

A Journal for Ideas and
Criticism in Architecture

Colin Rowe
Peter Eisenman
Kenneth Frampton
Anthony Vidler
Diana Agrest
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Published by The Institute for
Architecture and Urban Studies

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OPPOSITIONS is an attempt to establish a new arena for architectural discourse in which a consistent effort will be made to discuss and develop specific notions about the nature of architecture and design in relation to the man-made world. It is our joint belief that truly creative work depends upon such an extension of consciousness. To this end, OPPOSITIONS will orient itself towards the process of critical assessment and re-assessment. It will regularly feature a number of articles which critically examine either a building, a book, or a theoretical position with a view to interpreting and evaluating the general complex of ideas involved. It is hoped that a series of dialogues will result which will occasion an exchange of views not only among the editors, but also between the reader and other outside contributors. To this end we will extend some of this discourse into a series of forums to permit an open discussion of the issues raised by OPPOSITIONS. These forums will be held at The Institute for Architecture and Urban Studies. A record of the discussion will be edited for publication in an issue of OPPOSITIONS.

In all this, no attempt will be made to establish a single editorial line. The Institute will maintain its independence while we, as editors, will simply attempt to maintain the discourse at a high level and to concentrate on issues which in one way or another must necessarily affect the future status of architecture and design. Naturally our respective concerns as individuals for formal, socio-cultural and political discourse will make themselves felt in our

joint editing of OPPOSITIONS. The opposition alluded to in the title will first and foremost begin at home.

OPPOSITIONS will address itself to the evolution of new models for a theory of architecture. It will attempt to relate such models to specific buildings and theories which, in our opinion, either directly state or implicitly evoke the existence of such models. We will not, in all this, restrict our discourse to the very latest work. On the contrary, we will attempt to link the present to the past to assess the overall contribution of major individuals and movements which still have relevance today. Our editorial position will be to attempt to create a climate of opinion where ideas and action are seen as being necessarily complementary to any vital architectural culture.

Peter Eisenman
Kenneth Frampton
Mario Gandelsonas

Neoclassicism and Modern Architecture

Colin Rowe

These two articles on the Miesian school of “neo-Palladianism” and on the generic classicism of Mies’s later work were written in 1956 and 1957 respectively. Hitherto unpublished, they extend and broaden the argument first broached in Rowe’s essay “The Mathematics of the Ideal Villa” of 1947.

Colin Rowe has been at Cornell University, where he is Professor of Architecture, since 1962. After graduating in architecture from Liverpool, he also studied at the Warburg Institute with Rudolf Wittkower and at Yale with Henry Russell Hitchcock. Besides Cornell, he has taught at the universities of Liverpool, Texas and Cambridge.

- 2 The Miesian and the Palladian – for some time in certain circles these epithets have been almost synonymous, and now that we are no longer shocked by their juxtaposition, and no longer even shocked by our lack of shock, one might well ask what larger issues are subtended by this little semantic revolution. It has been so quiet a coup, so lacking in flags and manifestos, that one might be tempted to believe it not to have taken place – if only the buildings were not there to prove it, and if innumerable student drawing boards did not seem to promise more to follow.

Nor has there been any unwillingness to recognize these buildings for what they are. Already in 1953, in a house whose symmetry a casual observer might then have dismissed as innocent, *Architectural Forum* was ready to detect “Palladian” overtones; recently the *Architectural Record* has been able to designate similar manifestations as “Space-Time Palladian”; while in England—from time to time—the *Architectural Review* has hinted of the formalistic dangers inherent to a neo-Palladian program. It would thus be ill-advised to believe that a new attitude has not appeared, or to assume that the appellation “Palladian” is not something

Figure 1. Oneto House, Philip Johnson, architect. 1951.

Figure 2. Oneto House. Plan.

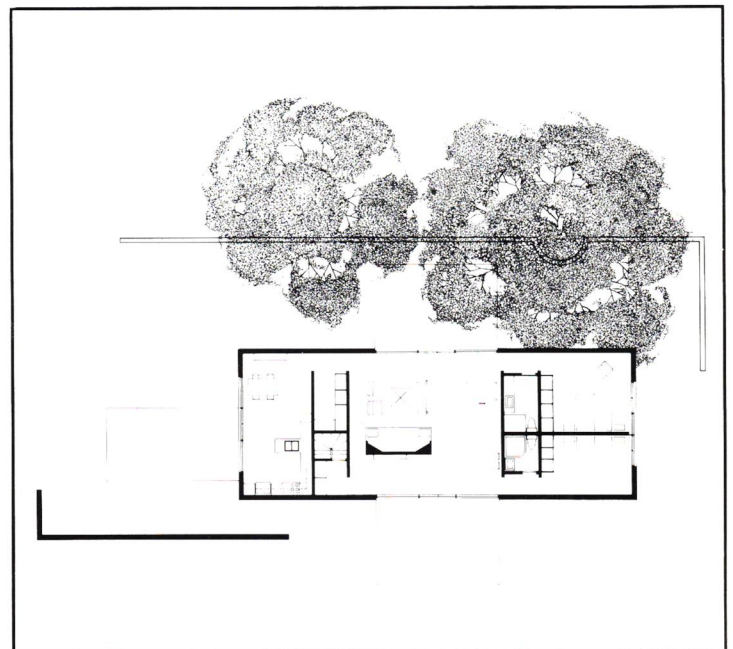
more than another straw casually blowing in the critical wind.

Most generally the contemporary “neo-Palladian” building presents itself as a small house equipped with Miesian elevations and details. Conceptually a pavilion and usually a single volume, it aspires to a rigorous symmetry of exterior and (where possible) interior. If not Mies’s Resor House, then Philip Johnson’s Oneto House at Irvington-on-Hudson, may be considered a forerunner of the type, of which John Johansen’s house in Fairfield County, Connecticut and Bolton and Barnstone’s De Moustier House in Houston might be allowed to represent more elaborate examples. But almost certainly other examples, and not necessarily domestic ones, will suggest themselves.

It may be noticed that buildings such as these are a distinctly American phenomenon, or at least that they are scarcely for the moment to be found outside the United States. It may also be suggested that their resemblance to any alleged prototype along the Brenta or around Vicenza is slight, that obviously their architects have eschewed any



1.



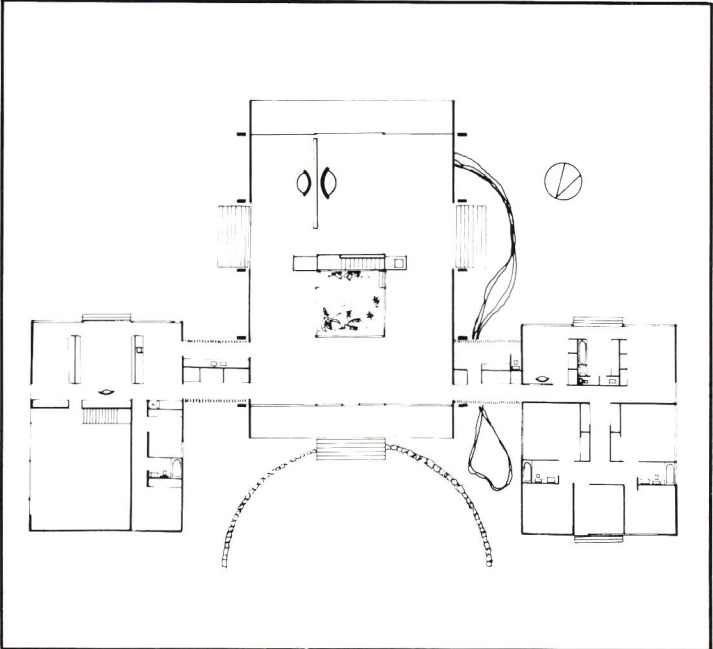
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Figure 3. Goodyear House. John Johansen, architect. 1956.

Figure 4. Goodyear House. Plan.



3.



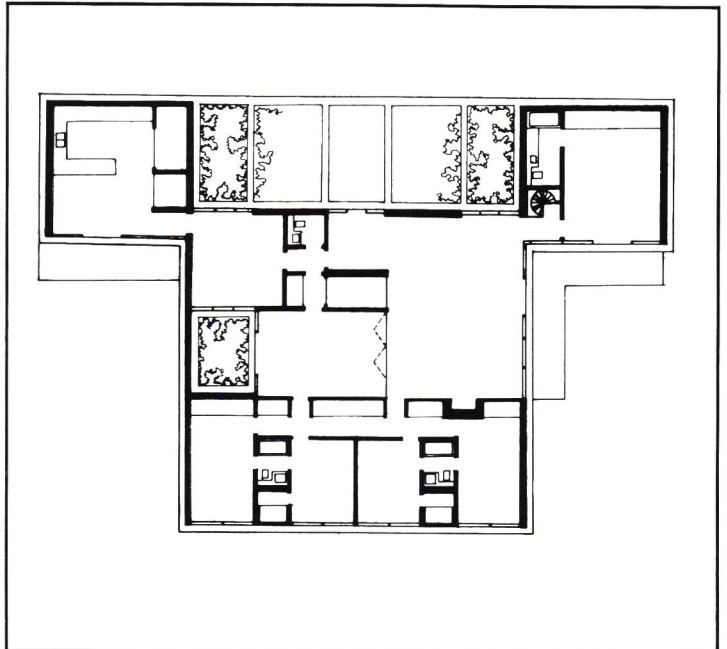
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Figure 5. De Moustier House. Bolton and Barnstone, architects.

Figure 6. De Moustier House. Plan.



5.



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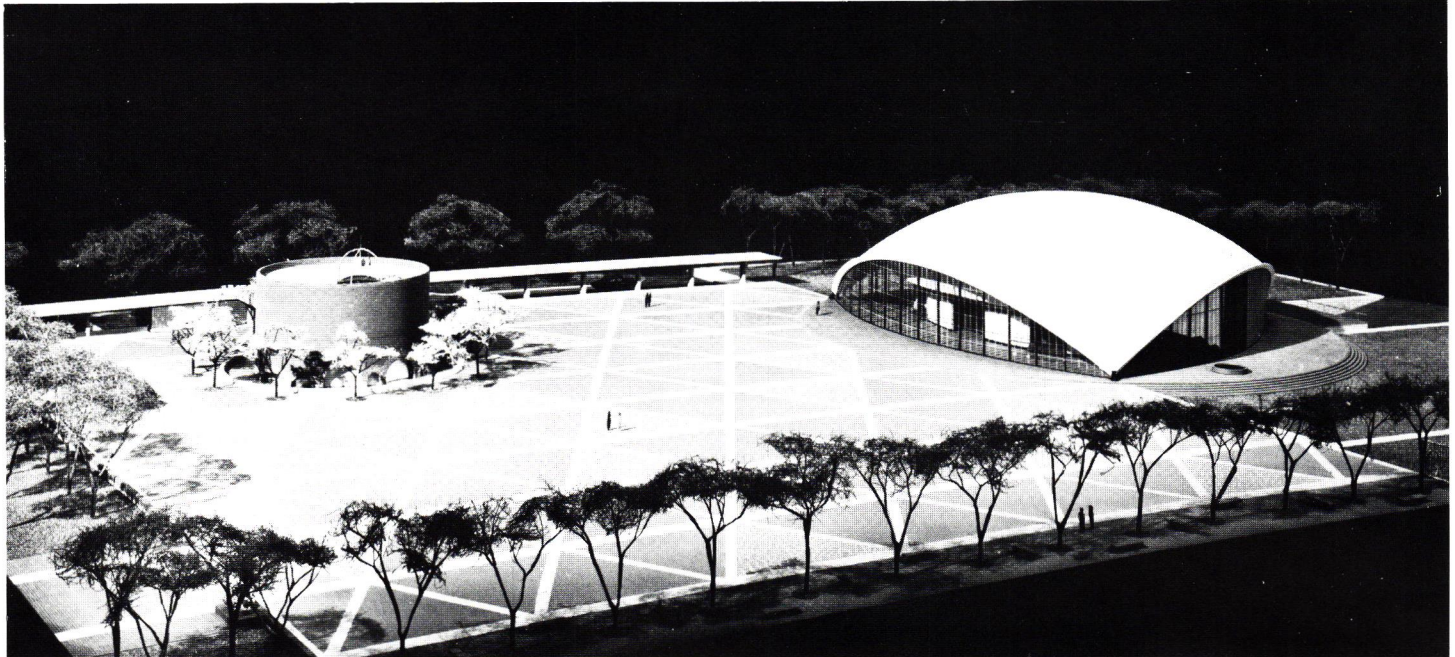
Figure 7. St. Louis Airport. Hellmuth,
Yamasaki & Leinweber, architects.
1955.

Figure 8. Kresge Auditorium and
Chapel. Eero Saarinen, architect.
1953. Model.

4



7.



8.

overt historical reminescence; but that, being inspired by certain activities of Mies van der Rohe, they have presumed the symmetrical disposition of a building to be adequate for most purposes and that, in doing so, have arrived at some rough approximation of the characteristic Palladian *parti*.

There is not—or perhaps there should not be—anything very remarkable about a Palladian *parti*; some forty or fifty years ago it would conceivably have escaped notice. And there is not—or should not be—anything very much to engage attention in a small Miesian house which is surely among the more distinguished conventions of the last decade. But this new convention, the small and elegant Miesian house which self-consciously advertises a Palladian *parti*, should still invite attention; in the first case, perhaps not so much for what it is as for what it signifies.

For twenty years ago a proposal that by the turn of the century the members of a younger generation of architects might be obsessively fascinated by problems of symmetry would have appeared dubious, or one presumes it would; while in 1947, one knows, the supposition would still have appeared surprising. In 1937, with the few, and ten years ago, with the many, it was probably safe to assert that, among other formalistic aberrations, the “cult of the axis” was dead, or dying. But apparently today things have changed, and, as the reflections of this change, these “neo-Palladian” buildings do seem to propose a question, a problem that might quite simply be stated thus:

Either we are scarcely able to accept these buildings as examples of modern architecture;

Or we are scarcely able to accept modern architecture's theoretical professions.

While the first proposition is absurd and the second is distressing, embarrassment still cannot inhibit the suspicion that buildings of this kind do constitute a decisive breach, not only with modern architecture's *orthodox* tenets, but also with the visual criteria of what might be considered its canonical achievements. Because, in a general sense, this problem concerns some of the more impeccable and influential productions of the present day, it begins to grow acute. In any case, this post-Miesian manner is now altogether too general for it to be lightly dismissed as a private diversion of

the sophisticated. Nor can it be properly judged in isolation. Almost certainly to understand its significance it should be seen as paralleled by that broader, more popular and dubiously classicizing movement reasonably exemplified by such recent works as Yamasaki's St. Louis Airport and Saarinen's auditorium and chapel group at M.I.T.

These developments—the domestic interpretation of Mies in terms of a latter day Pompeian amenity and the quasi-Roman translation lately given to the experiments of Nervi, Buckminster Fuller and Candela—are evidently related. Thus, although the one is involved primarily with the plan and the other shows perhaps a more developed interest in structure, both are preoccupied with an ideal of volumetric control, both display a partiality for centralized space, both show an urbane and technocratic rather than a rustic and craftsmanlike conception of architecture, and neither has any quarrel with the present day. But, while both indisputably depend on the so-called International Style, it is a little too easy to assert that they represent no more than an extension of the sanctions of this “style.” A reaction *à l'antique* such as this has been recognized to be, such a reaction, carried out within the framework of modern architecture and sometimes with a belligerent loyalty towards it—on the face of it this is so odd and so much a violation of what was thought to be the idea of modern architecture that it deserves serious attention.

Of course what is, or what was thought to be the *idea* of modern architecture, is a subject of some confusion, as such matters always must be. Also, in order to establish any standard of judgment, to refer to an orthodox theory of modern architecture is unwarrantable, to invoke modern architecture's canonical achievements is exaggerated, while even to imply the existence of the International Style is somewhere to give offense. Nevertheless it is for the moment of convenience to use all these terms as implements of criticism, as working generalizations in order to permit a few ideas to be deployed; although such generalizations will scarcely respect the thickness of texture which is present in the most elementary situation, if they are understood to be no more than implements they might still do some rough justice to the facts.

6 Thus, if modern architecture proposed to combat all vested orthodoxy in the interests of rational evolution and if it never conceived its past as likely to determine its future, it is still beyond argument that a certain consensus of theoretical precept and some common compositional methods did distinguish the verbal pronouncements and plastic solutions of the twenties and therefore it is not entirely misleading to speak of the International Style; while further, since the architectural crystallization of thirty-five years ago still remains of crucial significance, it is not completely unreasonable to recognize its representative manifestations — the Bauhaus, Garches, the Barcelona Pavilion, for instance — as establishing a canon, and then to identify the theory which inspired these buildings as orthodox.

But orthodox theory, it must be admitted, is not easy to identify. It is apparently something less than a consistent doctrine and something more than a body of principles. It is an unformulated collection of aphorisms and polemic from which certain inferences can be drawn. It is an attitude of mind which we may recognize by its temperature. For present purposes it is that atmosphere of thought vaguely associated with Le Corbusier, Gropius and Mies Van der Rohe which expounds and justifies the appearance of a new architecture in the years following 1919.

Persuasive, sometimes contradictory, often highly condensed, precisely because it is a climate of opinion, orthodox theory does not submit itself too readily to analysis. It is like a building that resists frontal examination which, in consequence, one is obliged to approach from the flank. Since it is impossible to approach it head on, it might be as well a beginning to get into it, as it were, by surprise, and then very briefly to observe one of its central assumptions: a proposition that the condition of a community's architecture is a symptom of its social and spiritual health. This, as the more scientifically stated proposition that the evolution of architecture may be an index to the history of ideas, is obviously one of the more basic postulates of the history of art. But as a hypothesis that contemporary society is sick, doomed, lacking in integration and chaotic, while the society of the future will be whole, sane, organically differentiated and ordered, it furnishes an invaluable clue to the mind and spirit

of an epoch. The world, it seems to imply, awaits the great regeneration; and modern architecture emerges as a kind of present evidence of this, as the result not so much of a change of vision as a change of heart.

Obviously these suppositions, which are not without distinctly theological overtones, expanded the feelings and contributed dignity; while, being able to conceive of himself in these millennial terms, the modern architect was able to become a kind of Siegfried or St. George. He became the hero figure who, strangely absolved from contemporary corruption, is the killer of the eclectic dragons which are its symbol and the protagonist not only of an architectural but of a social revolution and, since, by reference to these attitudes, the individual building could be understood not simply as a building, but as the indication of a genuine rebirth, so it was partly in this way that the International Style, perhaps alone of all the *avant garde* movements of the twenties, was provided with a basic responsibility. Endowed with a rationale quite independent of architecture, the modern building became a ritual celebration of the humane potential in a mechanized society.

This was an imposing fantasy; and the intensity of commitment which characterized the innovators of the twenties might, without too much exaggeration, be explained in terms of their accepting it. It was a fantasy which provided the new architecture with an ethical content, equipped it with a distinct symbolism, and became highly instrumental in its popular success. But it is now, of course, exactly this popular success which seems to have become injurious to this whole idealization of the future planned world motif. Rather awkwardly many of modern architecture's most significant achievements are already of respectable antiquity. One may approach them in much the same state of mind as was formerly reserved for the Palazzo Farnese or the Louvre. We have become aware that modern architecture has a past, not to speak of a present; and since this present—the future of yesterday for which all the struggle was—is not apparently threatened by any imminent Utopia, the whole millennial justification begins to seem embarrassing. Modern architecture is now recognized by governments and endorsed by great corporations. A generation has grown up which accepts

it as a matter of course; and therefore, the modern architect can less seriously claim to be the protagonist of any new integration of culture. He can no longer very well be militant; and, being less disposed to evangelize a world which, without changing very much has accepted him, he seems now more willing to resume a specific function.

Gain or loss, there is in this combination of public appreciation, practical success, and a certain deflation of the optimism, one of the contributory causes of the new attitudes and one of the possible explanations of that partly obsessive, partly defiant relationship with the older masters which characterizes the present day. The derivative nature of the new movements is apparent and sometimes self-proclaimed. Often they differ from their source material largely by reason of what they have in common with it, and generally they are apt to play upon the same sensibilities.

“Neo-Palladianism,” for instance, has inherited, particularly from Mies, a sense of propriety. It has adopted, particularly from him, an ordinance of the building envelope. It has been led by him to accept as sufficient the statement of elementary volume. Its preferred textures, its taste for big scale and immaculate finish are largely Miesian, while it has enjoyed the same sanction for its symmetrical solutions. And to a not so extreme degree the same statements are also true of the less formulated “neoclassical” manner. This has absorbed a number of further elements: it is structurally more adventurous, it is perhaps more disposed to look with active favor upon Le Corbusier; but, in the last analysis, its Miesian point of origin is not easy to dispute.

However the two movements, and the “neo-Palladian” in particular, seem to be most intimately linked with Mies, and with that orthodox theory of which he is here considered a representative, by their characteristically “typical” and neutral forms. Here, and in the cold synthetic materials by which they chose to realize these forms, their allegiance to a principle of the twenties could scarcely be more explicitly stated. But it may be the very explicit nature of this statement which also calls attention to it as an act of compensation, since quite as explicitly—in their choice of *partis* and by their unashamed selecting of certain forms *in and for*

themselves—the new movements set other principles of the twenties at a distance. 7

“The attempt to revive architecture from the point of view of form appeared to be doomed,”¹ wrote Mies in 1940 of the situation c. 1910; and his “We refuse to recognize problems of form but only of building,” is almost a battle cry of the years c. 1923. It is the *leit motif* of the Bauhaus and a constantly recurring element, though with different inflection, in the thought of Le Corbusier. The pursuit of form was presumed to lead to forms of doubtful integrity, to be irrational and private, to be a wilful pre-occupation with the past, an irresponsible side tracking of the future; and there was the example of the nineteenth century to prove it. The new architecture was to be authentic, that is, it was to be inevitable and predestined and in the nature of things. It was to be simply not one possibility among many, but the only possibility, and thus it was necessary that its determinants should seem to lie outside the sphere of choice, that what Mies termed “subjective license” should be eradicated and that, in its place, “objectivity” should be installed as the criterion of value.

“Objectivity” meant limits. It implied also an impersonal, a generalized and an abstracted form; and, of course, the conception of such a form, purged of individual sentiment and rising above personal emotion, is, at the bottom, a classical one. It is the idea which subsumes all tragic drama. And most notably this aspect of the demand for neutrality seems to have been understood by Le Corbusier. But the same requirement could be given an alternative twist. “Typical” form could be seen as necessitated by mass production, by common sense, by the reality of everyday and by the demands of a new society. “Objectivity,” it might seem, could be guaranteed by an exacting attention to use fabrication and performance, by giving to architecture the impersonal purity of a technique. Such form, it was sometimes felt, would, in contrast to the architecture of the last five hundred years, be rational and an answer to the needs of the spirit.

But the discriminating doubted whether this could be all. An architecture which repudiates mere stylishness and wilful innovation, but which calls itself “modern,” or “new,” or for

that matter “contemporary,” possibly means something by these words. Their significance is not entirely chronological. An architecture which calls itself “organic” is apt to invoke biology. A “modern” architecture, of necessity, calls up a criterion of contemporaneity; and thus, according to Gropius, the new architecture is “the inevitable logical product of the intellectual, social and technical condition of our age”;² and, although this may mean a great deal, it can also only mean that in order for a building to be “new” or “modern” it must embody a full consciousness of certain imperious and strictly contemporary demands, that it must be predicated not only in terms of function, structure and materials but also in terms of that more intangible content: *the spirit of the age*.

