen, and in its providing of a folio of his work it serves this purpose well. One can only hope that others will investigate the questions this book leaves unanswered.

Notes

1. Louis Sullivan, "The Chicago Tribune Competition," *Architectural Record*, 53 (Feb. 1923), p. 152.
2. Eliel Saarinen, *The City: Its Growth, Its Decay, Its Future* (Cambridge, Mass.: M.I.T. Press, 1971), p. 18.
3. Ibid., pp. 8–9.
4. Ibid., p. 15.
5. Ibid., p. 123.
6. Ibid., p. 24

Figure Credits

1–9 From Albert Christ-Janer, *Eliel Saarinen: Finnish-American Architect and Educator* (Chicago: University of Chicago Press, 1979).

Quant'e Bella

William Ellis

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No divination will ever enable us to predict what the gods will do on any specific day. Vincent Scully lauding Aldo Rossi, the saints preserve us. Surely we shall soon be called upon to suffer Matthias Ungers in praise of Colin Rowe. Of such larger than life figures some are deflatable and others apparently are not. Vincent Scully is among the latter. To attend his perorations on a good day is always a pleasure. He has an open mind and a big heart. And what could be a better forum for his generosity than the Institute, where the totally arch may sometimes become the utterly ecumenical?

Critical interpretations of Rossi's work usually fall into two categories. There is the pro-Rossi position. This is committed to a generalized appraisal that tends to disregard the specifics of the historical setting and concentrate instead on the lyric, mythic quality of his decontextualized images—images which are understood as transcending time, place, or stylistic precedent, images which are personal, private, poetic evocations of architectural essences. Then there is the anti-Rossi line. This somewhat crudely misconstrues certain historical references in order to dismiss him as a neurotic Neo-Fascist. To the extent that both positions are incomplete and extreme they both miss the point.

Vincent Scully, in opposition to these positions, occupies a middle ground where the act of criticism may prove to be more lucid and fruitful. Thus at a recent *Oppositions* forum he attempted to link Rossi to the larger, principally Neoplatonic, tradition of Italian architecture, which of course includes the Third Rome. In so doing he attempted to stress the fundamental differences that separate Rossi's work from the rhetoric of Fascist architecture. This elucidation of large, uncomplicated ties between Rossi and a regional and national heritage served to clarify the "public" aspect of Rossi's work and to allow Scully to make his straight-

1 Mario Botta and Vincent Scully.
2 Ulrich Franzen and Richard Meier.
3 Peter Eisenman and John Burgee.
4 Mario Gandelsonas, Mary McLeod, and Anthony Vidler.
5 Diana Agrest.
6 Barbara Lee Diamonstein, Etel Thea Kramer, and Vincent Scully.
7 Julia Bloomfield and Massimo Vignelli.
8 Barbara Jakobson.

forward points, which are often mistakenly regarded as being too obvious to attain critical elegance. For all his allusions to Rossi's lyricism, rendered with characteristic theatricality and enthusiasm, Scully's position strikes a note of sanity amid an otherwise hysterical pattern of criticism. Thus Scully's view of this master of the Tendenza is balanced, fresh, level-headed, and persuasively speculative.

After arguing that the International Style suppressed the monumental, symbolic power of the Italian tradition, Scully went on to suggest that the Fascists took over and exploited this symbolic lexicon, just as they assimilated the traditional songs of Italy. But they sterilized these forms: they took the arch in the bare wall, and, according to Scully, "they made it scaleless, cut it down, made it sharper, harder, simplified it, clarified it, but it came out as rather bumptious, boring, and stiff." So while Fascist forms may in fact derive from the clean, cubic quality of Italian architecture in general and from Quattrocento Neoplatonism in particular, these forms nonetheless distorted the tradition by becoming part of a bombastic rhetoric. According to Scully, Rossi's work recognizes not only the Italian tradition pervading these forms, but also the traditional meaning that was lost through the manipulation to which they were subjected. For Scully, what Rossi does "through irony, intelligence, and greater complexity of comment" is not only bring back the forms which had been killed by the International Style, but also restore their traditional meaning which had been perverted by the Fascists. Scully referred to "the symbolic power of the Italian tradition of architectural form taking its position permanently and monumentally in space." For him it is a conscious act on Rossi's part to reflect this power, even in the name of Neo-Rationalism. Thus, the Yale master established affiliation without stigma between Rossi and Third Rome, simply by making more precise arguments than those to which we have recently become accustomed. Through this brilliant critical maneuver, he presented Rossi in an expansive, nationalistic context rather than in a narrow political frame.