It was a valuable idea. It elevated modern architecture both above mere rationalism and mere whimsy. It was an idea which, seeing modern architecture as the “inevitable” product of the time, gave it value in terms of all preceding time. It was the standard which Mies called up in 1923-24 when he gave his eloquent definition of architecture as “the will of the epoch transplanted into space.” But at the same time and with equal eloquence he had also demanded of architecture that “it should exclusively be: building.”

Now there is a possible dichotomy here which, it might be said, Mies has ever since been attempting to solve. For, if architecture is to be simply rational building and simultaneously to be the embodiment of the spirit of the age, then we are forced to one of two conclusions: either that the spirit of the age is simply materialist, concerned entirely with technology; or that it is so refined in its powers of selection as to be willing to content itself with a simply technological expression. And, if either of these possibilities seems to be improbable—and both do seem to be unlikely—then it can only be assumed that although modern architecture may be a physical translation of “the will of the epoch” it can scarcely, for that very reason, be simply rational building and no more.

However, since the spirit of the age, while maybe a reality which can scarcely be disputed, is also a very elastic conception, a discrepancy of this kind can often be overlooked. For, by implication, the spirit of an age is a universal spirit, irre-

sistible, supra-rational, impersonal, perceptive and wise. It is, presumably, the unexpressed cravings at any given time of mankind, or of “the people;” so that in presenting himself as the interpreter of this collective unconscious, the modern architect added a further role to his Siegfried-St. George repertoire. He became now he who intuits what should be, the mediator between the unconscious psychological life of the “folk” and the technological means at its disposal, the seer, the prophet, the guru. He became not only the protagonist of social renovation but also, it might be said, the midwife of history, or of historically significant form.

Or at least something like this seems to have been the idea; and, obviously, armed in this way and able to see himself as the neutral agent of an epochal will, the innovating architect of the twenties was well able to “refuse to recognize problems of form.” These problems were, in theory, no longer his own. Form became, now, not the result of choice, but an imperious necessity of evolution or an unavoidable effect of social change; and, in this way, the architect could de-personalize his taste and then interpret it afresh as a prophetic intuition.

But when an aesthetic preference becomes an insight into human destiny it may, for all the overt suppression of its real nature, still flourish as happily as before; and the fact that it may explain a great deal which is otherwise inexplicable. For, logically followed, the rationalist theme of orthodox theory—that of a dedicated architecture determined by use and technology—should have resulted in a series of solutions elicited entirely by inductive and empirical methods, solutions which might happen to be similar by reason of similar functions or similar technological conditions; and the canonical monuments, which have been here too long neglected, are anything but this. They were intended to embody the spirit of the age and of course they did; but, at its most architecturally enlightened, this spirit of the age was also highly defined and, whether it was supposed to or not, it does seem to have prompted forms quite as specific as those neoclassical distributions which today are deliberately chosen.

Thus when Gropius writes in 1923 of “a new aesthetic of the horizontal,” and when he adds that, “at the same time the symmetrical relationship of parts of a building and their

orientation towards a central axis is being replaced by a new conception of equilibrium which transmutes this dead symmetry of similar parts into an asymmetrical but equal balance,"³ while implying that this is a general tendency (which it certainly was), he also provides some indication of his own quite personal feeling for specific distributions of form.

And, in a remarkably similar passage, so influential a publicist as Theo Van Doesburg displays a comparable preference:

In the course of time the symmetrical composition has pressed itself more and more towards the centre, towards the axis of the plane, to such a degree that the composition is entirely pivot shaped and the canvas remains blank and therefore gives an impression of emptiness.

Very important essential renewal of the method of composition. Gradual abolition of the centre and of all passive emptiness. The composition develops in the opposite direction, instead of towards the centre towards the extreme periphery of the canvas, it even appears as if it were to continue beyond it. . . .⁴

Here, though Gropius is writing about architecture and Van Doesburg ostensibly about painting, both are saying very much the same thing. Van Doesburg stigmatizes symmetry and proposes "the abolition of the centre"; Gropius finds traditional symmetry "dead" and being replaced by "a new conception of equilibrium"; Van Doesburg concludes this "new equilibrium" to be concerned with peripheric rather than concentric developments; and the evidences of what he elsewhere called "peripheric composition" are to be recognized in varying degrees in most of the historically significant buildings of the period – whatever their functions, whatever their structure, whatever their materials.

Peripheric composition, because of a mental set against the exercise of aesthetic preference, was rarely acknowledged; but, whether consciously employed or not, it does seem to have provided a major principle of organization. When Siegfried Giedion writes of the Bauhaus that it "expands into a pin wheel" or that "the ground floor lacks all tendency to contract inwards upon itself,"⁵ he identifies one of its manifestations. When Philip Johnson notices that in Mies's earlier buildings "the unit of design is no longer the cubic room but the free standing wall, sliding out from beneath the roof

and extending into the landscape," he recognizes another. But at Garches the "abolition of the centre" is conducted in even more thoroughgoing fashion than at either the Bauhaus or the Barcelona Pavilion, and there, particularly, the full relevance of the peripheric idea becomes evident.

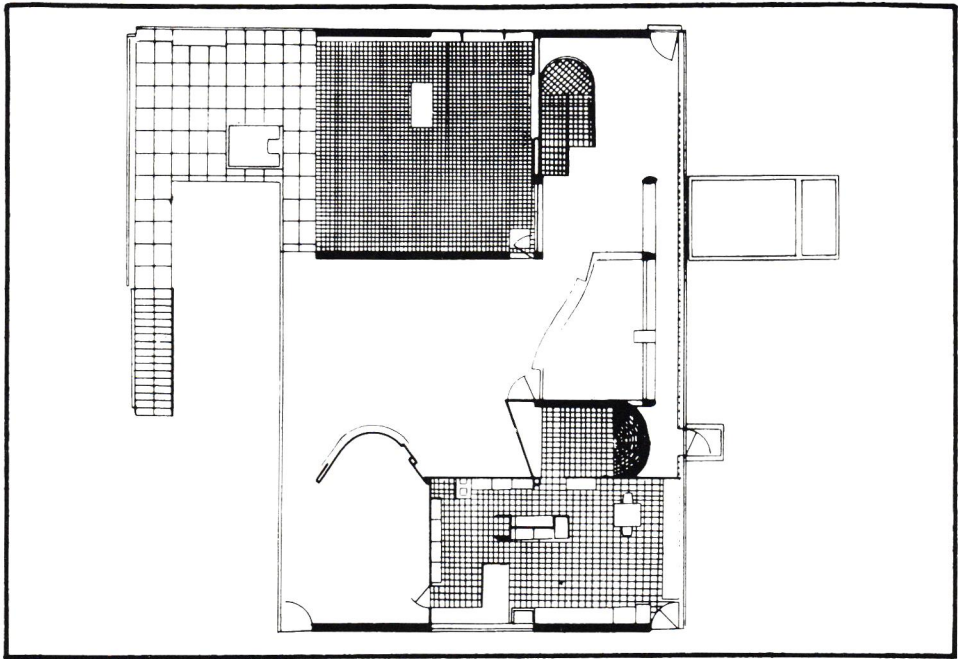
At Garches, precisely because of the condensation of the building into a block, that centralization to which Gropius and Van Doesburg were so averse seems certainly to be demanded. But the strongly repetitive nature of the grid – the basic constituent of so many modern buildings – tends to prohibit it. And the sandwich-like layers of space – also a product of the grid – have the same effect. They emphasize the idea of an extension, of a pulling outwards rather than a concentration of space; and, while it is true that at Garches a gesture is made towards centralization by the perforation of the floor slabs and the inflection of the grid to an A.B.A.B.A. rhythm, Le Corbusier's solution remains the classic illustration of how peripheric composition was able to reinforce seemingly intrinsic characteristics of the skeleton structure. It enters into a contrapuntal relationship with this skeleton; and, by doing so, it further deemphasizes the already unemphatic center of the building and strengthens or gives tension to the extremities of the space.

Nor, obviously, was peripheric composition merely the practice of modern architects of the great generation. Just as clearly it may be seen persisting in one of the most representative American buildings of ten years ago – in Marcel Breuer's Robinson House at Williamstown, Mass., a bi-nuclear scheme of considerable finesse providing an almost perfect example of how the pre-dispositions of the twenties became progressively modified by an increased taste for the rustic. Theoretically a diagram derived from analysis of function underlies the conception of any such house as this one; but, after any more than a casual inspection of Breuer's building, it becomes evident that the existence of its two cores is not only a matter of their use but is also a method of building up a spatial tension. And it further becomes clear that the comparative insignificance of the central link connecting the two cores is not only an expression of its minor purpose but primarily is the means to instigate that series of visual excitements which are to be discovered around the

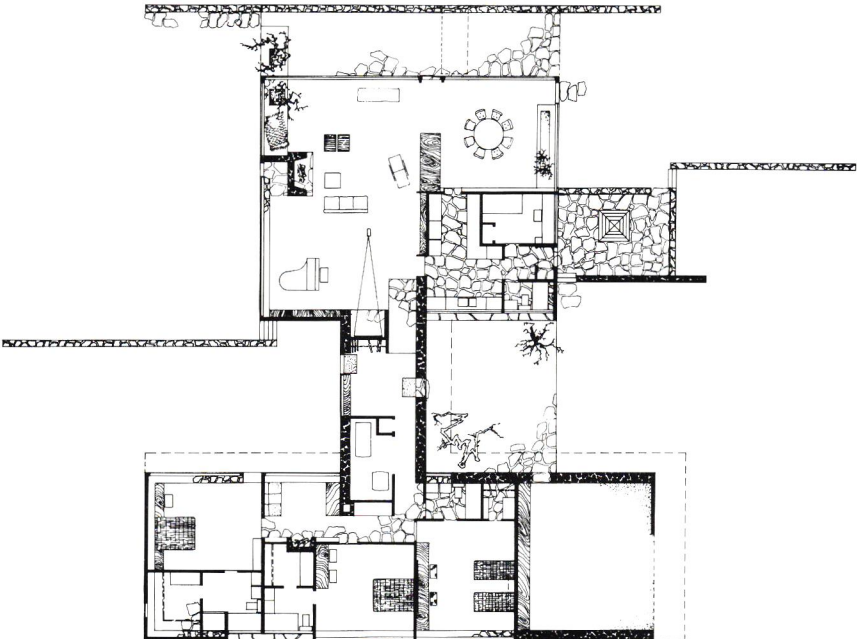
Figure 9. Villa Garches. Le Corbusier, architect. 1927. Plan.

Figure 10. Robinson House. Marcel Breuer, architect. 1947. Plan.

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10.

edges of the composition. While, finally, it is seen to be these peripheric incidents – low walls, extruded roofs, slits and slots – which contribute a particular stringency to the building, define its air of modernity, and pre-determine our sensations of pleasure.

Precisely because the peripheric principle (which according to prejudices might be traced back to Cubist painting, and/or De Stijl, and/or the Prairie House of Frank Lloyd Wright) was so compatible with technical media and functional planning, because it could generate products so various and legitimate as a Garches, a Bauhaus, and a Barcelona Pavilion, there was in the twenties, and later, no immediate need to recognize its independent and active role. Indeed to have done so would have seriously damaged modern architecture's polemic. And, while orthodox theory could at any time (presumably by appealing to the spirit of the age) have legitimated peripheric composition, it preferred not to do this – and understandably so. Up to a point, orthodox theory has been highly effective. It has been propagandist and evangelical; and in calling up the spirit of the age, it provided itself with a most formidable ally. But this ally, which was an essential catalyst of the International Style, was also expected to remain a somewhat remote presiding deity. It was to inaugurate a “new vision”; but, otherwise, its behavior was not seriously to affect a rationalistic program. Thus, there arose the anomaly of a theory which seemed to be unable but which was really only unwilling to provide adequate explanation of the phenomena which it purported to sponsor; and there appeared that dilemma to which Matthew Nowicki called attention, the problem “that even when form results from a functional analysis this analysis follows a pattern that leads to the discovery of the same function whether in a factory or a museum.”⁶

A glossing over of this problem, as Nowicki well recognized, is of no service to modern architecture; platitudes will not conceal it; and when it is perceived, as it is generally perceived, to what degree functional and structural analysis has been consistently edited so as to facilitate the expression of a preference, then, however acceptable the results might be, apprehension necessarily follows as to how precarious are the philosophical foundations of such activity. Now a pre-

carious philosophical foundation may be neither here nor there, may sometimes in no way impede the most remarkable performance, may occasionally be positively advantageous; but, in spite of this, the lack of correlation between compositional practice and the explanation of it which was becoming glaringly apparent by the late forties almost certainly did provide a prompting for the developments under discussion.

To make a metaphor: it might be said that rationalist theory, understood to be a scheme of determinism *qua* function and technology, had entered into a gentleman's agreement c. 1922-23 with a grand historical abstraction; and that rationalist theory, perhaps, had not fully understood the consequences. Nor was it any mere arrangement of convenience which brought the two together; since, in order that a rationalist architecture might become a “new” one, it was essential that the spirit of the age should be embraced. And, apparently, the agreement was successful. The one partner was analytical. The other dynamic. And both were stimulated. But there was a potential incompatibility in the amalgam, and this seems to have been dimly suspected. The spirit of the age can be indiscreet. Rationalism never. But the two shared many of the same interests. The spirit of the age was an enthusiast for speed, mass production, air planes, reinforced concrete, sociology, sun bathing, heavy machinery, simple life, factories, grain elevators, Atlantic liners, hygiene, and the classic automobiles which were created in its own image; and, so long as it could be believed that the creature was aesthetically neutral, rationalism was not eager to discourage such discriminating excess. But, when the first evidences of *taste* were revealed, the old problem which the partnership had been established to settle was back again; and, for rationalism in general, the recognition that the epoch's will is not something entirely transcendental, philanthropic or practical has been the source of acute embarrassment. The lapse into consciousness has meant the end of innocence.

This metaphor has been intended to point out the dilemma which can result from advocating a dual doctrine and failing to recognize its duality. The attempt to relate the spirit of the age to the function-structure-materials triad was entirely

12 understandable. But, in reality, these are natural antitheses and not harmonious partners. They are the positive and negative charges which authenticate any genuine process of creation. But they can be brought together only in a relationship of tension. Neither can be subordinated to the other. They are both autonomous and require constant check. And, by the late forties, so much could be intuited. For, by then it had become evident, in more ways than one, that the spirit of the age was not entirely to be trusted. Certainly it was no longer the tractable and stimulating playmate which, twenty years earlier, it had seemed to be. In architecture it had proved itself more than competent to out manoeuvre an unsuspecting rationalism. Nor was it exactly impartial; and, if the spirit of the age could show a taste for peripheric composition, it might equally well develop one for Corinthian capitals and/or pointed arches; and if then, as Nowicki had suggested, function, structure and materials were no more than the pragmatic sanctions of architectural form, how could they resist it? They scarcely could; and, as a result, rationalism was distinctly embarrassed.

The attempts to resolve this dilemma have been many. The postwar Italian idea was simply to be witty about it. In England picturesque townscape provided a characteristically national escape route down which hundreds fled. In the United States regionalism, by attempting to set up the spirit of the province as a check to the spirit of the age, provided one equally characteristic American solution. But this form of architectural states rights could scarcely exist without the complement of a central authority; and, as a version of this central authority, the present neoclassical mutations must appear to any dispassionate observer to be no less typically American.

Briefly, being possibly somewhat disturbed about the spirit of the age, the new movements apparently propose to submit this fictional or real demand to arbitration. To the question which Nowicki asked of the canonical works – Are these buildings the rationalization of function-structure-materials and no more, or are they the product of a specific aesthetic originating at a certain time? – they have replied with unaffected casualness. They have reserved judgement on function, if not on structure and materials; and, while they are,

conceivably, aware of an aesthetic which originated in particular places at a certain time, they are indisposed to attribute to it inordinate significance. Rather the reverse. Disposed to keep this aesthetic at some distance, they do so at the level of taste by re-emphasizing a form of concentric composition, and at the level of ideas by attempting to assert a universal principle – one to which both the less instructed and the members of a real or supposed elite may alike give assent. Thus, they have assumed the existence of an idea applicable at all times; and, in doing so, they imply an intention to subordinate the imperatives of the epoch to an architectural equivalent of the rule of law.

Exception can scarcely be taken to the logic or to the responsibility of this conservative but eminently radical step. It is one of the limited ways of plugging a gap which has become more and more insupportable. It is the product of personalities which require a standard; but which, unwilling to be left to the mercies of the time-spirit, are equally unwilling to be left to those of nature. That is: it is the product of personalities which cannot accept an “organic” incursion into Wrightian territory as a possible solution; and, instead, neoclassicism has taken its stand in favor of the legislative ability of mildly Platonic forms, with the presumption that these are valid, independent of function or technique, and that, while they may defer to the age, in theory at least, they transcend it.

Very little more need now be said. On the face of it the neoclassical choice might have brought those who chose into the orbit of Le Corbusier who, perhaps anticipating a problem of this kind, very long ago proclaimed his decided adherence to immutable laws of geometry and mathematics. But that a different allegiance was declared is accountable. Miesian example is more accessible, more suited to advanced technology; and, in addition, Mies, also, had gradually modified his position with regard to his “will of the epoch” which, apparently unrestricted in 1923, had by 1930 become substantially qualified. By 1930 he could announce: “The new era is a fact: it exists, irrespective of our ‘yes’ or ‘no.’ It is neither better nor worse than any other era. It is pure datum, in itself without value content. . . . One thing will be decisive, the way we assert ourselves in the face of circumstance.”

And, if by 1930 the value of an individual assertion was set up against what in 1923 seems to have been a collective one, by 1938 Mies had defined his position further. In his inaugural address at I.I.T. he is able to propose a distinction between “practical aims” and “values”; and it becomes now only by the first that “we are bound to the specific structure of our time” while the second are now assumed to be “rooted in the spiritual nature of man.”

This gradual revision of what, in the first case, appeared to be a crudely deterministic position has given Mies a peculiar centrality at the present time. He has gradually pulled away from the less tenable defences of modern architecture; if he seems now to conceive of architecture as arising from the interaction of a specific contemporary technology and an unchanging spiritual nature, one might guess that the neoclassical movements are only half disposed to agree. They have received certain idealized forms as a gift from Chicago, and they have received them with the difficult proviso that “Form is not the aim of our work but only the result.” They are apt to respect this proviso but also to beg to differ. Possibly less disillusioned than Mies with “the will of the epoch,” they are less disposed than he to restrict it to matters of technology. But, still anxious to control it, they wish to employ Miesian form precisely for this purpose — as a reasonable restraint which might hint at a conviction expressed through an attitude.

It is not, it might be suggested, so much a spiritual or an architectural conviction, as a social, almost a sociological one. “Nothing is more pitiful than the arrogant disdain of our contemporaries for questions of form,” wrote De Tocqueville in the eighteen-thirties, and the cogency of his observation to the point at issue must excuse the introduction of this august personage. “Men living in democratic ages do not readily comprehend the utility of forms,” he adds; and, though his primary reference is to social and political forms, form in itself is also implied. “Democratic nations naturally stand more in need of form than any other nations,” he continues. “In aristocracies,” he concludes, “the observance of forms was superstitious: among us they ought to be kept up with a deliberate and enlightened deference.”⁷

If it is not too facetious to suppose that this kind of argument is implied by a number of post-Miesian buildings it would be of some interest to know to what it might lead.

Notes

1. All quotations from Mies van der Rohe are to be found in Philip Johnson, *Mies van der Rohe* (New York: The Museum of Modern Art, 1947).
2. Walter Gropius, *Scope of Total Architecture* (New York: Harper, 1955), p. 61.
3. Herbert Bayer, Walter Gropius and Ise Gropius, eds., *Bauhaus 1919-28* (New York: The Museum of Modern Art, 1955), p. 30.
4. From *De Stijl VII*, pp. 24-27. See also *De Stijl*, cat. 81 (Amsterdam: Stedelijk Museum, 1951), p. 34.
5. Siegfried Giedion, *Space, Time and Architecture* (Cambridge: The Harvard University Press, 1941), p. 495.
6. Matthew Nowicki, “Origins and Trends in Modern Architecture,” *Magazine of Art* (Nov., 1951), p. 273.
7. Alexis de Tocqueville, *Democracy in America*, trans. Henry Reese (New York: Pratt, Woodford & Co., 1848), part 2, p. 347.

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- Figures 1, 3 and 7. Ezra Stoller © ESTO.
 Figure 5. Fred Winchell.
 Figure 8. Courtesy Roche Dinkeloo & Associates.
 Figure 10. Courtesy Marcel Breuer & Associates.

- 14 *The idealistic principle of order...with its overemphasis on the ideal and formal, satisfies neither our interest in simple reality nor our practical commonsense.*
*Mies van der Rohe*¹

The expressed tastes of a younger generation provide an ironical commentary upon the Miesian text. For, if “the idealistic principle of order” has not lately been set up, then something very close to it evidently has; and, paradoxically, it is Miesian example which has provided the incentive for the change. Thus “ideal” volumetric simplicity, “ideal” symmetry, and “ideal” centralization have now become the order of the day, the Greek Revival inspires increased affection, and the disturbed ghost of Palladio threatens to become a frequent visitor in the more discriminating suburbs.

It is particularly such a structure as Crown Hall, the architecture building at the Illinois Institute of Technology, which has seemed to the historically sensitive to be some mid-twentieth century counterpart of the Villa Rotonda; and, since it is symmetrical, four square, and approached by an elevated platform which might suggest the podium of some yet unbuilt portico, it is surely not by accident that it invites the parallel to be drawn. And since, different though they may be, because in the case of each building one senses the activity of an architect who is remorselessly determined to be clear, who is willing to operate only within the most stringent of self-imposed limitations, and who is absolutely concerned with a specific theme, the parallel may be sustained.

But, when all this has been said, and for all its classical implication, Crown Hall is not the Villa Rotonda – nor anything like it. It may occasionally be useful to see this building and its immediate predecessors in this way – that is if some partial explanation for the recent revival of the Palladian *parti* is demanded; but, for the moment, it would be more profitable to recognize that the Villa Rotonda and (perhaps) Crown Hall are really exemplars of that “demonstration” of which Louis Sullivan’s mathematics teacher spoke, the “demonstration so broad that it will admit of no exceptions”²; and, since demonstrations of this sort are apt to command the imagination, there is here then some very obvious reason for the phenomenal success which Mies’s current conception

of architecture has come to enjoy. Apparently so much more crystallized and systematic than the compositional methods of ten, twenty, thirty years ago, it seems now to be reducing these to insignificance. It has the power to impose itself; and, while whether it can succeed in doing so is a matter of importance, whether its success can or will lead to a highly widespread new ‘classicism’ is scarcely less so.

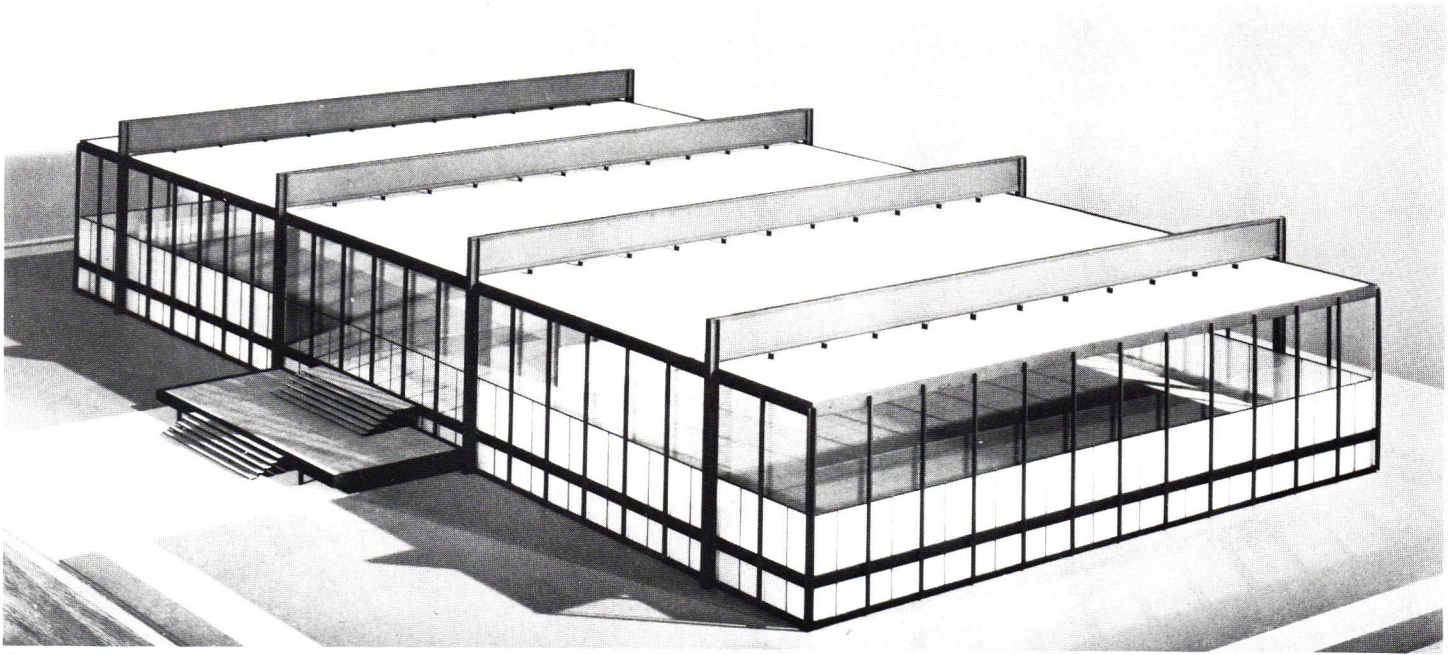
Shortly after coming to the United States, or perhaps before, Mies obviously reacted very sharply against the elaborately interwoven space compositions which had formerly typified fully developed examples of modern architecture. His spaces became less tense. His rationalism became more acute. In certain ways he may be said to have turned back to that Schinkelesque, Biedermayer neo-Grec which characterized the earlier phases of his career; and, because this evolution seems to have been a crucial one for all the later developments that have absorbed his influence, it might be as well to examine it in some detail.

Since it has been widely asserted that modern architecture is not merely an attitude of mind towards technological and sociological problems, but that there has taken place a radical re-orientation in the capacity to conceive of space, and since it is implied that, while the elements of this new spatial order may all have been present for many years, their effective synthesis was an achievement of the twenties, it will be useful to clarify certain precepts of what will here be called (for the want of any better term) International Style space. International Style space will here be understood as the space of Garches, of Mies’s house for the 1931 Berlin Building Exhibition and of Le Corbusier’s foyer for the Centre-soyus Building, Moscow – to name only a few outstanding examples. All of these are reasonable manifestations of the spatial revolution of the twenties. All of them have exercised and continue to exercise a wide influence upon practice; and, although the spatial strategy which they represent has only rarely been achieved, the idea of this space is none the less significant for that.

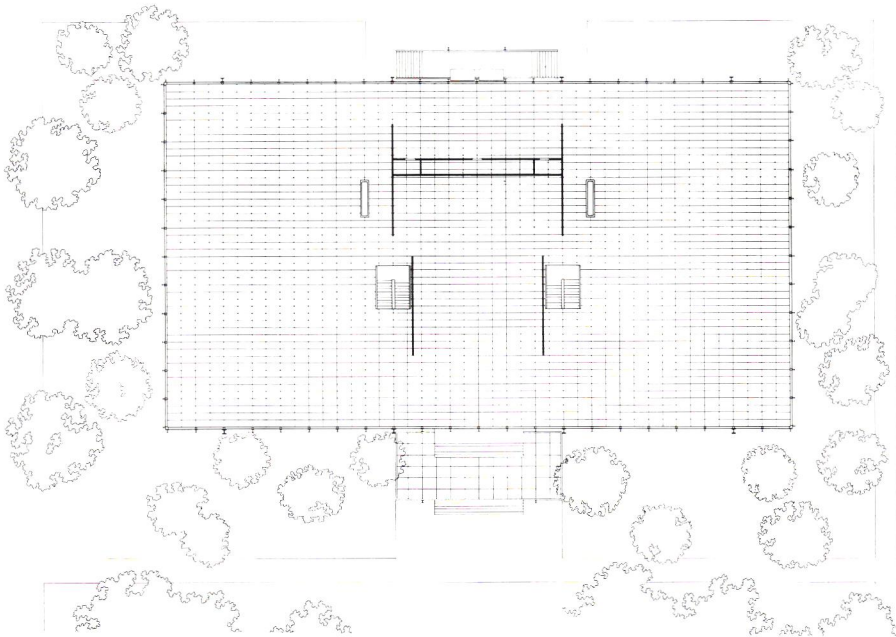
Like all other systems of space, that of the International Style resulted from a re-appraisal of the functions attributed to the column, the wall and the roof; and, at its most devel-

Figure 1. Crown Hall. Mies van der Rohe, architect. 1956. Model.

Figure 2. Crown Hall. Plan.



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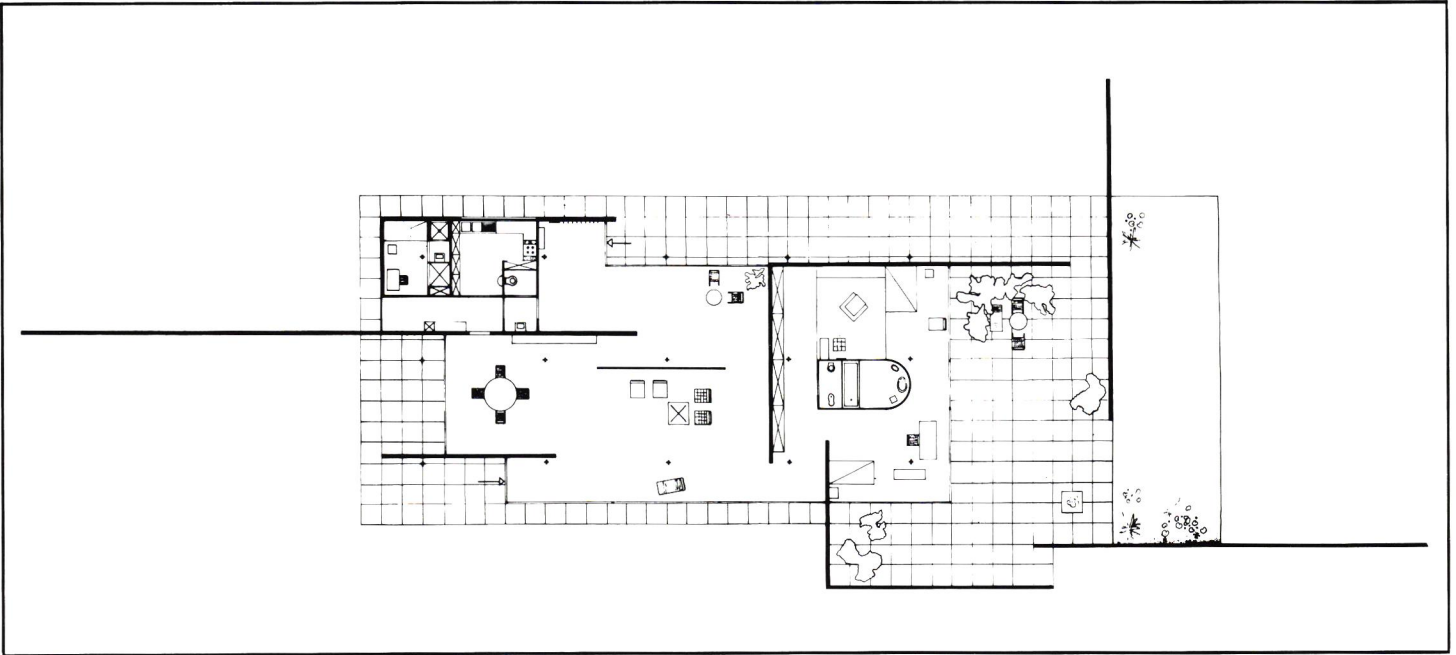


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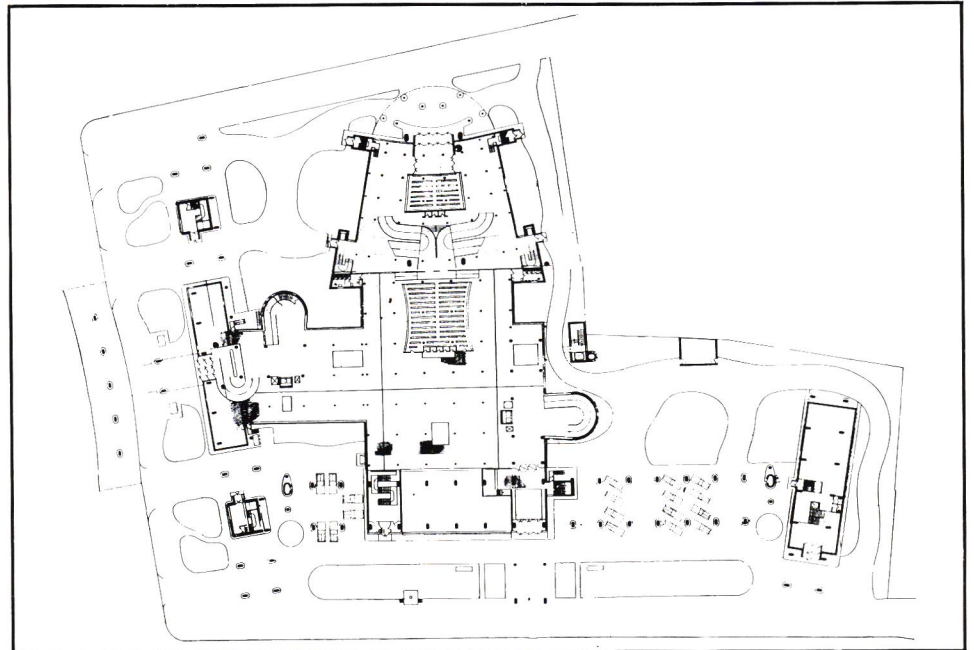
Figure 3. Berlin Building Exposition House. Mies van der Rohe, architect. 1931. Plan.

Figure 4. Centrosoyus Building. Le Corbusier, architect. 1930. Plan.

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oped, it postulated a skeleton structure whose function of support was to be separately expressed from any non-structural function of enclosure. The skeleton structure, it was recognized, had made bearing walls, or the appearance of such walls, redundant; and, since this structure was now to be made clear, it was demanded that columns be disengaged from walls and be left free to rise through the open space of the building. All else was a logical deduction. Detached from the liberated columns, the walls were now to become a series of freely disposed screens; and, while in this way there ensued the “free” plan, its corollary, the “free” facade, was required so as to make, by an extensive opening up of the building, a further assertion of the functional independence of its parts.

The principles of this space were perhaps first fully enunciated by Le Corbusier who, around 1926, published a series of diagrams which at that time represented to him the logical effects of a ferro-concrete system³; but, about the same date, almost identical conclusions seem to have been reached by Mies with reference to the problems presented by steel supports. With Le Corbusier the new demands were put into words and the new roles ascribed to column, wall, plan and facade were followed by a new demand with regard to the roof. For both pragmatic and sentimental reasons this was to be flat – so that it could be used as a garden; but obviously – gardens or not – flatness of silhouette was also preferred by Mies, not to mention by Gropius and innumerable others, and conceivably it was preferred because it was felt to be highly expressive of the peculiarities of the volume which the roof now protected.

For there are other peculiarities of International Style space, some intrinsic, some extrinsic, which deserve attention. As already noticed previously, it was characterized by a tendency to emphasize a peripheric rather than a central expression of the building. To refer again to Van Doesburg, the center was to be gradually abolished and the composition was to be developed in the opposite direction. Or to paraphrase Gropius, the new demand led to the dead symmetry of similar parts being transmuted into an asymmetrical but equal balance.

Further, it should be noticed that, on the whole, International Style space was a system which tended to prohibit any display of beams; and, rather than the *upper* surface of the roof slab being flat, it seems even more certainly to have been required that the *under* surfaces of the roofs and floors should present uninterrupted planes. And this restriction seems to have been a further deduction from the conception of the freedom of the column – since the free column could scarcely assume an explicit relationship with the beams which it might happen to support without leading to a compartmentalizing of the space, and thus to a violation of something of the freedom of the plan. In fact, the appearance of beams could only tend to prescribe fixed positions for the partitions; and, since these fixed positions would be in line with the columns, it was therefore essential, if the independence of columns and partitions was to be asserted with any eloquence, that the under side of the slab should be expressed as an uninterrupted horizontal surface.

Fundamentally, therefore, in Mies’s and Le Corbusier’s buildings of c. 1929 the column acts as the punctuation of a horizontally extended space which, particularly with Mies, is characterized by a neutral equality of section. In these buildings the column does not promote the spatial expression of the structural bay, nor do a series of columns define individual structural cells. Rather the reverse is true. The column is no more than an interpolation, a caesura in a general space, and the spatial expression of the structural bay is strictly subordinated to a spatial expression of the flat slab which the columns support.

It was probably Mies who provided the most literally perfect transcription of this delicate and complex system of logic; and, by comparison, Le Corbusier may seem to have been less loyal to the principles which he had affirmed. For where Mies’s distinctions between functions of support and enclosure are conceptually immaculate, Le Corbusier’s may often seem quite perfunctory. But, on the other hand, while the charm of Mies’s spaces at this date lay in their peculiarly limpid quality, in their lyrical sensitiveness to the most expensive materials, Le Corbusier seems to have explored a dimension of the problem with which Mies was not concerned. Where Mies’s vertical planes trail out suggestively,

18 “peripherically,” into the landscape, Le Corbusier had already denied himself this possibility. Perhaps out of antipathy to the idea, or perhaps out of some instinctive recognition that the principles of a Prairie House could not be so readily fused with the repetitive ordinance of a steel or concrete structure, he had always been pre-disposed to internalize this peripheric incident – as, for instance, at Garches where all the long walls that contribute a rotary, pin-wheeling movement to Mies’s buildings are condensed into the compass of a single block within which they acquire an explosive, emphatic, enriched quality, completely distinguished from the relaxed Miesian serenity.

It is part of the irony of recent developments that, in the nineteen twenties, when Mies had absolutely no use for the block, Le Corbusier could employ it in order to achieve a formulation of International Style space; but that, in the nineteen forties, Mies should then approach the block with a completely different end in view. Apparently Mies had to wait until he arrived in Chicago before the block became with him an obsession; and it is then that his feeling for it became part of his reaction against the spatial order to which he had earlier subscribed. Throughout the early thirties Mies had been progressively simplifying his somewhat over-extended manner of 1929-31, and in his patio houses of this time he had already been led to a retraction of the planes that formerly slipped out from beneath the slab. But, despite this simplification, he still retained a hankering for a somewhat picturesque loose volume, and it is not until Chicago that the block appears – when it is by no means that *prisme pur* to which, fifteen or twenty years earlier, Le Corbusier had expressed his devotion. Instead Mies’s block was very much a version of the old and structurally articulated buildings of the Chicago school; and, most significantly, in acquiring this taste he seems to have acquired also an antipathy for his earlier conception of the column.

Le Corbusier’s characteristic column was, and has remained, circular. Mies’s characteristic German column was circular or cruciform; but his new column became H-shaped, became that I-beam which is now almost a personal signature. Typically, his German column had been clearly distinguished from walls and windows, isolated from them in space; and,

typically, his new column became an element integral with the envelope of the building where it came to function as a kind of mullion or residue of wall. Thus the column section was not without some drastic effects on the entire space of the building.

The circular or cruciform section had tended to push partitions away from the column. The new section tended to drag them towards it. The old column had offered a minimum of obstruction to a horizontal movement of space; but the new column presents a distinctly more substantial stop. The old column had tended to cause space to gyrate around it, had been central to a rather tentatively defined volume; but the new column instead acts as the enclosure or the external definition of a major volume of space. The spatial functions of the two are thus completely differentiated. The new column is no longer the old International Style mark of punctuation. Instead it implies the existence of an autonomous structural cell; and any series of such columns now comes to function as a kind of skeletalized partition or discontinuous wall.

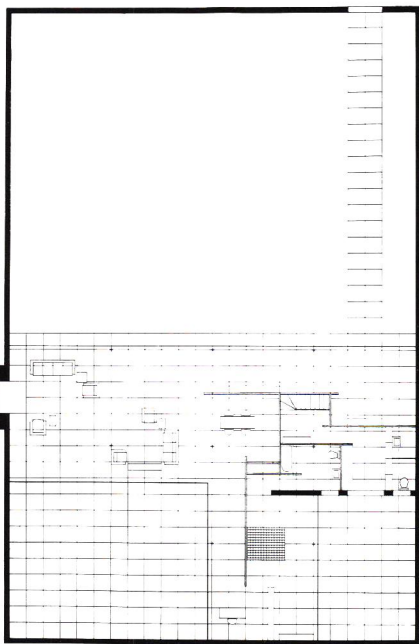
From this simultaneous affirmation of the block and transformation of the column – whether it was audacious or innocent – all else may be said to flow. As an International Style element, the column put in its last appearance in the museum project of 1942; while in the Library and Administration Building project of 1944, the effects of the H-shaped column are already apparent and are clearly exhibited in the published drawings of its plans. From these drawings it is evident that the column is no longer to be allowed to float ambiguously beneath a slab. It is now – apparently for the first time – tied to a network of beams, and these beams have appointed definite positions for the screens, and for the most part the screens have already leapt into these positions – in fact only the extra-thick walls around the lavatories seem to have been able to resist the new attraction.

So innovative is this achievement that it is a temptation to believe that even Mies himself must have been alarmed by what he had here done. He had produced major symmetrical projects before, but he had produced them largely in terms of his older concept of the column; while in both the Reichs-

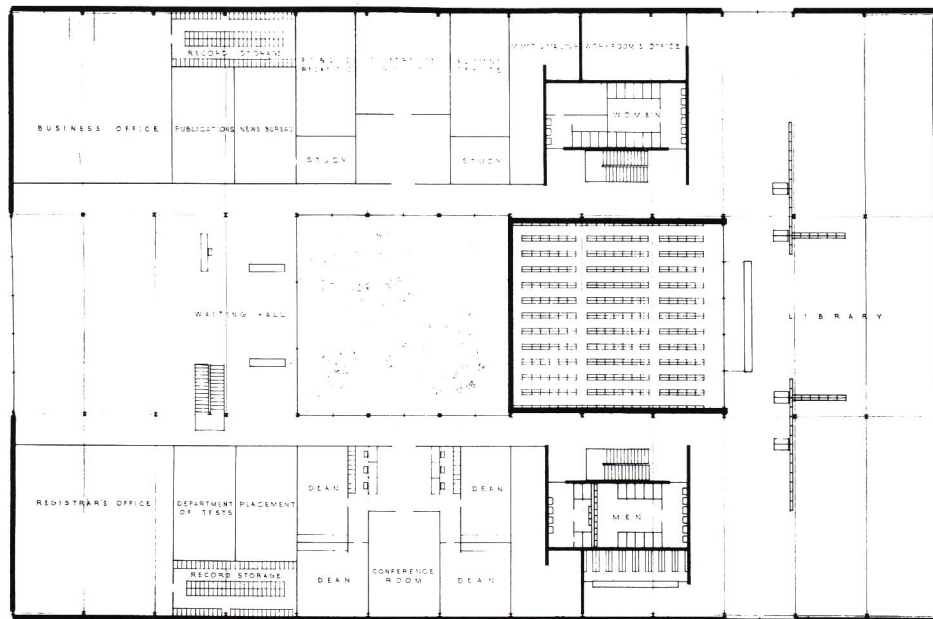
Figure 5. *Patio House*. Mies van der Rohe, architect. 1934. Plan.

Figure 6. *Library and Administration Building*. Mies van der Rohe, architect. 1944. Plan.

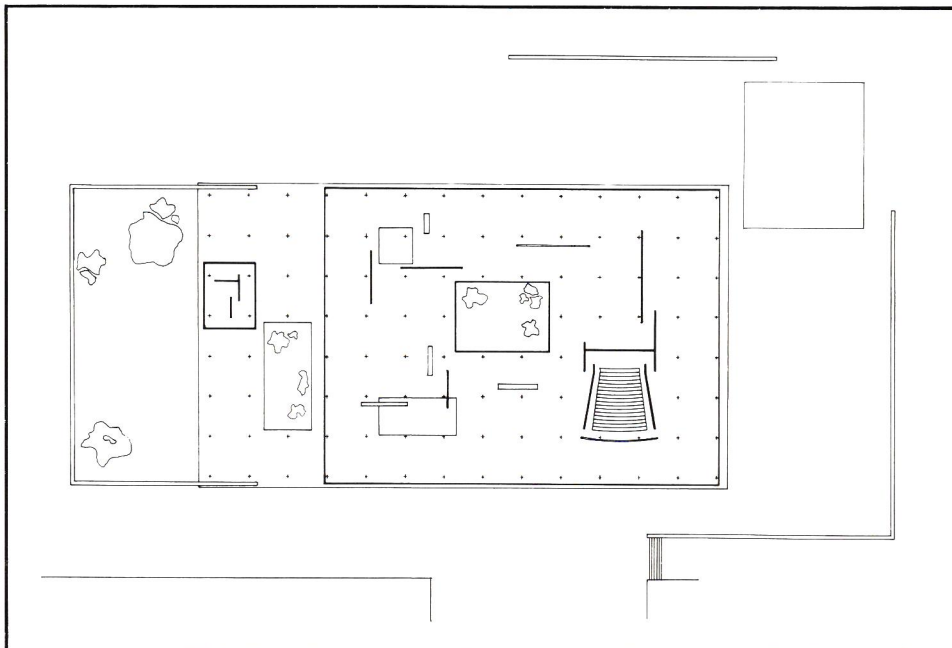
Figure 7. *Museum for a small city project*. Mies van der Rohe, architect. 1942. Plan.



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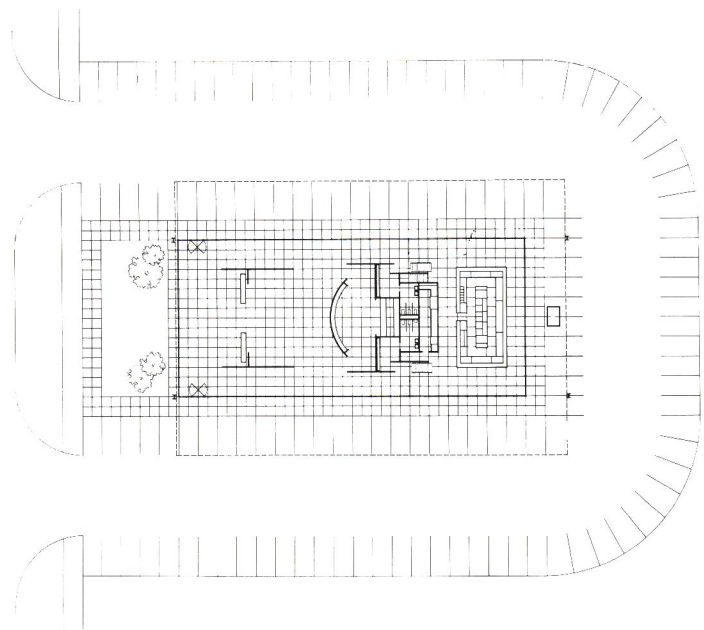
Figure 8. Drive-in Restaurant. Mies van der Rohe, architect. 1946. Model.