Along the way, Scully ranged over a number of evocative comparisons—above all Kahn's drawings of the 1950s, including those of the Forum Mussolini. He suggested that Fascist architecture, validated by its connection with De Chirico's scenography, is the only recent architecture that can serve as the basis for a monumentality which was lost under the International Style. He went so far as to present Kahn as a precursor of Rossi. For Scully, they both strive for "an immobile, static, fixed, permanent order with a *very ambiguous, abstract scale.* They take out the details that speak of time and size and even shelter." They both seek, he went on to say, a recognition of the "timeless, general, symbolic equivalence between all objects, large and small, domestic and urbanistic; the intense [ontological and symbolic] reality of all objects." Hence, as far as Rossi is concerned, coffeepots as well as urban space.

At this juncture Scully brought up the rather convoluted idea of the symbolic task of the vernacular. Neo-Rationalism, for Scully, is seen as vernacular rather than abstraction. Under this rubric he evoked Edward Hopper for his "light, nostalgia, and alienation," and with Hopper, but perhaps with less reason, the Smithsons, Wright, and Venturi. Of Rossi's monument at Segrate, Scully argued that "he goes beyond iconographic abstraction to three things: the vernacular, the temple pediment, and the basic shapes of the Neoplatonic strain in western European architecture."

In an effort to analyze the "lyricism" of Rossi's architectural forms, much belabored by other critics, Scully attempted to focus on certain differences between Le Corbusier and Rossi. They offer two different kinds of monumentality. At La Tourette and at Chandigarh, the columns are "active, aggressive, archaic; the buildings stand on their legs; the columns lift in a menacing movement, as if posing some existential threat. Rossi's columns and other forms are just there, static, with no lift; much smaller, they civilize the materials; they have the urbane, remote, abstract, haunting, nostalgic, gentle quality of Italian forms."

The ultimate difference between Rossi and Fascist architecture depends, for Scully, on the degree to which Rossi's work corresponds to what Scully sees in De Chirico's painting. The forms of the Fascists had a simple, narrow, surface meaning—the uncomplicated monumentality of the impersonal state. Rossi's work, on the other hand, is "sad, reflective, with a dimension not all in the conscious mind; filled with images; dreaming its way through the forms again; exploring the iconography of the dream journeys of the mind."

Scully asserted that if Fascism is a sterile perversion of transcendental ideas about existence outside oneself, Rossi's work wrings from the heritage of Italian soil a universal idea far greater than that of the state—an image of humanity beyond ideology. To be sure, some of this has been alluded to before. Scully made it sing. He concluded elegiacally with a quote from Quasimodo: "Each one stands alone on the heart of the earth, transfixed by a ray of the sun. And suddenly, it is evening."

Figure Credits
1–8 Photographs by Dorothy Alexander.

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Hiromi Fujii was born in Tokyo in 1935. He graduated from the School of Architecture at Waseda University in 1958 and from 1958 to 1964 worked in the M. Take studio there. From 1964 to 1966 he studied in Milan, and then worked for Peter Smithson in London for two years. When he returned to Japan in 1968, he established Hiromi Fujii and Associates and began teaching at the Shibaura Institute of Technology where he is presently a professor. In 1978 he was a visiting critic in the Waseda University School of Architecture. His articles and works have been published in numerous magazines, and his work has been shown in architectural exhibitions. He participated in the "New Wave of Japanese Architecture" exhibition and lecture tour organized by the I.A.U.S. in 1978.

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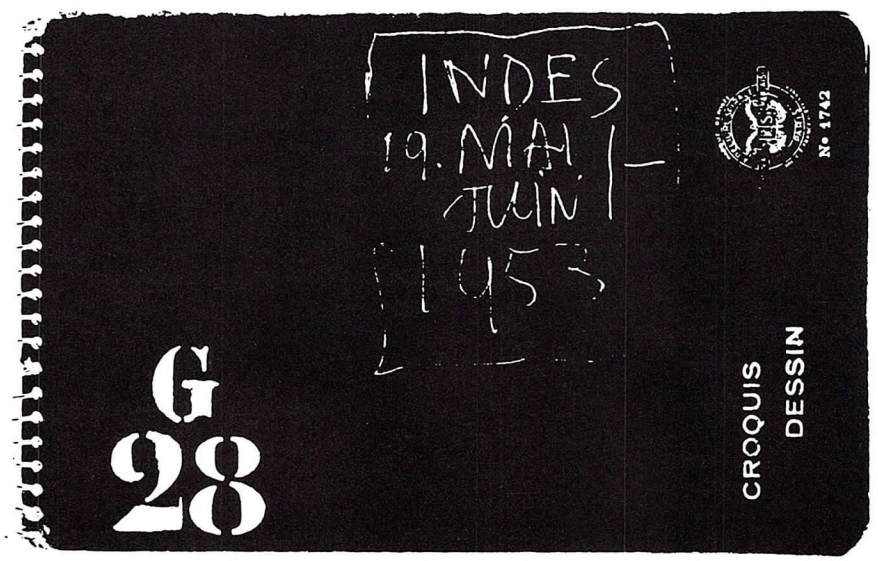

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