Figure 9. Drive-in Restaurant. Plan.

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bank and Krefeld projects he had been careful to articulate his principal volumes as separate entities. And now, eschewing this possibility, he had thrown his spaces together so as to comprise as far as possible a continuous whole; but, at the same time as doing this, he had refused to allow himself the typical International Style treatment of such continuous space.

The concept of his new column was both more structural and more classical than that of the revolutionary and plastic column of the twenties; and, having stipulated the column in these terms, he could scarcely escape the consequences of his statement. Structural and spatial expression now promised to become more integral than before; but the space, for all its openness, promised to become more rigid. Thus the Library and Administration Building is already puckered by little points of central emphasis, quasi-articulations in terms of structure, and it is already tentatively furrowed by a system of axes and cross axes. At any moment it seems about to break down into a scheme of three parallel halls, and again to submit itself to a further breakdown into a constellation of individuated structural cells. The building is like a solution which, depending on the addition of a further ingredient, will completely change its nature. But this is not allowed to happen. To prevent it, to hold the solution in suspension, Mies returns again to the concept of the flat slab and floats a false ceiling beneath the greater part of his beams, only allowing them to show at their junctions with the columns. And thus, by restating the space as a rather fattened version of the sandwich volume of which he had been such a master, he was still able to control the quite anomalous developments within it.

But it had been a near thing. The Library and Administration Building is somewhat like a signpost pointing in two or possibly three directions; and, by 1946, in the Farnsworth House and in the Drive-In Restaurant project, the most congenial of these seems to have been chosen. By a considerable expansion of the structural bay, by an expression of the building as a single structural cell, the ossification of space which the new column seemed to threaten could be avoided; and, by an externalizing of the beam, the “ideal” flatness of the undersurface of the slab could be preserved.

But it could be preserved only at the price of emptying the interior as much as possible of all local spaces. For, with the structural bay thus augmented, the organizing ability of the steel skeleton was necessarily diminished. There was less of it. It could no longer therefore provide a repetitive beat, a tempo, for the building. Nor could it any longer very ably control an asymmetrical organization of screens; and, in the columnless space of the later forties, these screens, which as mementoes of the structurally irrelevant walls had survived as elements of considerable episodic charm, now begin to seem embarrassing. Fairly massive cores might be located in this empty space and screens might be disposed with reference to these — but by the time of the Drive-In Restaurant and Farnsworth House of 1946, to all intents and purposes (since it is a combination of their themes) we have returned to the Architecture Building of ten years later; and, in returning to it, we have returned to the resurrected Palladio and to all the problems of neo-classicism which prompted this digression.

Like the characteristic Palladian composition, Crown Hall is a symmetrical and, probably, a mathematically regulated volume. But, unlike the characteristic Palladian composition, it is not an hierarchically ordered organization which projects its centralized theme vertically in the form of a pyramidal roof or dome. Unlike the Villa Rotonda, but like so many of the compositions of the twenties, Crown Hall is provided with no effective central area within which the observer can stand and comprehend the whole. The observer may understand a good deal of the interior while he is external to it (although even this Mies is disposed to disallow by planting a screen of trees across the front); but, once inside, rather than any spatial climax, the building offers a central solid, not energetically stated it is true, but still an insulated core around which the space travels laterally with the enclosing windows. Also, the flat slab of the roof induces a certain outward pull; and, for this reason, in spite of the centralizing activity of the entrance vestibule, the space still remains, though in very much simplified form, the rotary, peripheric organization of the twenties, rather than the predominantly centralized composition of the true Palladian or classical plan.

22 Nevertheless, in apparently leading up to this plan and then backing away from it, Mies does seem to have created an appetite for it; and thus, on the one hand, in Connecticut there has re-emerged the old scheme of *corps de logis* and flanking pavilions and, on the other, in Cambridge there has re-appeared an image of that relentlessly ideal dome which, whether it is sponsored by Brunelleschi or Buckminster Fuller, appears always to be the unavoidable offspring of an insufficiently prepared flirtation with the classical tradition.

Certainly, at a theoretical level, such a house as Johansen's in Fairfield County and such a structure as Saarinen's Kresge Auditorium at M.I.T. may be said to propose the same formal problem — that of how to assert centrality in the face of circumstances; and in each building a discontinuity between function and expression testifies to the difficulties of an attempt to accommodate this post-Miesian appetite. In Fairfield County the Farnsworth House is triplicated and becomes bedrooms — living room — garage; at M.I.T. a single structural cell like that of the Architecture Building is made triangular, is domed, and is then converted into a receptacle for a concert hall. In Fairfield County, by the inference of the *parti*, either a subordination of the wings to the center or of all three elements to the courtyard is presumed, but scarcely could have been expressed without a less diagrammatic handling of structure; and at M.I.T. it is almost the same problem in reverse. Structure there asserts centralization but the plan can hardly accept it. And, since the anomaly of both these cases obliges one to believe that each of these buildings is really an adjunct to a more general theorem, it is hard not to conclude that the re-appearance of vaults and domes is other than a corollary manifestation to the re-appearance of highly academic *partis*. The dome, of course, having recently acquired technological legitimacy, is now provided with an empirical justification, while the value of a Palladian plan can scarcely be other than ideal; but when, for all this, one observes how Saarinen has slipped an “ideal” plan beneath his “empirical” dome and how Johansen has “empiricized” his “ideal” distribution by balancing garage against bedrooms, then one recognizes that there are here two disguises of the same manifestation, that Saarinen's dome is really the consummation of Johansen's spatial demand.

But if the dome, as a form where structural system and spatial expression are completely integral, is the logical conclusion of all attempts to centralize space, it is not necessarily either the inevitable or the desirable one; nor is it altogether a tractable subject. Demanding a completely unified space and the entire suspension of everyday function beneath it, the dome — except as a kind of episodic blister — is altogether too pure a form to accommodate anything except the extreme case; while the post-Miesian architect, above all, inherited concern for the typical condition rather than for any extreme. Moreover, a dome requires to be seen in complete isolation, to be the whole building — an exceptionally difficult proposition, for it requires the rest of the building to be hierarchically subordinate to it — a proposition which, at the present day, is probably no less difficult.

It is for reasons such as these, which illuminate the results of an unsuspecting pursuit of symmetry and centralization, that one returns to Crown Hall with increased respect and begins to understand all over again how, by still insisting on the flatness of the underside of the slab and by refusing to tolerate the presence of more than one block, Mies has been able to equilibrate both an outward pull and a centralizing moment. And the equilibrium between peripheric and central emphasis, though largely unnoticed, is significant because it does prompt the question of how, with the ingredients of modern building such as they are, can any real or total centralization be made effective. Symmetry may be, as Mies, Le Corbusier and others have shown. But centralization? To make this effective is surely a logical impossibility. The repetitive nature of the grid, which, in spite of casual deviations and very specific programs, remains and is likely to remain the basic component of modern architecture, resists the idea. The horizontal and vertical system of coordinates which the grid provides will scarcely allow any but the most minor differentiation in the form of its members. It insists that rank of all parts of the building should be approximately equal; and, the staccato ordinance of the gridded structure being thus abundantly democratic, how can those almost imperceptible gradations that establish one part of a building as superior to the rest be introduced? Evidently they scarcely can, or scarcely can without subterfuge; and thus it is less with some historically remote Palladian

villa but rather with Garches that Crown Hall deserves to be compared.

At Garches, as already observed and emphasized, there is – in an elaborate and now almost antique version – some pragmatic justification for the peripheric composition of the twenties. For, if the centralized theme is virtually put out of bounds by structural means, then, if the building is not to be aesthetically entirely passive, only the absolute opposite of the centralized theme survives as a possibility. Hence International Style space. And even when the free standing column, one of the essential components of this space at its most developed, is abolished, and when, as in Crown Hall, the monumental structural cell absorbs the whole building, still centralization remains no less difficult. For, like the dome of which it is a flattened, squared out version, a structural cell such as this one is apt to require the sacrifice of all spatial detail and the presence within it of simply an unsegregated void.

In other words, whatever its merits, as a model, Crown Hall is probably too pure to be useful. It may be a statement magnificent in its single-mindedness; but, while it persuades the spirit, it scarcely accommodates the flesh. For unhappily, the empirical world is not reducible to such simplicity; and though we might wish it could be, though we might wish certain aspects of reality (as here) to be, apparently, transcended, Crown Hall does not altogether allay doubts as to whether, in its presence, we are not being lured down some important street which, in spite of appearances, we shall finally discover to be a *cul-de-sac*.

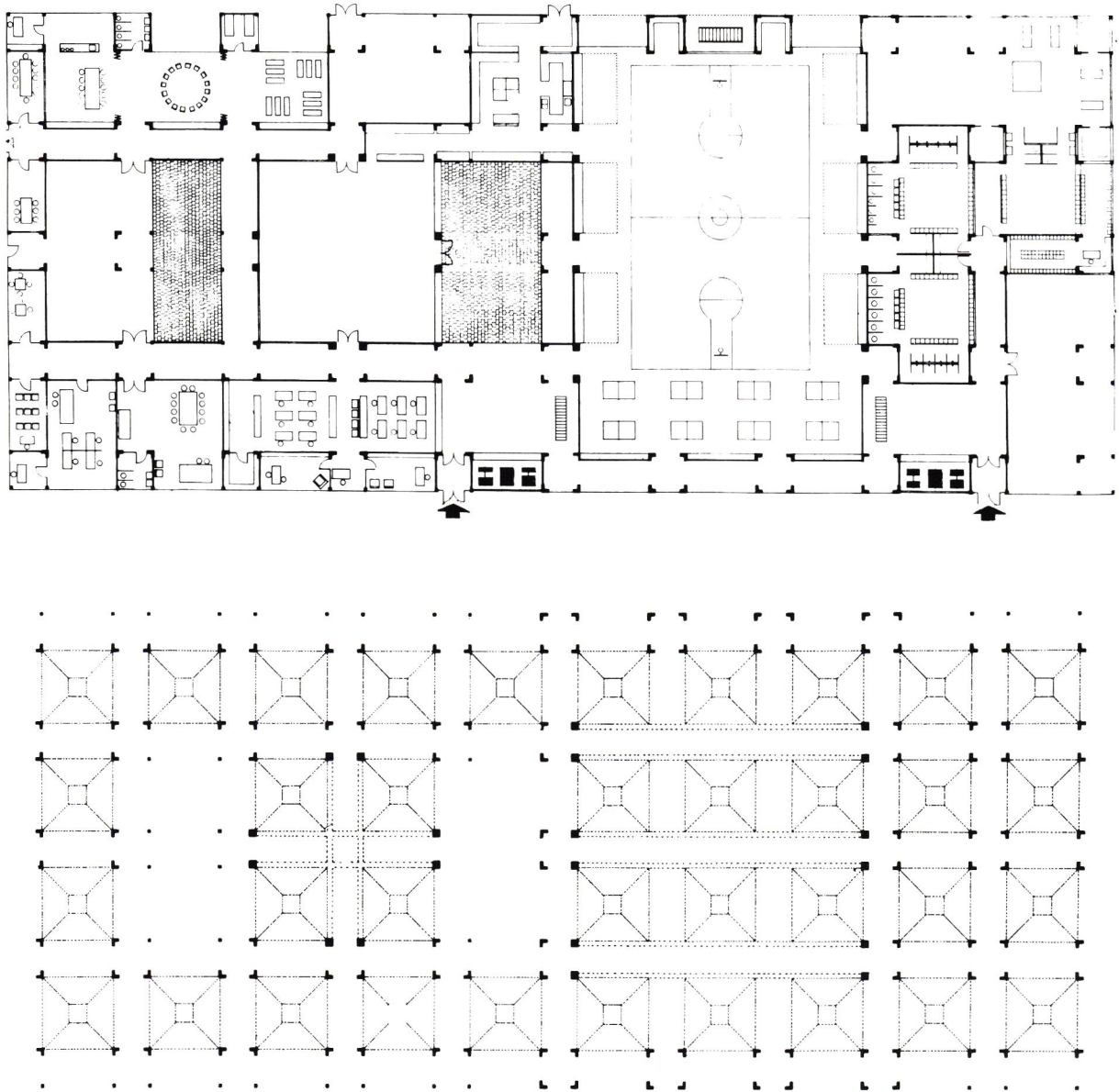
But, if Crown Hall may elicit such questions as these, if its interplay of centrifugal and centripetal stress may not be very visible, if the peripheric idea which Gropius implied and Van Doesburg asserted more than thirty years ago may be shown to be practically reasonable, if centralization and attempts at centralization may be deduced to be impossible, if these are the logical arguments, does this really help? One is reminded of a passage in which Henry Adams quotes Poincaré: “How shall I answer the question whether Euclidian geometry is true or false? It has no sense! . . . Euclidian geometry is and will remain the most convenient”⁴; and, with re-

gard to centralization, almost the same thing might be said. Neither true nor false, functionally preposterous, being psychologically convenient, it has become a demand; and, as a demand, it provides some explanation for those anti-Miesian and sometimes a-structural gestures in which disciples of Mies have lately been indulging. For, if the repetitive grid obviously predicates a space without focus, and if the single enlarged structural cell, while it will permit focus, predicates a space without function, then, if there exists a genuine desire to introduce focus, it might be expected that, after a certain point, *something must give* – either spatial preference or structure or both.

There is thus some very good reason for those decorative vaults that have lately compromised the cellular emptiness. Their appearance can only indicate an impending breach with the unified space idea formulated by Mies c. 1946. In the minuscule plaster scenery of Philip Johnson’s guest house the dissolution of such space is rehearsed, is presented as an attractive possibility. On the more solid stage of the St. Louis Airport an operatic realization of related themes makes the possibility more probable and public. Domical vaults, cross vaults, domes used in repetition, even folded slabs, all these are obviously means of centralization alternative to the single unique dome. They modulate the section of the building, introduce concavities, plough up the roof slab, animate the space beneath, and impose a cellular organization upon the plan. They are also themes that were latent in the I.I.T. Administration and Library Building. They are among the logical conclusions of the compartmentalizing of space which was there intimated; and, as representing the vertical stressing of space, they are among the possibilities which, for himself, Mies apparently felt obliged to reject.

One might, of course, detect in all these manoeuvres the hankering for a Beaux-Arts spatial system, for something reassuringly familiar and yet modern, for something comfortably womb-like and yet seeming to belong to the future. But, rather than proceed in this way, it might be best, if the Library and Administration Building is indeed a critical project that seems to point in a variety of directions, to direct attention to what seems to be the most logical and daring dénouement of what was there implied.

*Figure 10. Trenton Jewish Community Center. Louis Kahn, architect. 1959.
Plan and reflected ceiling plan.*



Louis Kahn's project for a Jewish Community center at Trenton, New Jersey, with its arches and brick piers, could be regarded as a self-consciously primitivistic version of a Beaux-Arts proposal. It may not be dependent on Mies's Library and Administration Building – and there is no reason to suppose that it is – but both of these schemes, at least, do display an analogous *parti*. The one shows a library and offices, the other a gymnasium and meeting rooms; but both sets of accommodation are assembled within rectangular blocks of comparable proportion and each block is susceptible to similar courtyard penetrations and to a variety of entrances. Also, about each building there is something a little heroic and a little strained. They are, both of them, more than interesting but a little less than plausible; both of them clever buildings but not quite conclusive ones; and something of their quality no doubt derives, in each case, from their architect's quite insistent determination to jam discrete functions within the same volume. But then there is more than this. Kahn, apparently, does not feel Mies's scruples with reference to an elegant structure. He is willing to tolerate an inflated structure and one which, by technological criteria, could be criticized as arbitrary and retarded. Thus, he can augment Mies's columns and equip them with mass so that they articulate rather than probe space; similarly, in the place of Mies's flat slab, he can engender a whole colony of pyramids; and, by these means, he is able to take up what the Mies project seems to infer but what an understandable inhibition prevented Mies himself from pursuing. That is, Kahn is able to accept the pressure of structure upon space; and, in doing so, by frankly accepting the existence of minor points of central emphasis and individuated spatio-structural cells, he can then proceed to make a building out of just these, a building which becomes firm and palpable in precisely those situations where the Miesian example remains delicate and tentative.

Now, whether this is gain or loss will, up to a point, be a matter of taste. Over something like the Library and Administration Building Kahn lays a complex grid of maybe Wrightian, maybe Beaux-Arts origin; and this grid gives to his project something of that Scotch plaid quality that is characteristic of Blenheim Palace as it is of the Martin House at Buffalo, as it is of so many *Prix de Rome*. It gives an

internal substance and animation to his proposal which enable it to stand up to the outer world in a manner that the Library and Administration Building scarcely can. But, while the evidence of such apparatus as this could suggest, rightly or wrongly, that Kahn is interested in proceeding in a direction where Mies has feared to tread, it might still be not impertinent to introduce some observations.

Whether dependent or not upon the precedent of the Library and Administration Building, the Jewish Community Center is emphatically the most complete development to date of themes that were there scarcely allowed to surface; and, compared with the other "neoclassical" manifestations we have examined, it seems so far to present the most comprehensive solution to the problems initiated by the anxiety to introduce centralization and/or the vertical stressing of space. But one might still ask exactly what has been gained by this solution; and certainly there has been scarcely a gain in flexibility. For, if there is a quality of sclerosis in late Mies, there is something equally sclerotic in this proposal for Trenton. In the one case there is an obsession with the flat slab, in the other with pyramids; but, while both obsessions do control and order, neither the flat slab nor the colony of pyramids can be said to answer very conspicuously to what is going on beneath them. With Mies the flat slab rejects the episodes the columniation acts to sponsor, with Kahn the pyramids propose episodes in plan that only rarely receive a corresponding recognition; and, if one may very well prefer the staccato and aggressiveness of Kahn's pyramids, the inward and outward show of his building, to the apparent Miesian indecision, it is still necessary to ask to what general conclusion such a proposal as his might lead.

Very briefly, it might be suggested that Mies Van Der Rohe's specific propositions, like Le Corbusier's though not to so extreme a degree, derive from certain general suppositions as to the nature of the building process and the nature of society. It might, therefore, be proposed that a building by Mies, like a building by Le Corbusier, whether successful or not, is always a statement about the world and never simply a statement about itself. And, in addition, it may be insisted that, for all the ideality of their positions, both Mies and Le Corbusier subscribe to what must be considered fact, that

26 they both recognize and accept what is surely the normative condition of twentieth century building – the flat slab and its point supports.

Now it is difficult to see how there can be any evasion of this situation, how in a multi-storied building, whether residential or commercial, so long as floors remain horizontal, the slab can be puckered; and it is therefore difficult to see how, in the normative building, there can be opportunity for those vertical stresses which seem, at present, so much to be desired. Domes, pyramids, etc., will permit and encourage vertical stress; but, in the typical scene, these can only rarely be incorporated. Structure, or its expression, may also be so distorted that a frame building can be presented as, seemingly, an accumulation of pavilions; but, again, in doing so the notions of the normative and typical are just as seriously breached. And it is, therefore, both the failure to observe a basic datum and the absence of typicality (that most classical of classical requirements) which must be insisted upon in any evaluation of the adequacy of the classicizing propositions which have here been discussed.

For the most part, perhaps, these buildings should be regarded as interesting aberrations that are relative to private rather than to public problems; and, if their individual merits may sometimes be considerable, it is just possible that they should be regarded as protests against a situation rather than, in themselves, as sponsoring one. And this predicament could allow for irony. For surely, in rejecting the free plan (or International Style space) these classicizing movements, whether consciously or otherwise, have rejected the greatest and most remarkable discovery of twentieth century architecture, something enormously difficult to manage but also something immensely rewarding when successfully manipulated.

But, if the rejection of the free plan may seem to be regressive and based upon insufficient information, then we may also be faced with a more complex reason for irony. For it has been emphasized that there is another and more legitimate form of “regression” which the classicizing mutations under discussion infer. It has been suggested that, at least in part, these derive from the rejection of the notion of an

over-riding, coercive and creative *zeitgeist*; and, if this could indeed be the case, then, whatever its provincial failings, the initial intention of “neoclassicism” should surely deserve some recognition.

Notes

1. Philip Johnson, *Mies van der Rohe*, p. 194.
2. Louis Sullivan, *The Autobiography of an Idea* (New York: Press of the American Institute of Architects, 1924), p. 221.
3. Le Corbusier, *Oeuvre Complete de 1910-29*, ed. Willy Boesiger and Oscar Stonorov (Zurich: Erlenbach, 1943), p. 129.
4. Henry Adams, *The Education of Henry Adams* (Boston and New York: Houghton Mifflin Co., 1918), p. 455.

Figure Credits

Figures 1-3, 5-9. Courtesy The Museum of Modern Art/Mies Archives.

Figure 10. Courtesy Louis Kahn.

**From Golden Lane to Robin Hood
Gardens; or if you follow the
Yellow Brick Road, it may not
lead to Golders Green.**

Peter Eisenman

A shortened version of this article first appeared under the title “Robin Hood Gardens London E14” in the magazine *Architectural Design*, September 1972. Its appearance here, in its original form, is intended to correct any misunderstandings that may have arisen as the result of an editorial abridgement that was little short of tendentious. The bold type indicates the passages that were omitted in the first publication.

27

Peter Eisenman was born in Newark, New Jersey in 1932. He is an architect and Director of the Institute for Architecture and Urban Studies in New York City. He has taught at the University of Cambridge, Princeton University and at present at the Cooper Union. In addition to a series of single family houses which he has designed and built, he has worked on several urban design projects; one for the Manhattan waterfront which was exhibited at the Museum of Modern Art in 1967. He has also completed a three-year study of the urban street commissioned by the U.S. Department of Housing and Urban Development and collaborated in the design of a low-rise housing prototype for the New York State Urban Development Corporation.

- 28 The making of architecture can be said to be a continuing dialectic between ideas and forms. Certain ideas and metaphors have the power to suggest buildings. Equally, certain buildings, by virtue of their form, can imply a use and even suggest a way of life. Each is no more or no less architecture. Both are rare. Few ideas have been built; few buildings are anything other than the latest mode in shape making. It is unusual that Britain should have produced within the same generation architects who might be considered exemplary of these two attitudes.

While ideologically opposed, Alison and Peter Smithson on the one hand and, James Stirling on the other, present a certain parallel. Stirling does not begin with a program of ideas; instead, they tend to develop from his forms. The Smithsons start with a series of ideas – metaphors – which have the power to suggest both buildings and larger urban complexes. It is against a commitment to an architecture evolved from a set of articulated and often elaborated ideas that their contribution must be seen. It is through the medium of their latest built work, Robin Hood Gardens, that this paper will attempt to analyze that commitment at two levels of intention; first as urbanism and second as architecture.

A pair of metaphors, the ‘tower in the park’ and the ‘building as street,’ articulate the two major contributions of the modern movement to twentieth century urbanism. Both models are alternatives to the *rue-corridor* of the 19th century. Both suggest a different relationship of building to street. And to the extent that both present images which are in conflict with the status quo, they embrace a utopian aspect.

While the ‘tower in the park’ appeared as an idea in Auguste Perret’s thinking, it was given its first significant presentation in Le Corbusier’s Ville Tours of 1920 and Ville Contemporaine of 1922. Here the office towers transform the building/street relationship from one of a continuous facade forming the street space to one where the street is merely a two dimensional band in open-ended green space.

The second of these two metaphors, the ‘building as street,’ which will affect much of the Smithsons’ development, first

tentatively appears in the *maison à redent* blocks, of Ville Contemporaine. This notion is developed into a purely linear form in Le Corbusier’s Rio de Janeiro Project of 1929 and his Algiers Project in 1930. In both of these latter cases the building is seen more as a road since it also carries automobiles, a concept prefigured in Edgar Chambless’ Roadtown of 1910 (fig. 1). The necessity for distinguishing between road and street will become evident in the discussion below. It is enough to say here that a street provides direct access to places of human occupancy; a road does not. To the extent that the automobile denies such access, streets become roads.

In 1952, the conception of ‘building as street’ was developed by Alison and Peter Smithson from the received ideas of Le Corbusier as set out in the Ville Contemporaine, and in his projects for Rio and Algiers, into the notion of the building as a continuous, elevated, street network. Golden Lane City (fig. 2), an elaboration of the Golden Lane Housing Scheme (fig. 3) of the same year, can now be seen as one of the salient propositions of mid-20th century urbanism. This significant contribution by the Smithsons must serve as a referent for any discussion of the Robin Hood Gardens housing scheme, because each attempts to come to terms with a problem of the modern city: the relation of the dwelling to the street subsequent to the introduction of the motor car, and in a more general sense, both the real and symbolic relation of the private to public realm. In addition to being the first housing which the Smithsons themselves have realized, Robin Hood Gardens is the culmination of an ideological development which concerns the capacity of ideas to be transposed into built-form, both at the scale of the city and of the individual building—a development which has influenced other housing schemes and many of the ideas of Team 10. Evoking the weight of such a proposition, sustained over twenty years, Robin Hood Gardens depends for its ultimate importance on the Smithson’s unique concern for the dwelling/street relationship. In this sense, Robin Hood Gardens can be seen as the end of a period, yet perhaps the beginning of something new. It contains a modification of their concept of the street, thus the housing no longer sustains the same ideological relationship to the street as it did in Golden Lane.

Figure 1. Roadtown. Edgar Chambless, 1910.

Figure 2. Golden Lane City Project. A. & P. Smithson, architects, 1952.

Figure 3. Golden Lane Housing Project. A. & P. Smithson, architects, 1952.

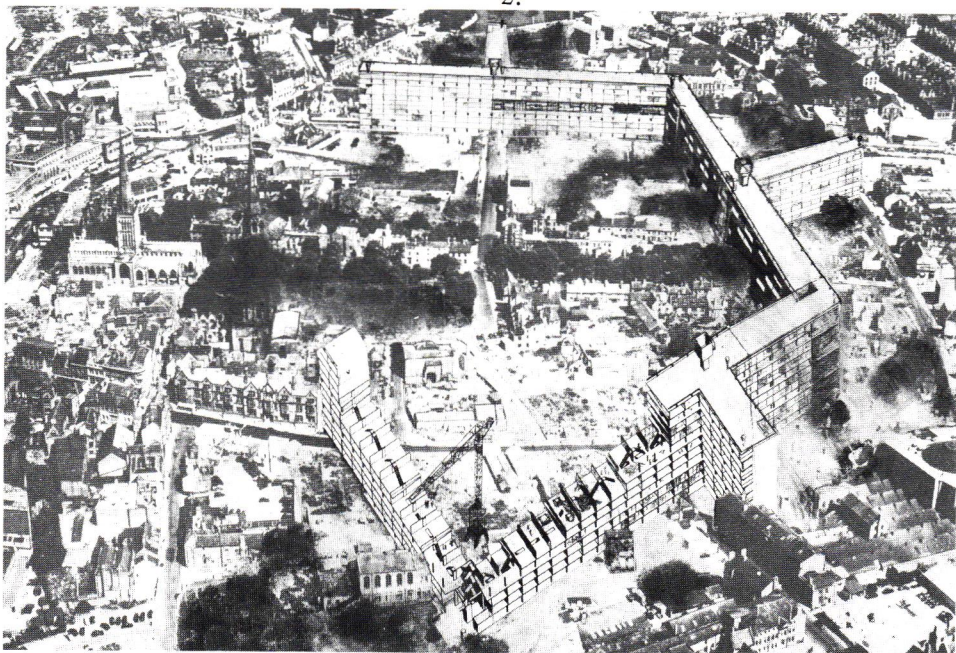
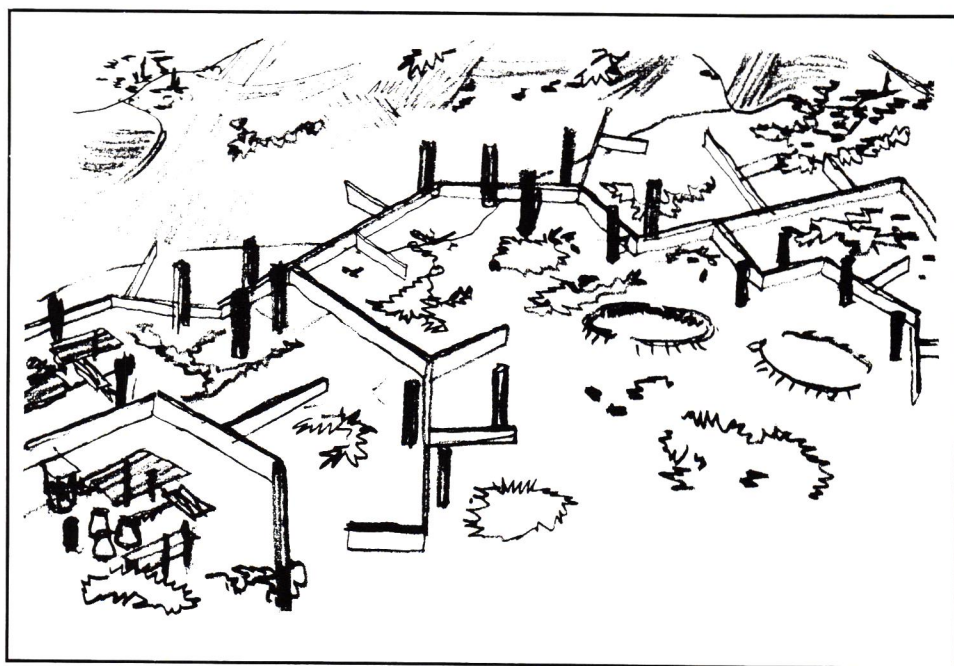
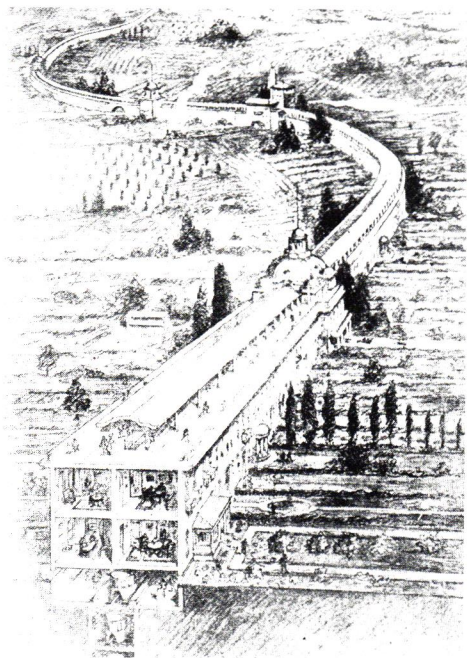
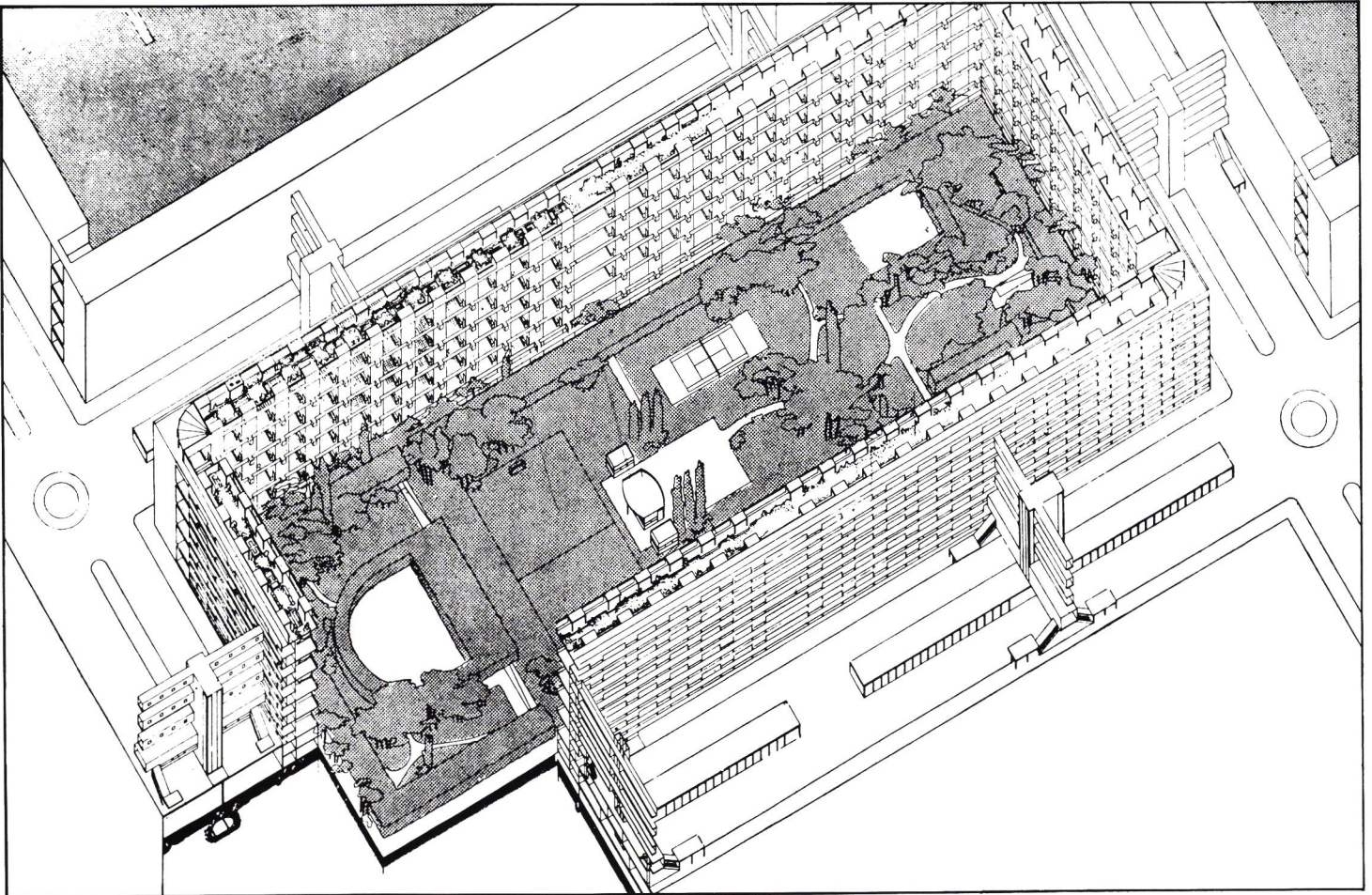


Figure 4. Immeubles villas, Ville Contemporaine. Le Corbusier, architect, 1922.



Any analysis of the Smithsons' ideas vis-a-vis a dwelling/street relationship must begin with Le Corbusier. The essential comparison between Golden Lane and Le Corbusier's conception of this relationship can best be seen at the level of urbanistic intention. This comparison has a very complex history.

Before the intrusion of the motor car, the street was the public pedestrian domain. Buildings were for habitation, work, and other essentially private activities. With the advent of the motor car, the street as the public pedestrian way became less viable, and by 1910 the pedestrian way was being conceived of as an entity, separated from the street. In 1915 the public pedestrian way had shifted in conception to become part of the building. It is important to note that when this shift occurs it modifies the form of the building, but also changes the dwelling/street relationship.

From 1952 to the present, the power of this idea to suggest formal organization has been a central theme for the Smithsons. This concern for a new dwelling/street relationship has been manifest in two principal ways; as a pedestrian deck and as a pedestrian precinct.

An important prototype of the pedestrian deck first appears as raised pedestrian bridges, connecting towers in Perret's City of Towers. In Perret's conception, the bridges are raised six stories in the air and have little to do with the form of the building or the ground. Le Corbusier, in *Vers une Architecture*, rightly questions this: since the inhabitants also have free access to the ground level, why should they use the bridges?¹ In Le Corbusier's Ville Pilotis of 1915, there are short passageways only one level removed from the street which provide a raised pedestrian connection. In his Ville Contemporaine of 1922, a series of pedestrian levels is presented, this time integrated into the cellular blocks of the *immeubles villas* type (fig. 4). These passages connect in both axes to form a bi-axial grid.

In contrast, the *redent* blocks of the same scheme, which also provide a multi-level pedestrian connection, only do so in one direction. Thus the interconnected, elevated decks of Golden Lane are prefigured in the cellular blocks of the *im-*

meubles villas rather than in the *maison à redent*, whose form they more closely resemble. 31

The idea of a series of elevated pedestrian decks represents a strangely ambivalent attitude to the motor car in the early thinking of both Le Corbusier and the Smithsons. For, in one sense, Le Corbusier's urbanism is both an homage to the *idea* of the motor car, and a reaction against the *reality* of the car. Similarly, in 1952 the Smithsons were saying that the street had been "invalidated by the motor car" and could not be revived by any "historicism."² Yet by 1958 the motor road was to be their primary device for providing a new urban scale.

This uncertainty about the relationship of the pedestrian to motor travel is initially reflected in the cellular blocks of the Ville Contemporaine with their elevated system of bi-axial pedestrian routes. The fact that the elevated system of the *redent* blocks of the same scheme only connect in one direction, obliging the residents to descend to grade before being able to move freely on two axes, only adds to this ambivalence. It is interesting that in the later Ville Radieuse the *immeubles villas* blocks and their gridded connections disappear, leaving only the uni-directional connections of the *redent* blocks. By the time of the Unité at Marseilles, which also has a pedestrian shopping deck in addition to access corridors (not to mention the roof deck), there was no longer any elevated connection; the attempt to segregate vehicles and pedestrians completely had been abandoned. So it can be seen that from Ville Contemporaine to Marseilles represents, for Le Corbusier, a continuous attempt to come to terms with the motor car. Where the Ville Contemporaine strove for total separation, Marseilles established a mutual co-existence at grade with the car by eliminating the raised level connection.

Golden Lane represents the beginning of another continuity; the post-war confrontation with the motor car. The universality of the motor car was still, in 1952, a futuristic idea, which accounts for the Smithsons' acceptance of the rather medieval road pattern of London on to which the Golden Lane scheme is projected. Nevertheless, streets dom-

32 inated by the motor car seem to have been unacceptable to the Smithsons for they reintroduce the elevated pedestrian decks, now as a completely connected system. Since there was no provision for parking at Golden Lane, the idea seems to have been to provide people, who were not envisioned as owning cars, with another means of mobility and association—a level of pedestrian connectors.

At Robin Hood Gardens there is no horizontal connection of pedestrian decks. This, in conjunction with the provision of a garage for each unit, asserts the reality of a consumer society in which workers are expected to share the affluence and mobility of the middle class.

Within the context of pedestrian/car separation and a conception of the car as a menace, Golden Lane can be considered a progressive idea. However, when this conception can no longer be sustained, then in comparison to Robin Hood Gardens, Golden Lane now appears even retrogressive in its attitude to the motor car.

The difference between Golden Lane and Robin Hood Gardens must be seen in context of the Smithsons' reassessment of the role of the motor car and the motor road stemming from Peter Smithson's visit to the USA in 1958. The new urban scale reality for the Smithsons becomes a connectivity dominated by the road. It is the road and not the building or the street which gives the necessary new scale to the city. Now the inner urban highspeed motorway becomes a positive aspect in their thinking, not only in their writing but also in their projects. This difference in their conception of the motor road is first presented in the Hauptstadt project of 1958 (fig. 5) and later in their Mehring Platz of 1962 (fig. 6). The 'building as street' and the connectivity of pedestrian decks are gone; the primary pedestrian connection is now thought of as being vertical to the motor car; horizontal connection is by car alone.³ This change is to be related to their preoccupation at that time with the mid-1950's work of Louis Kahn—both Kahn's acceptance of the road (as may be reflected in the proximity of his Philadelphia Medical Service Plan Building of 1954 to a major inner urban motorway) and his image of rivers, harbors, and docks of his Philadelphia Plan of 1952, with its complementary notion of the

pedestrian precinct, contain the American acceptance of the automobile as a way of life.

The negation of the idea of 'building as street' brings with it a change in the type-form model from the building as a continuous form expressive of an evolutionary process and a new scale of urbanism, to a form which is seen as a static entity; it brings a change in the conception of the building process from one which is intrinsically incremental to one which in each stage represents some aspect of completion.

In Golden Lane the buildings are in themselves fragments of a larger scheme; they are to be linked in some future state. Their form thus embodies a respect for an empirical process, i.e. one builds in increments, on as much of a site as one is given. The future city is no longer contingent upon being built at one time, but rather upon a process, accumulating development on scattered and random sites over time. The link-like forms of Golden Lane accept the reality of this process. They suggest both vertical and horizontal connection to the existing context. While they accept this reality, they are again no less utopian in their projection of a new heroic-scale urban conception than the Le Corbusier of *Ville Contemporaine*, if not as idealized in their form or in their conception of the building process.⁴

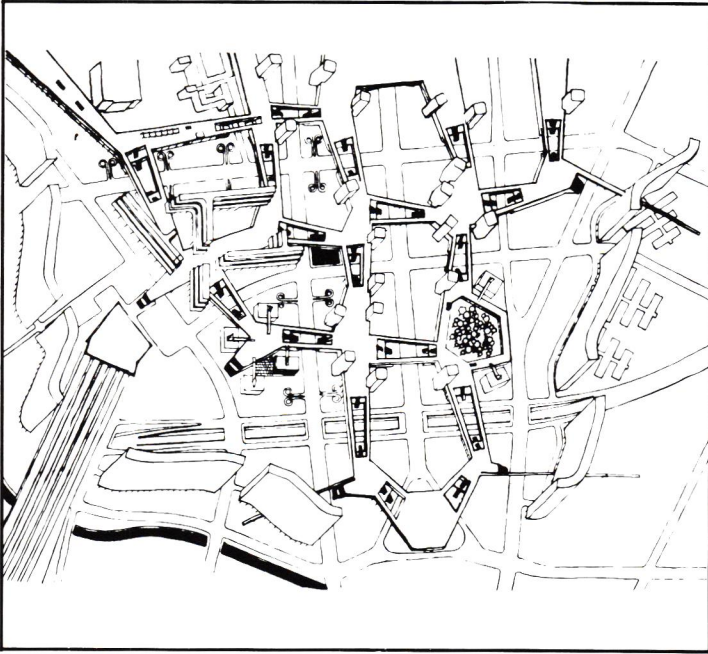
At Robin Hood Gardens the proposition is virtually the reverse. The built-form negates the idea of an accumulative empirical process and accepts the present context. The two slab blocks are formally terminated. **They are presented as complete in themselves and will accept of no extension or addition; the idea of a continuous process of development is gone—they are at once a present and a future state. They define and confirm the context as given. They deflect to and accommodate the existing street pattern.**⁵

But there are also some obvious spatial consequences resulting from this change in conception, which are important to this argument. At Golden Lane the housing block and the pedestrian street are the conceptual center (fig. 7). Because the housing form was not deflected with relation to its immediate context, the space which is left over by the block is fragmented and peripheral.

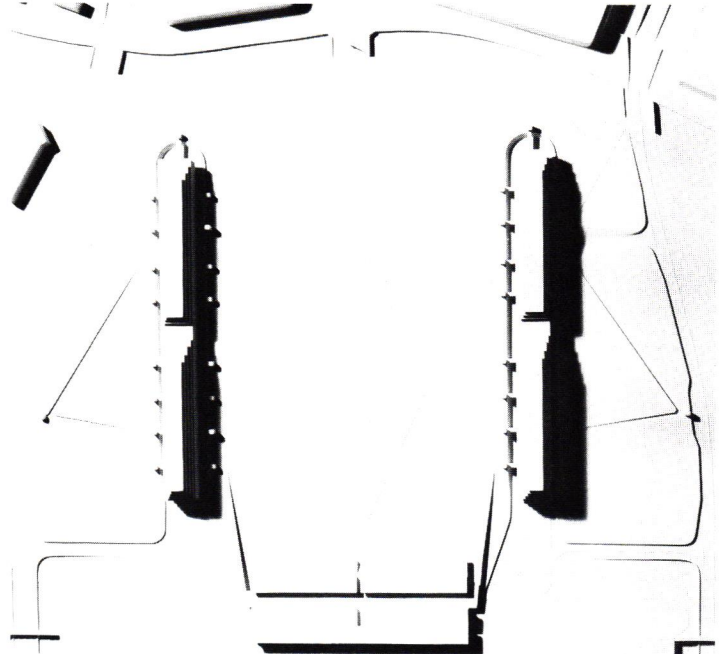
Figure 5. *Hauptstadt project*. A. & P. Smithson, architects, 1958.

Figure 6. *Mehring Platz Project*. A. & P. Smithson, architects, 1962.

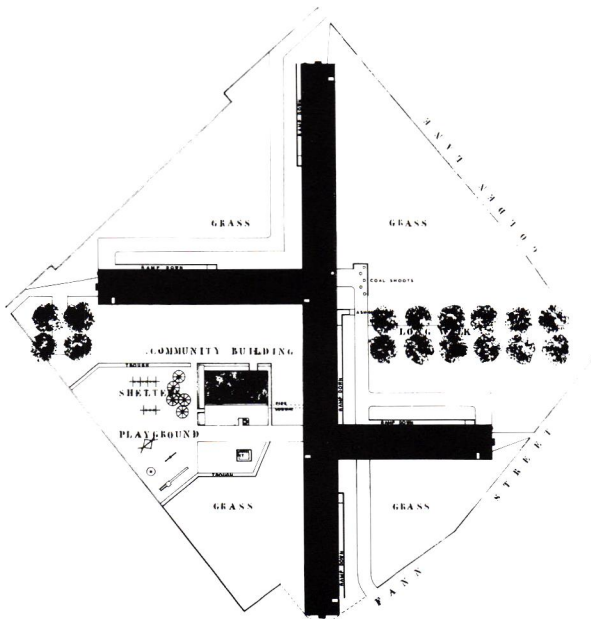
Figure 7. *Golden Lane Housing Project*. A. & P. Smithson, architects, 1952.



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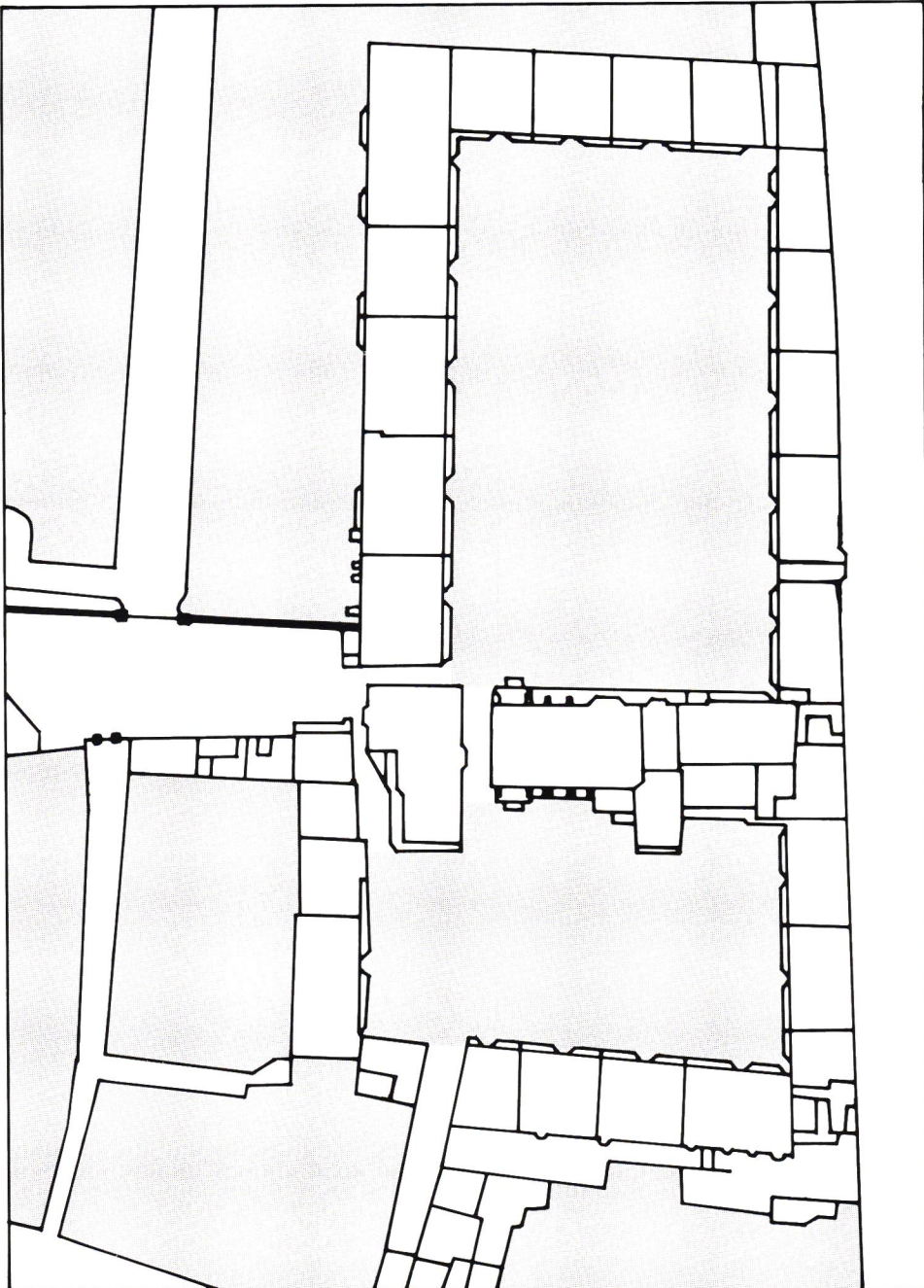
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Figure 8. Plan of Gray's Inn, London.

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8.

At Robin Hood Gardens, the housing blocks as well as their pedestrian decks are moved to the edge of the site. In this position, instead of fragmenting the space, they help to define it—the space is now whole and central—at the same time they perform the role of defining or separating the public domain from the semi-public and semi-private realm, by virtue of locating the decks on the exterior of the site. Thus the building complex engenders an inside/outside and a front/back relationship with respect to the existing context. **No such acknowledgement is made to the immediate locality in the case of Golden Lane.**

As the route building or ‘building as street’ had been one type-form to be epitomized in Golden Lane, so Robin Hood Gardens is now another, similar to the Georgian Terrace, or more specifically, the Law Courts at Grays Inn (fig. 8). As Peter Smithson himself says, “there is no reason for thinking we cannot *invent* something as good as the Georgian Square”; the problem is “how to make it speak.” It is merely that this type-form is concerned with another kind of connectivity; that is, from building to road.

While both types, the linear building and the articulated Georgian Terrace, are inherent in Le Corbusier’s *redent* blocks, they become uncoupled in the process of the Smithsons’ development from Golden Lane through the Hauptstadt and Mehring Platz, antecedents which ultimately anticipate the transition to Robin Hood Gardens. Thus, while certain elements—the street decks and the vertical circulation towers—are common to each project, and the concern for the dwelling/street relationship is constant, the spatial conception is different. The idea of the continuous and evolving building is replaced by building events or ‘landcastles’ as in Mehring Platz, in the form of pairs of facing slabs, reminiscent of the Georgian Terrace, defining space rather than displacing it. The pedestrian deck is replaced by the pedestrian precinct.⁶ Why this change in attitude to the road should also bring with it this change in spatial conception is an interesting problem.

While the idea of this continuous building is hardly revolutionary—one can point to many examples of this form in 17th and 18th century urbanism—it remains no less a

valid theme for 20th century urbanism. In Golden Lane it was projected further as a continuous network. But, as built-form replacing the void of the street grid as the primary structuring entity, it was seminal. Yet the notion that it should replace rather than define the street is to be seriously challenged.

If we take Robin Hood Gardens as built, it is a classic vision of a contextual, 18th century, English urban order, which stands in contradistinction to the topological space of Golden Lane;⁷ it conceives of and defines space in a way which Golden Lane does not. Golden Lane contains an heroic concept of the city, and while it provides for a new concept of spatial order it leaves unresolved the question of the scale and definition of the open space. Further, if a city is conceived of as requiring a hierarchy of open space, that is, the definition by buildings, of open space other than the street space itself, then Robin Hood Gardens may be facing a problem which both the *rue corridor* and Golden Lane do not.

While Robin Hood Gardens has lost the scale of heroic vision, its built form provides a sense of spatial hierarchy and definition which may be necessary to the individual conception of the city. Thus, from Golden Lane to Robin Hood Gardens the necessity of the idea to be imageable in a building diminishes. First, because the idea of the ‘building-as-street’ changes from what Peter Smithson meant when he said “the idea of the street is more important than the reality of the street”—to the idea of the reality of the road. Thus the road assumes characteristics which are building-like. Second, because the ‘heroic scale’ of the ideas which were imageable in the urbanism of Golden Lane cannot be sustained in the building of Robin Hood Gardens.

It is precisely because the Smithsons’ ideas have been usually conceived in and are most evocative at an urbanistic scale that the idea of connectivity is imageable in the form at Golden Lane, whereas at the scale of Robin Hood Gardens it is not. In this sense Hunstanton and Sheffield succeed because they manage to integrate the scale of idea with the form of the building. Robin Hood Gardens does not. What then remains in Robin Hood Gardens to the building, as opposed to the space it defines, as an embodiment of ideas?

36 From as early as 1914, in the *Maison Domino*, modern architecture has been dealing with the problem of architecture as housing. For the first time in modern architecture, housing was conceived of not only as private accommodation but also, in its agglomeration, as a public icon. Thus the forms usually invoked were not a manifestation of technics nor merely the resolution of a new functional living accommodation, but rather, they were intended as metaphors—as icons of both a social and technological aspiration. The forms represented ideas about a public function and about a process of building which was to be the new image of this public realm. Architecture, as opposed to mere building, was required to provide this iconic function. Since the built-form of Robin Hood Gardens follows in this tradition, in the last analysis it is the building-as-architecture which must be judged.

The pedestrian street-decks and their vertical connection to the automobile remain as the basic type-form elements in Robin Hood Gardens. As juxtaposed on the site the buildings provide a literal separation between the public and private domain, so the type-form elements serve to create a similar articulation between public deck and private cell, at a smaller scale. These elements as articulated in Robin Hood Gardens intimate not only that a different relation obtains between the type-form and the car, but also in the conception of the type-form elements themselves.

The pedestrian deck, which is problematic for both the Smithsons and Le Corbusier before the change in type-form, is now further complicated by another issue: which is the horizontal datum? In other words, what is to be considered the primary symbol of public association? Is it the pedestrian deck or the level of the motor car or the ground? This is never finally resolved in Le Corbusier's different versions of pedestrian/vehicular separation. Even at Marseilles where the shopping level is midway between the roof deck and the actual ground, the problem remains—even though this shopping level is stressed as primary—because there is no horizontal continuity. At Robin Hood Gardens, the problem re-emerges because the buildings now accept the existence of the road and a ground level datum. Moreover, by providing not one but a series of pedestrian levels, the problem is compounded.

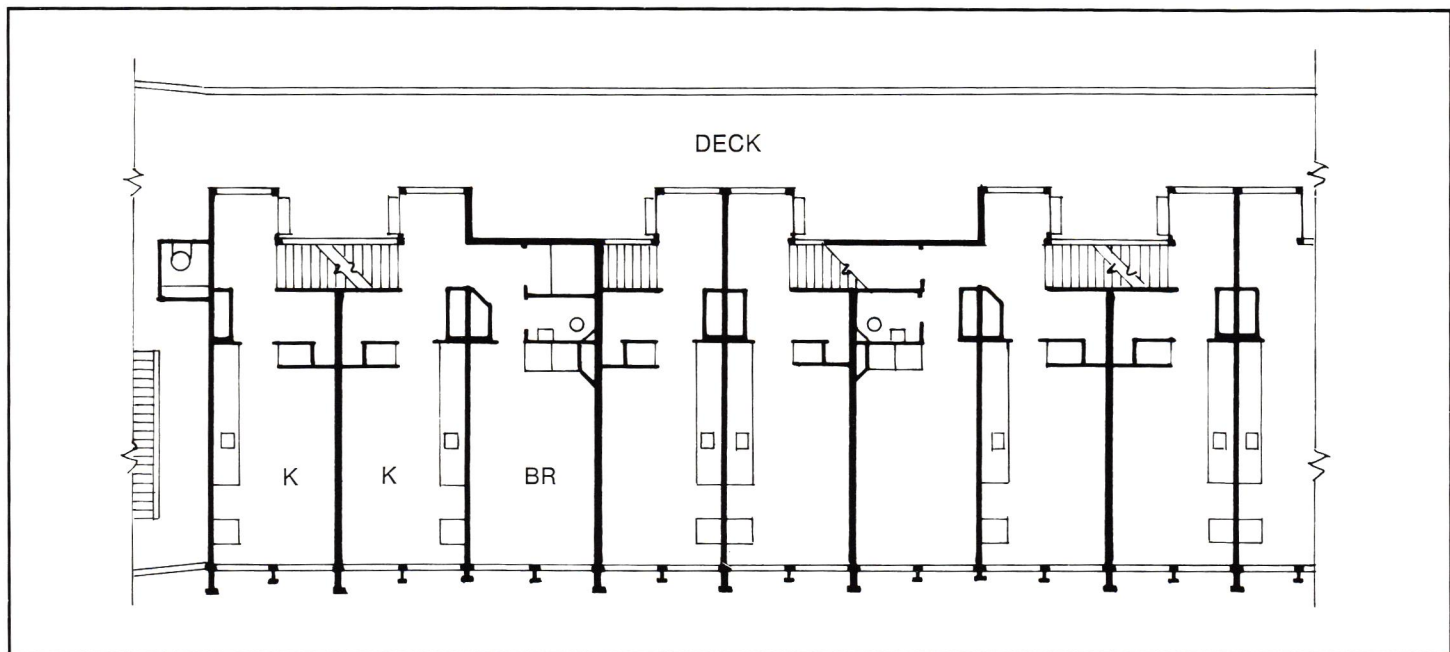
Without the horizontal connection of Golden Lane, the pedestrian decks here seem like an anachronism; a vestigial memory paying homage to a lost intent. Considered in merely functional terms, that is, as broad open-air access corridors, there is still the latent problem of the primary datum level.

In this light, if the pedestrian deck is conceived to be iconically the same as the Golden Lane, then it is retrogressive from the Smithsons' *Hauptstadt* and *Economist* designs, which in retrospect stand almost as an ideological critique of Robin Hood Gardens. However, if the city is conceived of as having a basic horizontal datum at ground level, then Robin Hood Gardens defers to that reality. But in this sense, a single elevated pedestrian level which maintains a close physical relation to the street would be one feasible alternative for the integration of this pedestrian level into the activity of the original datum. Without this proximity, or an upper level continuity, both the street and the idea of a public deck remain in a state of contradiction. However, Robin Hood Gardens seems to be offering an alternative proposition. If the pedestrian decks are conceived differently from those at Golden Lane, for example as private rather than public streets, performing a function which indoor corridors could not, and thus as a potential component in a new scale of hierarchies from public to private, then this problem does not arise.

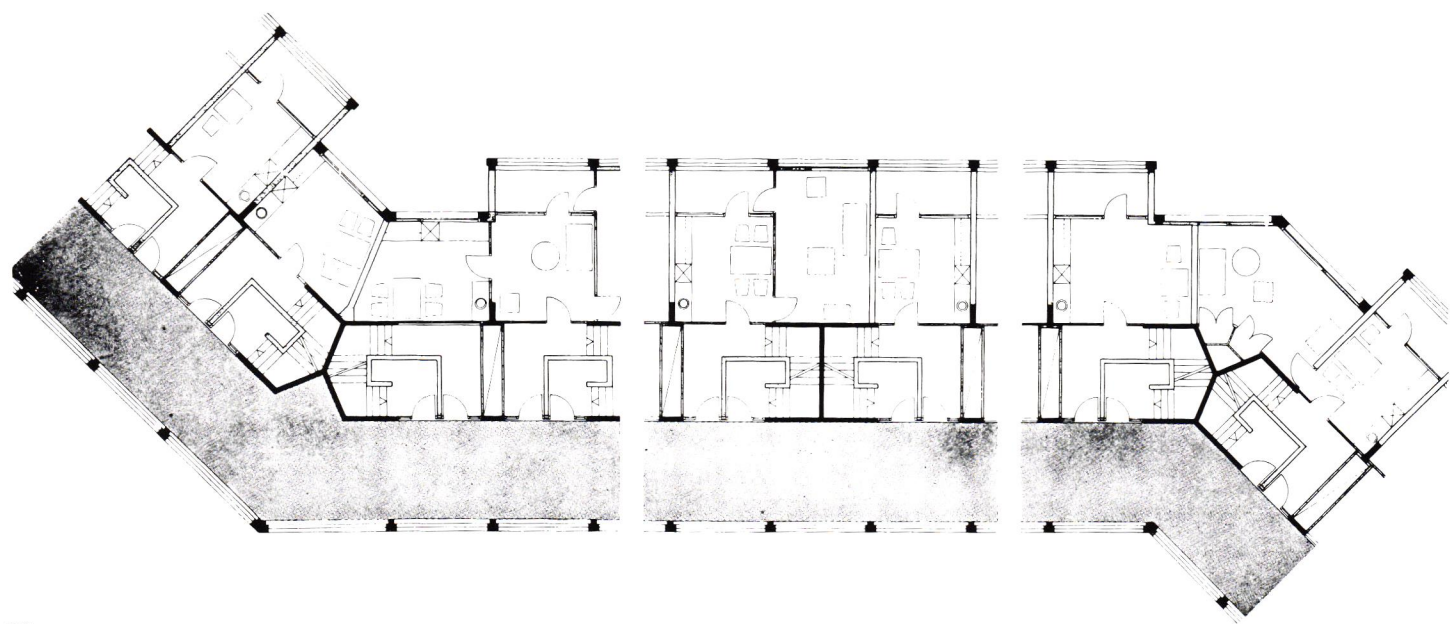
Another aspect, which seems to support this notion of a hierarchy of public to private space, can be seen in the relationship of the interior unit stair to the pedestrian deck. The interior stair serving the duplex flats is located, as it was at Golden Lane, parallel to the deck yet forward of the entry plane. This acts to do two things; first its parallel location creates a space and sound buffer between the public and private zones; second it creates a zone of space (fig. 9) in front of the entry, which acts as a transition from public to private. When compared to the stair/deck relationship at Park Hill Housing in Sheffield (whose architect Ivor Smith had worked with the Smithsons), which must be seen as a development of the Golden Lane model, this articulation becomes crucial. At Park Hill, the internal unit stair (fig. 10) is Georgian in

Figure 9. Robin Hood Gardens, A. & P. Smithson, architects, 1972. Plan of deck level.

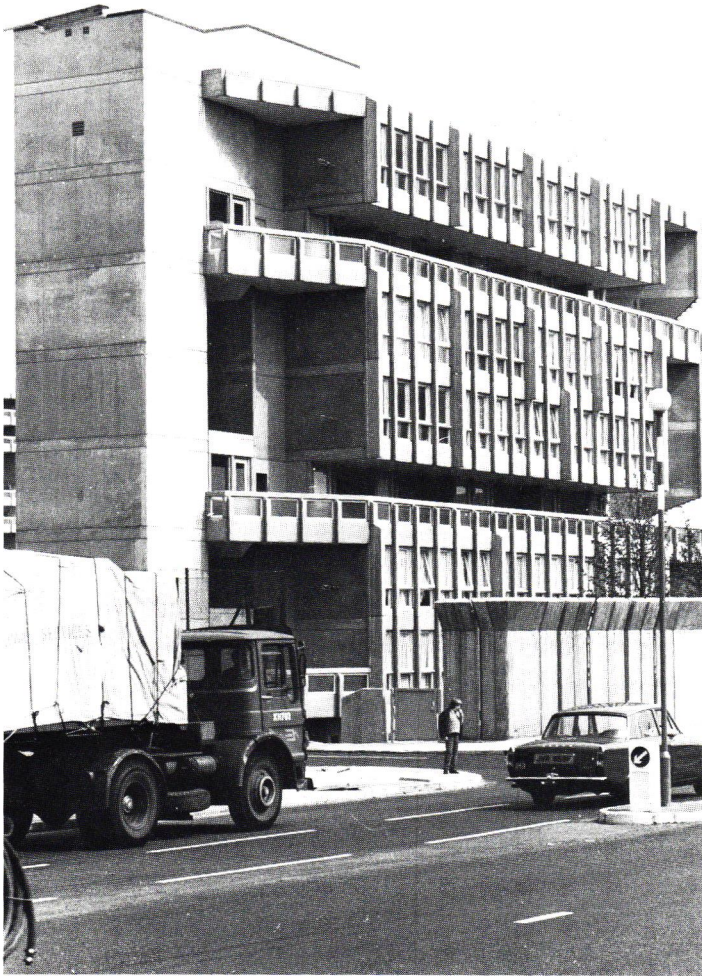
Figure 10. Park Hill Housing, Sheffield. Jack Lynn, Ivor Smith and Frederick Nicklin, designers, Sheffield City Architect's Dept., J. Lewis Womersley, architect. 1961. Plan of deck level.



9.



10.



11.

concept; being located centrally it provides neither a buffer from the public realm nor does it articulate any public-private transition.

The second type-form element, the vertical towers, are deployed differently at Golden Lane and Robin Hood Gardens. At Golden Lane the vertical circulation towers are clearly articulated, and their location along the decks corresponds to the cranking of the slab itself. In this sense the towers act as an organizing device.

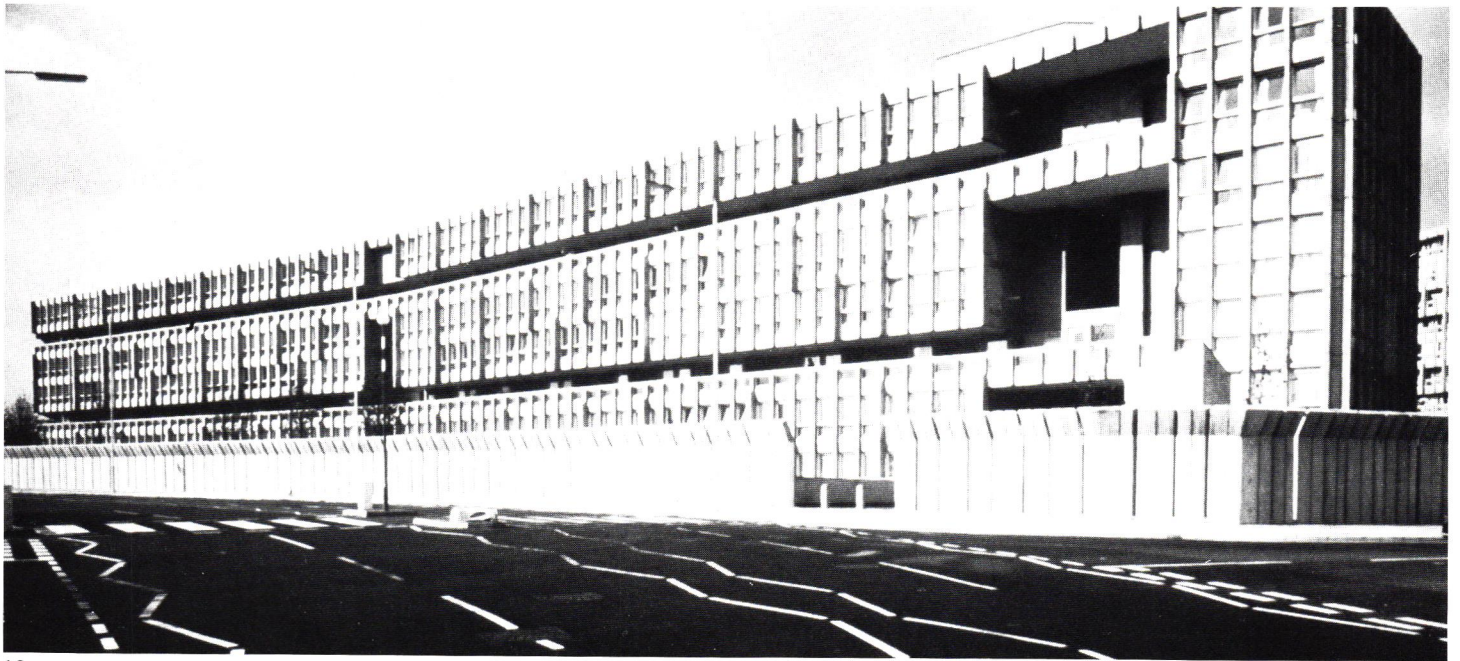
This is not a problem at Robin Hood Gardens where the slabs are not intended to be conceptually continuous. Therefore, to the north, the vertical tower is articulated (fig. 11) as an end. To the south (fig. 12), though articulated, it is displaced by an end dwelling unit, which wraps around the building indicating a termination and no future connection. A problem accrues however to the form of articulation seen in figure 12, in the relationship of vertical to horizontal access. When compared to the rather generous and even noble foyer and vertical access of the *immeubles villas* (fig. 13), the access to the pedestrian deck at Robin Hood Gardens is mean; the deck itself narrows to the lift lobby. This narrowing, plus the particular articulation of the lift tower, suggests an escape stair more than a main entry. However, if the narrowing of the deck is meant to articulate again the idea of a transition from public to private, rather than from vertical to horizontal, then the form is expressive of that idea.

While the building is most successful at the level of a public icon, in the expression of these transitions, the private realm seems less successful. While the public domain is full of imagery, the private units seem devoid of anything other than the mechanics of living in the present – and even at that hardly more than adequate, and perhaps below standard, when compared merely to the utilities provided in any similar public housing in New York City. Even when compared to Golden Lane with their private yard-gardens, the private unit at Robin Hood Gardens seems less ideal.

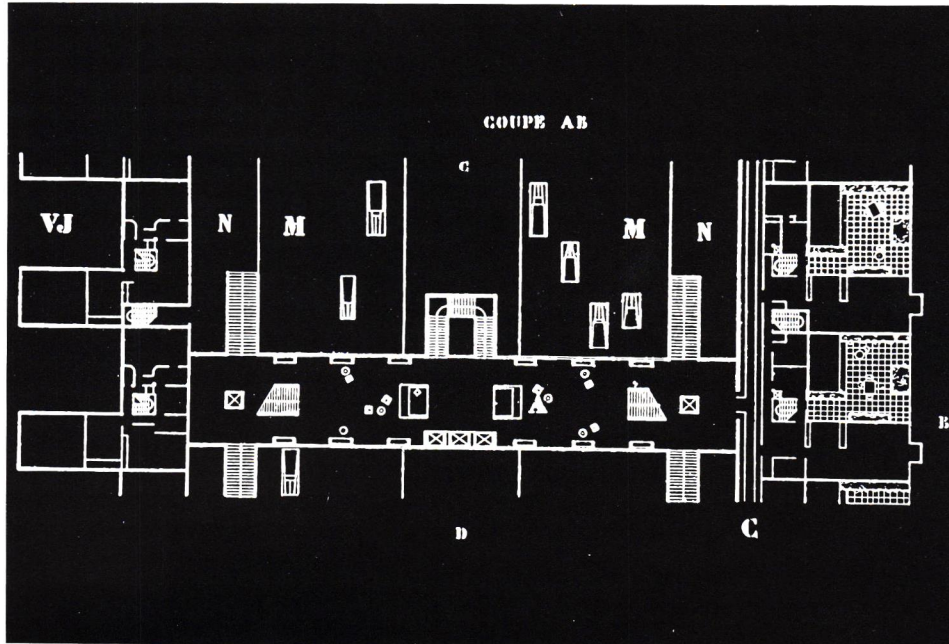
But further, it is the attempt to express the private unit on the facade of the building that creates an almost unsolvable problem between the expression of the public domain – the

Figure 11. Robin Hood Gardens.
A. & P. Smithson, architects, 1972.
North end of east block.

Figure 12. Robin Hood Gardens.
A. & P. Smithson, architects, 1972.
Road facade. South tower at right.



12.



13.

Figure 13. Immeubles villas. Le
Corbusier, architect, 1922. Plan of
entry foyer.

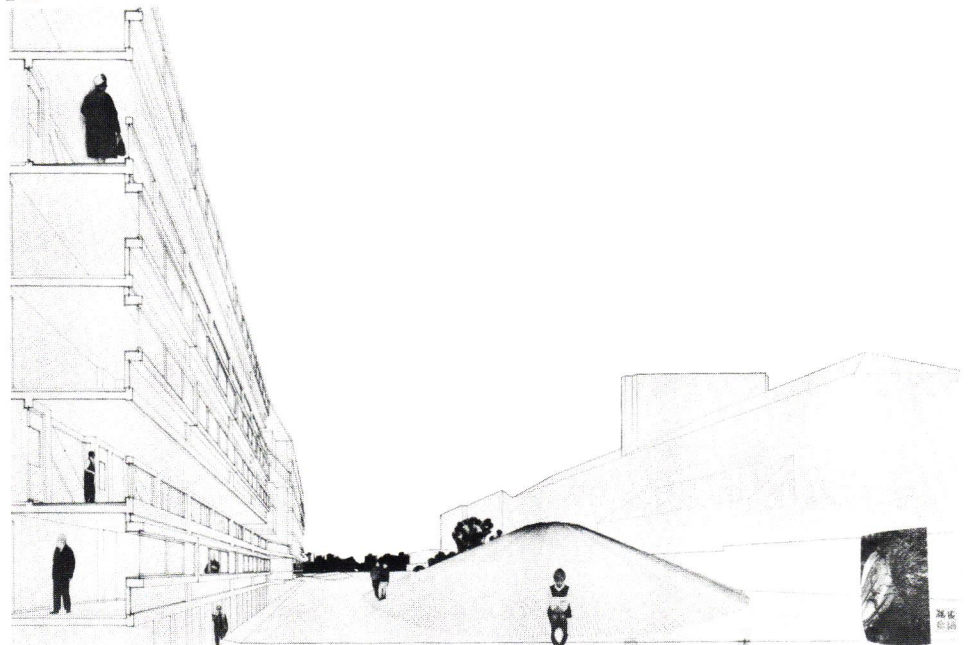
Figure 14. *Le Corbusier and the winerack.*

Figure 15. *Collage of earlier study for Manisty Street. (Robin Hood Gardens). A. & P. Smithson, architects, 1963.*

Figure 16. *Robin Hood Gardens. A. & P. Smithson, architects, 1972. East facade of east block.*



14.



15.

type-form elements — and the expression of the individual units. This problem is accentuated in the particular resolution of the facades which the Smithsons attempt at Robin Hood Gardens.

The iconography of a building's surface has been a continuing preoccupation for the Smithsons. It is manifested in their continuing search for a 'generalizing aesthetic' for ordinariness as a norm. It is seen in the concern to resolve the repetitive accommodation of large numbers through a "sort of anonymity of *styling*."⁸ The facades of Robin Hood Gardens attempt to postulate a general pattern open to some degree of individual variation and change.⁹ And Robin Hood Gardens, like the Economist Building, depends for its iconography upon a high degree of resolution in the facade; a resolution of the demands for both a generalizing aesthetic and a high degree of internal flexibility. The Smithsons attempt this resolution through the use of a 'skin.' A 'skin,' as opposed to a facade, should most properly be conceived of as a taut membrane without apparent depth, which seems stretched over the internal frame. The idea of a skin is clearly closer to Mies' aesthetic than to Golden Lane and Le Corbusier's idea conveyed by the image of the wine rack as a cage, with individual units capable of being dropped in and out like bottles (fig. 14). The essence of Mies' use of a skin is precisely that he does not attempt an iconography which is expressive of the individual unit. Mies permits of no elaboration or modification. His use of a skin is a carefully controlled formal orchestration of verticals *and* horizontals. But unlike Mies, where the skin is often a complex screen which remains neutral, Robin Hood Gardens represents a search for a skin which is at once seen as generalizing and at the same time as functionally and iconically expressive of the disposition of the internal elements.

The elevations of the earlier Manisty Street Project (fig. 15), the precursor of Robin Hood Gardens, were thought by the Smithsons to be too 'modish' because of their excessive horizontality. In opposition to this, the skin, as realized in Robin Hood Gardens, is dominated by vertical mullions. These mullions (fig. 16) are intended to act as a sound barrier from unit to unit across the vertical surface of the building, and at the same time are supposed to be iconically expressive of



16.

42 a median cell structure and its larger and smaller variations. However, as built, this skin of vertical mullions does not possess an “anonymity of styling.” No weight of functional argument can validate a quality in the facade which makes the mullions seem like appliqué fins, and the corresponding loss of their iconic intention as a skin. The problem seems to be the following. First, the mullions have a substantial depth. They contravene the received notions of the essence of skin, which has a necessary vertical and horizontal continuity but little depth. When these mullions lose their vertical continuity, they also violate any canon of perception concerning a trabeated system where the verticals, unless continuous and thus apparently supporting, appear to be applied to, rather than stretched over, the frame. Thus on the south end of both buildings, the mullions, being uninterrupted in their length from roof to ground level (fig. 17), are most successful as a generalizing aesthetic. On the two internal elevations facing the court, the vertical mullions can be read as part of a series of shallow vertical layers expressed on these facades from the outside edge of the mullion to the face of the living room which is set back behind a narrow sun balcony (fig. 18). Even though the mullions are interrupted by these balconies, because of the flatness of these balcony spaces and their lack of deep shadow and corresponding suggestion of volume, the mullions and balconies are read together and thus the mullions lose their appearance of depth. It is on the two external elevations, where the Smithsons articulate the private units as distinct from the public pedestrian decks, that the mullions are least successful as a generalizing surface. Here they are cut by the horizontal volumetric reading which accrues to the decks, and become rhetorical.

Ultimately, the problem is not whether the mullions are more or less rhetorical, or that there is or is not a skin, but whether the facades sustain the intended symbolism. Here one is presented with a generic problem — the classic confrontation between a classicizing aesthetic and an expressionistic aesthetic, and ultimately the Smithsons’ vacillation between Mies and Le Corbusier. The need to express the type-form elements — the vertical towers and the horizontal decks — contradicts the idea of a skin. Mies always suppresses these elements by placing them on the interior of the building; the generalizing aesthetic of the skin not only does not acknowl-

edge these, but also masks any horizontal or vertical articulation of the structure. But the Smithsons, who want to express not only the individual occupancy but the ease of that occupancy through a neutralizing agent—the skin—seem to be caught between their classicizing tendencies and the expressionism of Le Corbusier when they pull the towers and the decks through the membrane created by the skin to articulate the public elements.

Perhaps what one senses in the realization of Robin Hood Gardens as built-form is not so much a formal failure but perhaps a failure of their forms to sustain the *idea* of both a generalizing aesthetic and the type-form elements. This specific case can be traced to a more general problem found in the relationship of built work to ideas and in particular to social polemic, which runs throughout much of post-World War II architecture, and more specifically in the work of Team 10. There has always seemed to be a fundamental incongruity in the Team 10 position; a disparity between what is said and what is done.

Team 10 came into existence partly as a reaction to the historicism of CIAM and the “cultural obsolescence” of much of the existing mass housing.¹⁰ Team 10 was committed to a more aggressive concern for sociological and technological problems; to the “understanding of the patterns, the aspirations, the artifacts, the roots, the modes of transportation and communication of present day society.” But further it was committed to develop an aesthetic “appropriate to mechanized building.”¹¹

If there were such a radical difference between the polemic of 1928 and 1959,¹² it may have been more in the minds of Team 10 than in the ideas conveyed by the words. If there were new attitudes toward communication and technology, one would expect a corresponding new formal conception; as the Smithsons have said, new forms which would project a genuine 20th century technological image of the dwelling—“comfortable, safe and not feudal.”¹³

However, while Le Corbusier meshed a cubist conception of space with a social polemic to produce an iconography—a new form-meaning relationship—it is perhaps only in

*Figure 17. Robin Hood Gardens.
A. & P. Smithson, architects, 1972.
Detail of south end of east block.*

*Figure 18. Robin Hood Gardens.
A. & P. Smithson, architects, 1972.
Court facade of east block.*



17.



18.

44 the Smithsons' Golden Lane or Shadrach Woods' Free University of Berlin that any alternative formal and spatial conceptions with the power to act as a unifying force have been projected, and which were in any way spatially removed from Le Corbusier, De Stijl or Constructivism. In these two projects, as well as at Mehring Platz, there is an evolution, if not a clear cut alternative, to Corbusian space. Rather than an architecture conceived of as a relationship of spatial elements, there is now a relationship of spatial systems—or a relationship between relationships. Instead of space being conceived of as the relationship of an outside facade to an internal arrangement of surfaces, now it is conceived of as relationships at a different scale, external to the building. In this respect Mehring Platz transcends Golden Lane in its configuration of systems, and yet as in Robin Hood Gardens, its 'neoclassical' pairing of buildings remains tied to the past.

While the social polemic of Team 10 was said to have changed in the sense that it was more concerned with *linking* scales and systems of human activity, and while the external manifestations of its forms seemed more human and real, the spatial conceptions for the most part were still pre-1930. Even Aldo van Eyck's Children's Home in Amsterdam, which is thought by many to be canonical in the *oeuvre* of post-World War II building, can hardly be considered post-cubist. Le Corbusier succeeded perhaps because he invoked a revolutionary spatial conception—an imagery to house the social polemic. That Team 10 never understood this point can be seen in their continuing use of 'Parisian' space without recognizing its implications; neither the cultural load which it now carries, nor the spatial organizations latent in this formal conception with its corresponding potential for new meanings.¹⁴

...or if you follow the Yellow Brick Road it may not lead to Golders Green.

In appealing to a reality which is ultimately middle-class, in its particular acceptance of the motor car and its conception of a public/private hierarchy, Robin Hood Gardens sacrifices not only the revolutionary idealism of Golden Lane but also most of the *oeuvre* of the heroic period of the modern move-

ment. Yet, paradoxically, the ideal of Golden Lane which persists in Robin Hood Gardens can never be middle-class. For in the relation of built-form to open space in Golden Lane, there is a new conception of the hierarchy of the public to private realm. The traditional attitude concerning private open space and its use as a structuring device in such a hierarchy is replaced by a public domain which has few such transitions — the private cell is now in direct contact with most scales of urban structure.

To satisfy the welfare state and its agency in the G.L.C., which seems content in offering the working class such a bourgeois existence, is a problem which Golden Lane is ill-equipped to handle. Equally, the Smithson ideology, which would contend that in the heart of every worker there is a potential aristocrat, is a position which, both politically and socially, a particular brand of English socialism finds untenable, and refuses to confront.

Yet a housing project which at once is attempting to present a new type-form which has its roots in the Georgian terrace and in a political system which was responsive to and responsible for the public domain, and at the same time creates a private realm where the aspiring middle-class worker sees himself in a working class environment, albeit with a middle-class income, poses several difficult questions.

The problem must be twofold. First, the level of amenity in the individual unit is low. The per-unit cost allowance is probably all that can be afforded under the *existing* priorities of the G.L.C., but is nevertheless low for both an adequate public and private realm. Second, given the choice of one or the other, but not both, the Smithsons, it would seem, have opted in favor of the public domain. The question remains; within such limitations of cost, where do you spend your money?

The Smithsons' argument here is contradictory. On the one hand they are concerned with the problem of the personal occupation and possession of one's own 'private' space in the present.¹⁵ Yet on the other hand the Smithsons consider a building as a public icon (my reference), as part of a city fabric whose primary value lies in its image of permanence

and the capacity of that image to transcend and even change the reality of the present, again at a public level. While the public domain of Robin Hood Gardens suggests such a change, the private realm does not. In this context, the Smithsons say that a building, like an object, suggests a use and if the present inhabitants use it badly, the object-user dialogue being degraded, this may not be the fault of the object. Yet it is precisely at the level of the object that Robin Hood Gardens seems to leave this issue suspended.

The disparity between the G.L.C.'s need to create housing for a people today, and the Smithsons' desire to build a utopian present *and* future, may account for the unresolved attitude found in Robin Hood Gardens between the empirical fact, manifested in built-form at the scale of the individual building, and some normative idea for a new urbanism. This is reflected in Robin Hood Gardens as a change from utopian planner to actual builder; from a primary concern with the development of an idea, to a fundamental concern for the building process. While the former was revolutionary the latter is often ad-hoc and at best revisionist.

To build housing which does not indicate a possible future redemption while providing only for a population's present physical needs may be morally as untenable as providing no housing at all. A people who become a lumpen middle class in dwelling units which, through their physical amenity, deaden any expectation of future change, cannot be what the present advocates of "give the people what they want" have in mind.

The thrust of the early modern movement polemic, which the Smithsons continue to nourish, was probably more like "give the people what they would want if they knew what they wanted." This certainly is a paradox of the modern movement; it remains no less a contradiction in the idea of Golden Lane and in the reality of Robin Hood Gardens.

Postscript

In re-reading my criticism I find myself caught in a paradox of an even more personal kind. Partly because an act of

criticism demands a certain distance and objectivity, much of what I have said seems dry and fragmented. Partly as an American who has lived in England, I approach most things which are English with acute anglophilia, with reminiscences of my own culture shock and fall from grace as a noble savage. But perhaps more importantly, partly because I am often in disagreement with what the Smithsons say and what they do, I nevertheless cannot but admire what they stand for. But as an architect myself, attempting to translate ideas into form, I must abandon my critical neutrality, my cultural disjunction, and my personal disagreement when confronted by the intellectual and ideological integrity which the Smithsons represent for me in post-World War II architecture and urbanism.

For an architect faced with the economic, political and social realities of our particular time, there seem to be three attitudes which can be assumed. The first is one of extreme naiveté; that is to suggest buildings and plans which have no hope of eventual realization. The second is to be merely swept along by the practicalities of staying alive, building buildings which in some way satisfy society as presently given. The third is to adopt a cynical attitude: to retreat from or remain aloof and deprecating of the other two. The Smithsons, for me, in some way, have transcended each of these attitudes, to a possible fourth position which stands in some way as critical of the other three.

After twenty years of driving at the solution for a housing type first articulated in Golden Lane, it is difficult to sustain the idea of innocence. Yet to keep at the same idea, hitting at it over and over again in an attempt to realize an ideal can hardly be thought of as cynical. And to refuse to build, or to be refused the opportunity for want of compromise, is hardly practical. Thus, whatever the particular flaws of Robin Hood Gardens, whatever the limitations in the original idea of Golden Lane, the achievement of finally realizing in built form any ideas must transcend not only my criticism but also the building itself.

It is the dogged determination to stick with, develop, and build these ideas, in the face of those who would ebb and flow with the fickle tastes of current avant garde, which establishes

46 a model of integrity which forces each of us to question our own daily activity. The Smithsons represent an intellectual and ideological position, confirmed in a weight of writing, polemic, and criticism which is unparalleled since World War II; they possess a sensibility and an understanding of architecture as a history of social and cultural change; but above all, they have a total commitment to architecture as a way of life.

This is the stuff of which architecture is made. It is the way in which architecture will continue to challenge as well as reflect the aspirations of a way of life.

Consequently, I write this postscript as I wrote my criticism—faced with a paradox, which is partly a result of the criticism of myself suggested by their presence.



19.

Figure 19. Mound in central green space.

Figure 20. View of lower units from central green space.

Figure 21. Alison and Peter Smithson.



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21.

*Figure 22. Robin Hood Gardens.
A. & P. Smithson, architects, 1972.
Court facade of east block.*



22.

*Figure 23. Mound in central green
space.*

*Figure 24. East block as viewed from
the entry to the Blackwall Tunnel.*

Figure 25. View from the northwest.

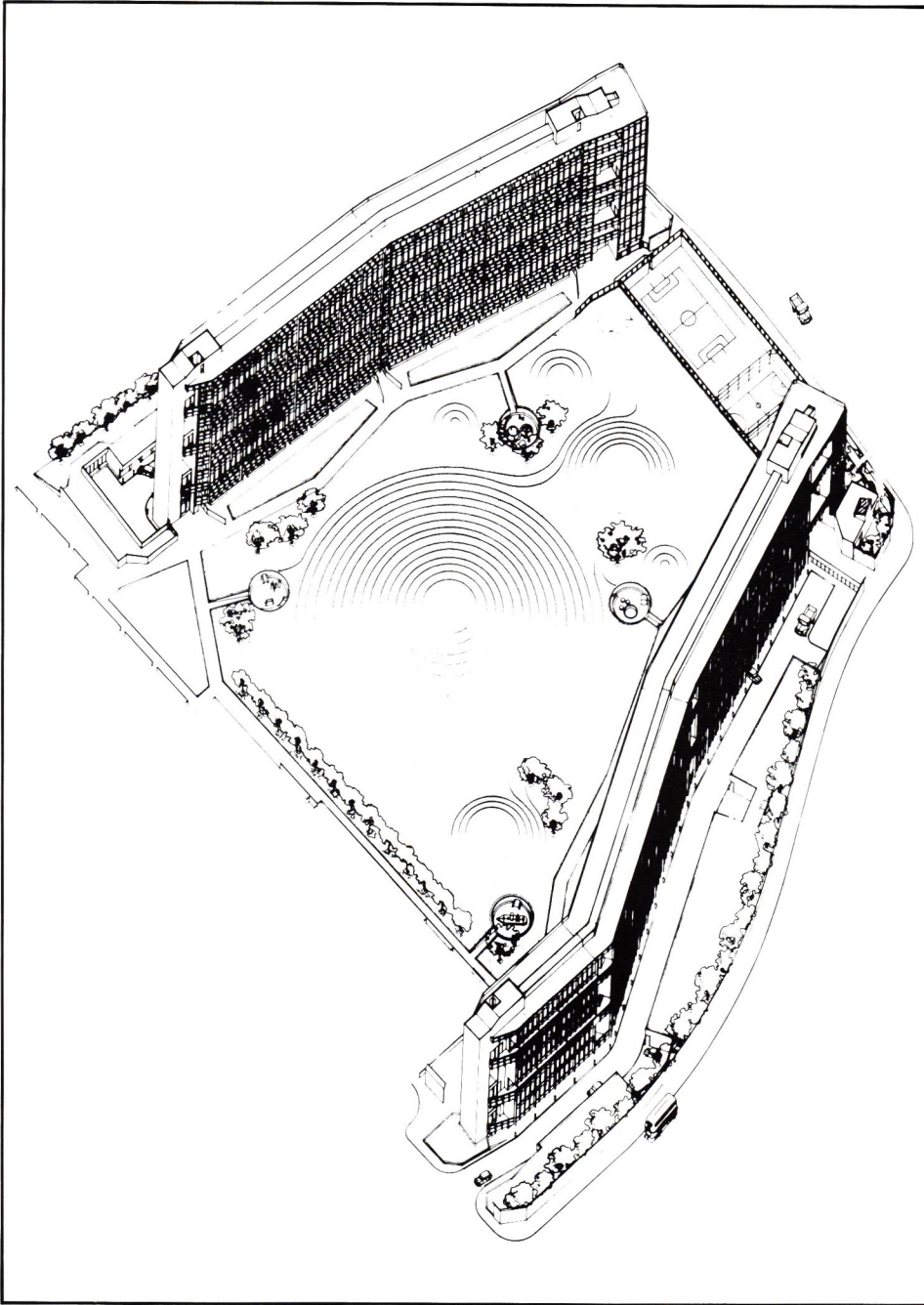
Figure 26. View of detail at entry.



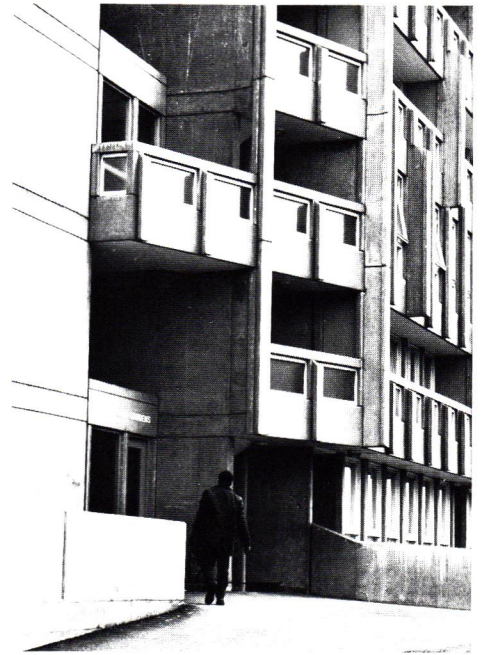
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Figure 27. Robin Hood Gardens.
A. & P. Smithson, architects, 1972.
Aerial view.

Figure 28. View looking into service
road and parking under west block.

Figure 29. View of court facade of east
block.

Figure 30. View of north tower of west
block.

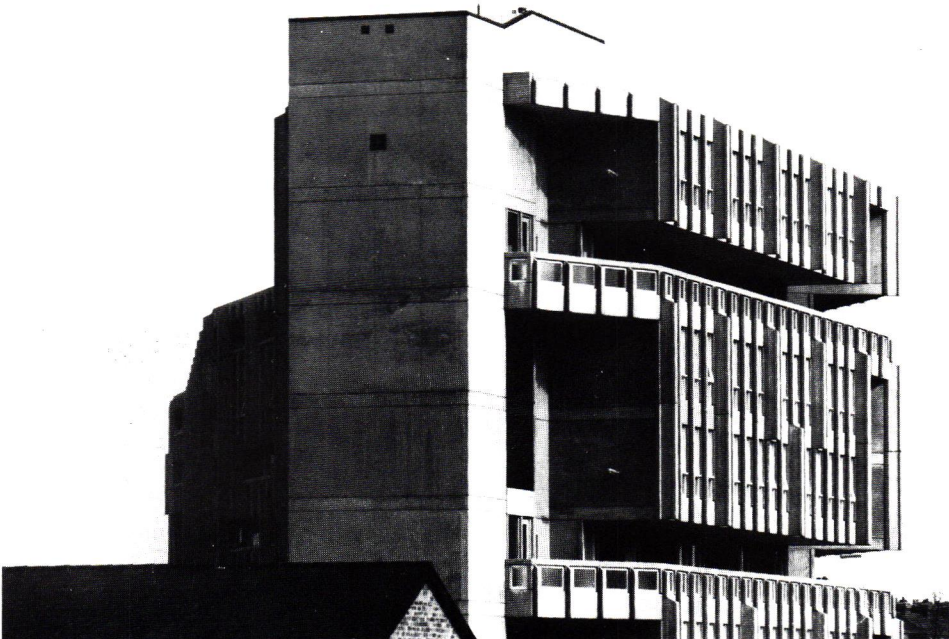
Figure 31. View of court facade of west
block.



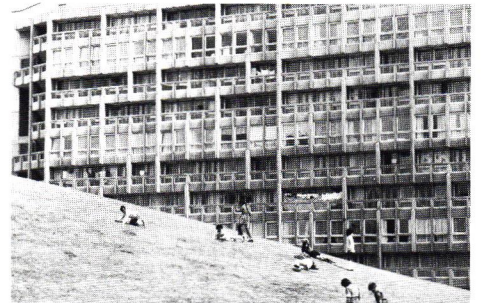
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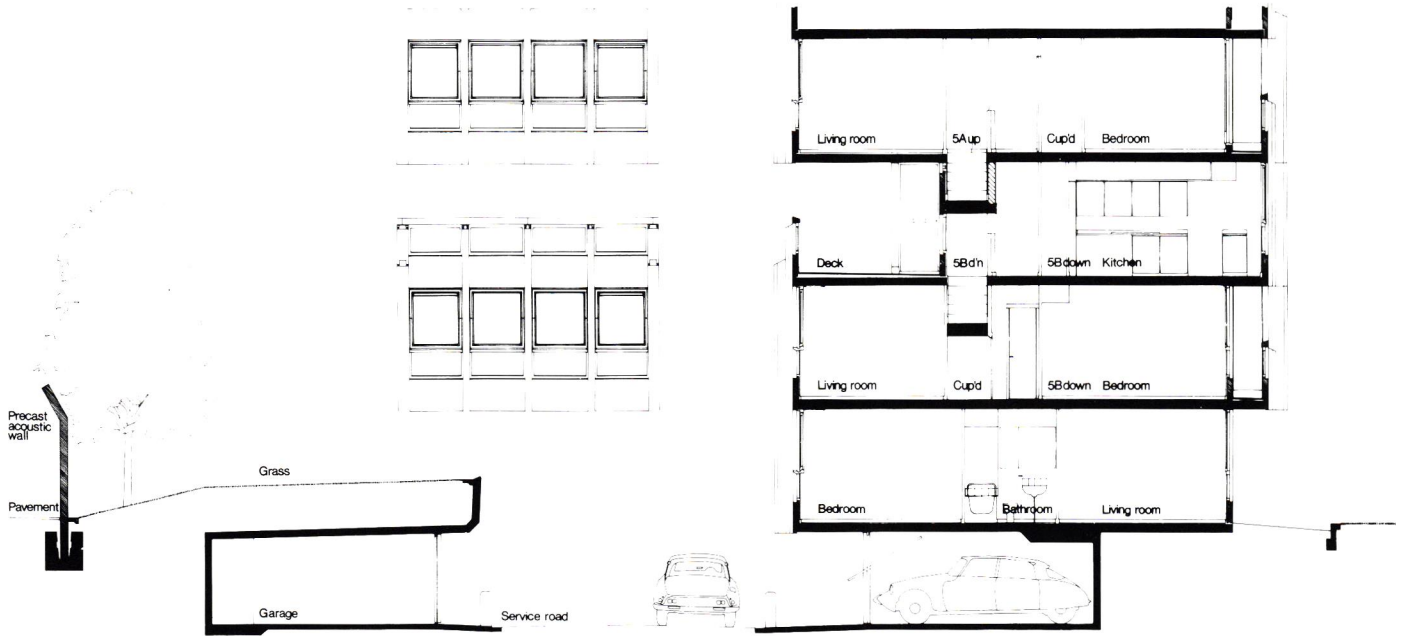


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Figure 32. Robin Hood Gardens.
A. & P. Smithson, architects, 1972.
Section and window details.

Figure 33. Plans of three typical levels
at the south end of the block.

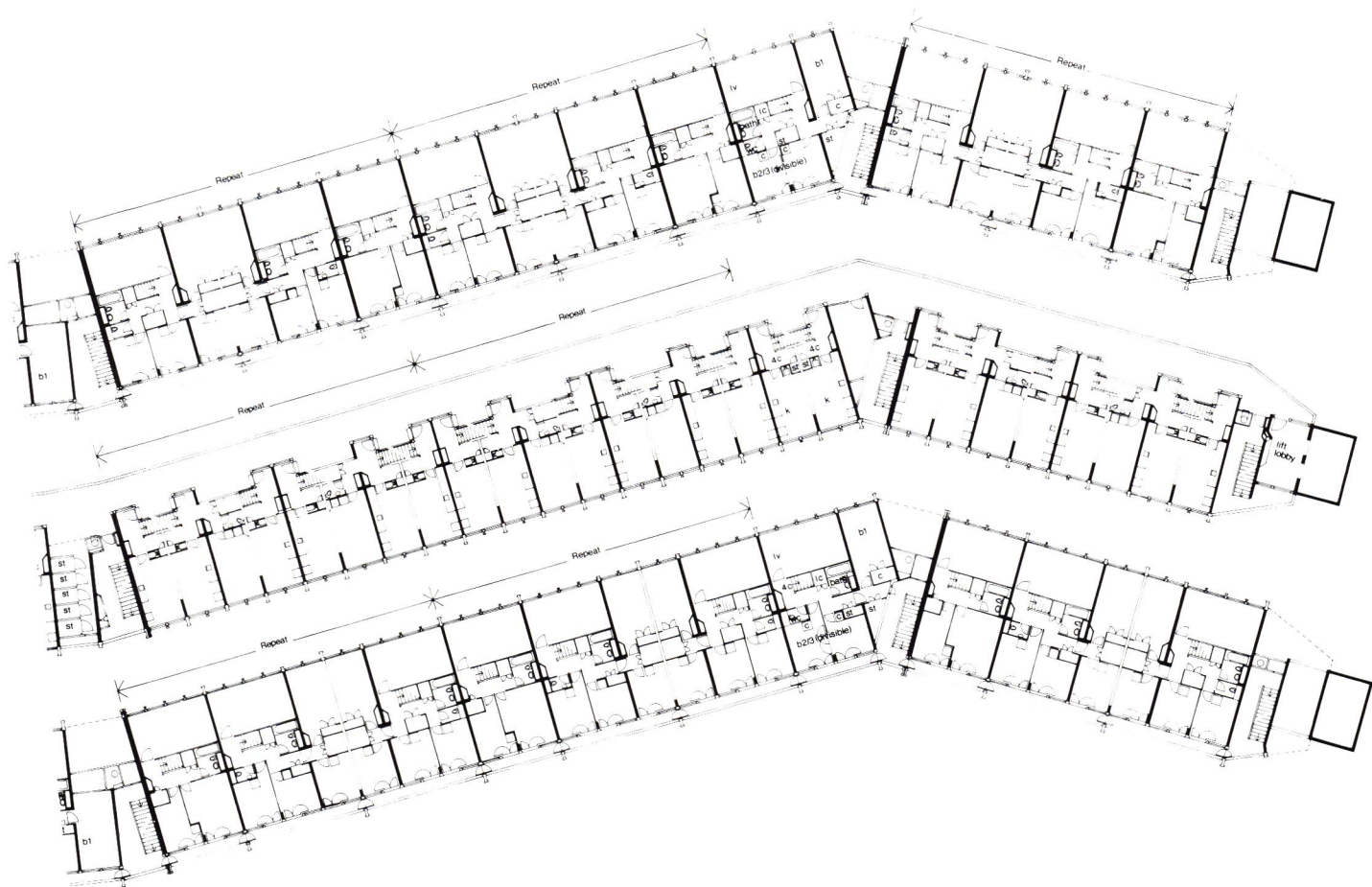
Figure 34. Plans of three typical levels
at the north end of the block.



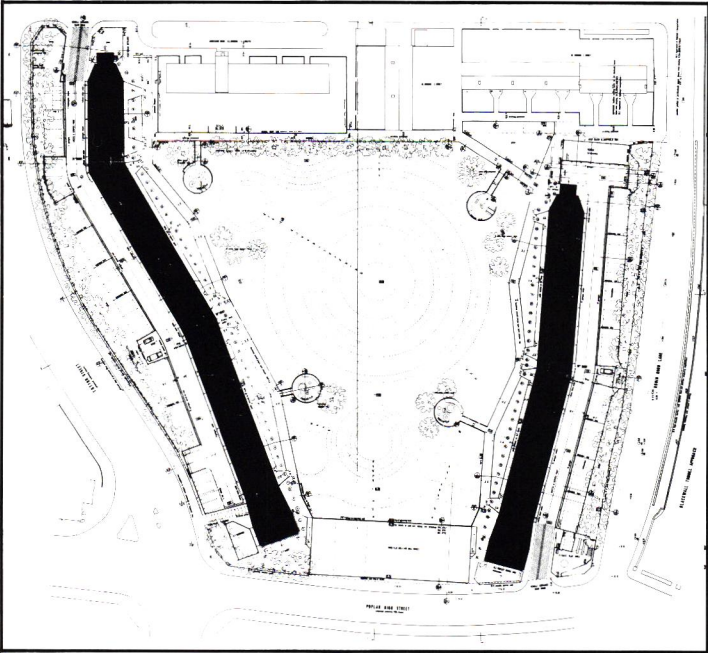
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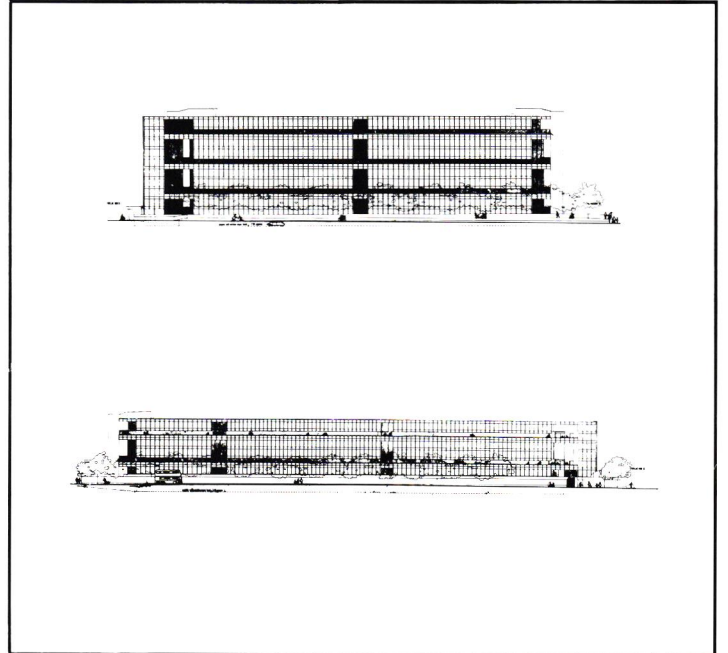
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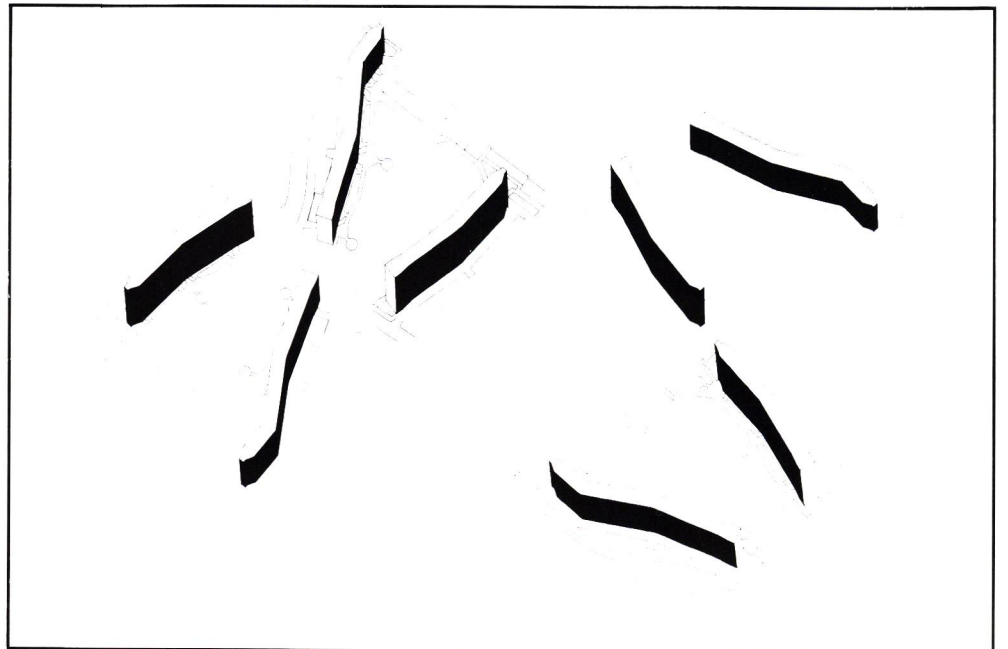
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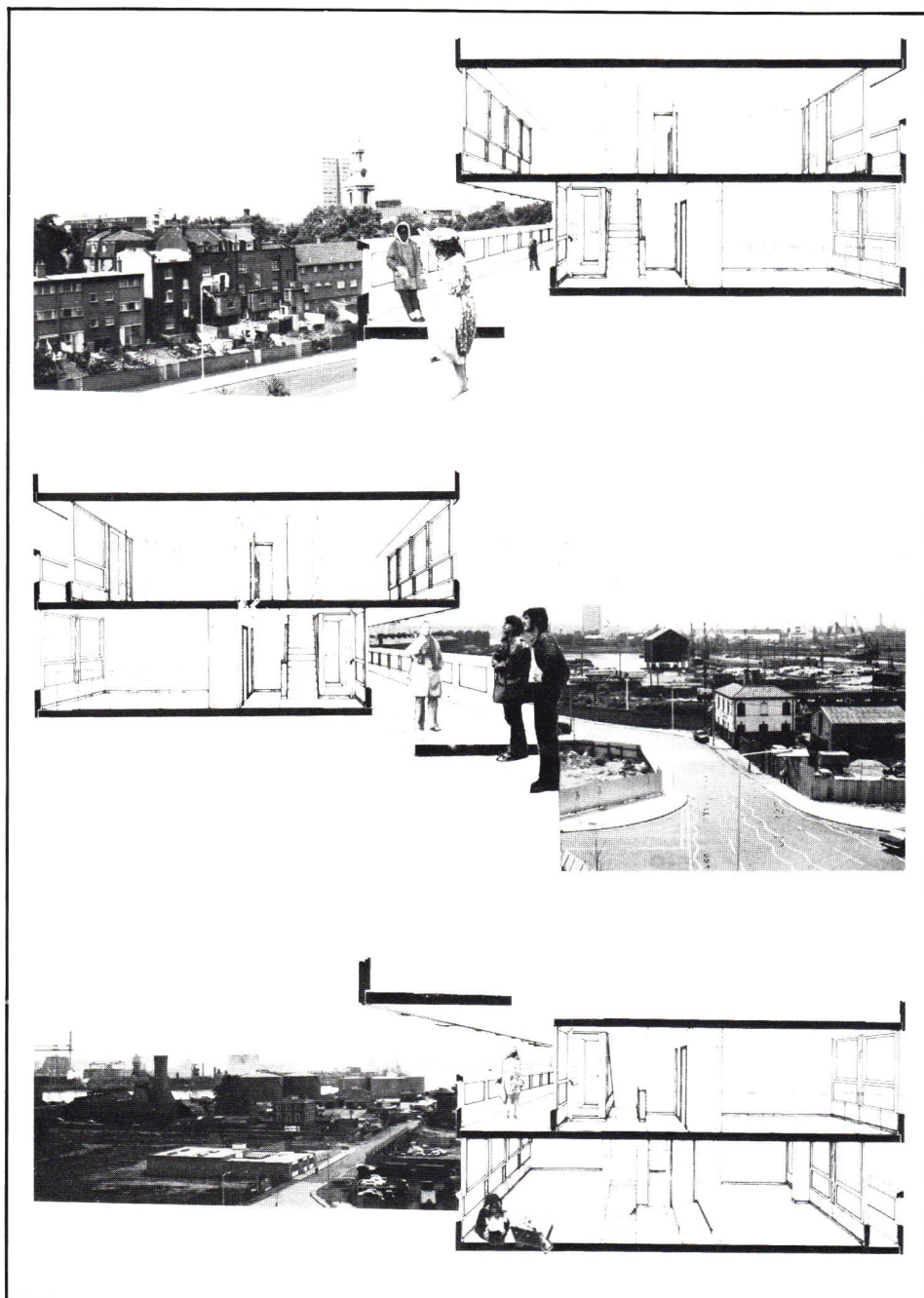
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Figure 35. Robin Hood Gardens.
A. & P. Smithson, architects, 1972.
Site Plan.

Figure 36. The two exterior elevations.

Figure 37. Axonometric drawing showing a possible growth pattern for the Robin Hood Gardens block.

Figure 38. Three perspective section collages.



1. Le Corbusier, *Vers Une Architecture* (Paris, 1923).
2. Alison and Peter Smithson, *Urban Structuring* (London: Studio Vista, New York; Reinhold Publishing Corp., New York, 1967), p. 10.
3. *Not So. Hauptstadt like Golden Lane was a metropolitan center site, ideal for pedestrian stressing; we would still say this was correct. In Hauptstadt it might be said that we were obsessed with stressing horizontal pedestrian movement, in a situation where the motorway net had already been established and was a 'fix' in the competition. (A. & P.S.)*
4. In many respects Golden Lane of 1952 reflects an English romanticization of Le Corbusier's classical concept. In its network which can be seen as a counter form to the existing London grid, both of which are random, Golden Lane almost seems like a photonegative of the medieval town rather than an idealization of the new.
5. In a similar sense, Golden Lane can be seen as an Englishman's idea of a grid as opposed to that of an American, as seen, for example, in Shadrach Woods' Berlin Free University. This is, in many respects, an evolution of Golden Lane, only deriving from an American tradition of the 19th century neoclassical gridiron town.
6. *Our concern, especially since the Economist, is with an aesthetic of connectivity; i.e. things don't have to be continuous to be connective. In Robin Hood Gardens the existing street pattern has been extensively modified, two streets removed completely and the whole vehicle storage and servicing re-formulated, quite the reverse of the original Golden Lane project. (A. & P.S.)*
7. It is interesting to note that in the first Manisty Street Scheme the building forms were not cranked; in this respect they were very much still in the spirit of Golden Lane.
8. In a formal context the urbanism of Le Corbusier can be characterized as linear; that of Kahn as maze-like. And it is after 1958 that the Smithsons change the image of the pedestrian experience from the street to the 'landcastle' and viaduct which connect 'building events'; the tangle of motor ways leading to plug-in 'harbors' à la Kahn.
9. It is also via Kahn, as Kenneth Frampton perceptively suggested, that the Smithsons make a return to the classicism, with which they had flirted at Hunstanton, and which is ultimately related in their terms beyond Mies to English Palladianism of the country house.
10. Alison and Peter Smithson, "Concealment and Display: Meditations on Braun," *Architectural Design* (July 1966).
11. It is interesting to note that Robin Hood Gardens led the Smithsons to a study of Bath and not vice versa; see *Architectural Design* (June 1971).
12. *The historicism of the middle age-group – our uncles – the popularism of the whole organisation. There is only a change of emphasis, of pace. (A. & P.S.)*

11. "The Death of CIAM," *Architectural Design* (Oct., 1959), p. A/5.
12. "The Truth about CIAM, Letter from Four Founders," *Architectural Design*, (Jan., 1961).
13. "The Death of CIAM," p. A/5.
14. *We are not stupid, just uninventive. "Parisian?" (A. & P.S.)*
15. Alison and Peter Smithson, "Signs of Occupancy," *Architectural Design* (Feb., 1972).

Figure credits

All illustrative material with the exception of figures 1, 4, 8, 13 and 14 provided by Alison and Peter Smithson.

Figure 1. Courtesy The Museum of Modern Art.

Figure 2. Drawing by A. Smithson.

Figure 4. Le Corbusier, *City of Tomorrow* (London: John Rodker, 1929), p. 221.

Figure 5. Drawing by P. Sigmonde.

Figures 11, 16, 18, 21-24, 26-33. Sandra Lousada for *Architectural Design*.

Figure 13. Le Corbusier, *City of Tomorrow*, p. 218.

Figure 14. Alison and Peter Smithson, *Ordinariness and Light* (London: Faber & Faber, 1971), p. 77.

Figures 17 & 19. P. Smithson.

Figure 20. © British Broadcasting Corporation.

Figures 34 & 35. *Architectural Design*.

Figures 38 & 39. P. Smithson.

Industrialization and the Crises in Architecture

Kenneth Frampton

This paper was first read on November 25, 1972, at York University, Toronto, Canada before a conference dedicated to the work of Hannah Arendt given under the auspices of the Toronto Society for the Study of Social and Political Thought. The author was asked to prepare this paper on the basis of his previous study of Hannah Arendt's work, which had first appeared in 1969 under the title, "Labor, Work and Architecture."

Kenneth Frampton was born in England in 1930. He is a Fellow of the Institute for Architecture and Urban Studies, New York and Associate Professor at Columbia University. From 1959 to 1965 he was an associate of Douglas Stephen and Partners, London. From 1962 to 1965 he was technical editor of the magazine *Architectural Design* and from 1966 until 1972 he was a member of the faculty of Princeton University. In the spring of 1973 he was a Loeb Fellow at the Graduate School of Design, Harvard University. He has worked as an architect in England, Israel and the United States and he has recently collaborated in the design of a low-rise housing prototype for the New York State Urban Development Corporation. A developed version of this prototype is now under construction in Brooklyn, New York.

58 A Klee painting named “*Angelus Novus*” shows an angel looking as though he is about to move away from something he is fixedly contemplating. His eyes are staring, his mouth is open, his wings are spread. This is how one pictures the angel of history. His face is turned towards the past. Where we perceive a chain of events, he sees one single catastrophe which keeps piling wreckage upon wreckage and hurls it in front of his feet. The angel would like to stay, awaken the dead, and make whole what has been smashed. But a storm is blowing from Paradise; it has got caught in his wings with such violence that the angel can no longer close them. This storm irresistibly propels him into the future to which his back is turned, while the pile of debris before him grows skyward. This storm is what we call progress.

Walter Benjamin
Theses on the Philosophy of History
1940

The transformations that overtook the basic means of production between 1750 and 1850 not only radically modified the man-made landscape during the period in question but also wrought fundamental alterations in the basic system of distribution and consumption. This so-called industrial revolution was predicated and furthered by two major upheavals in the realms of thought and action, namely Galileo’s discovery that the universe was heliocentric and the advent of the French Revolution. These had the effect of totally transforming the Western world. Both constitutionally and symbolically, they combined with the printing press to undermine the divine right rule of the *ancien regime*. While Galileo destroyed the integrity of appearance and being, and helped thereby to institute Cartesian doubt as the fundamental basis of the scientific method, the French Revolution gave birth to a new class of men, who could stand in the political arena in the name of the people as a whole. As Hannah Arendt has written of the former, “. . . the Cartesian method of securing certainty against doubt corresponded most precisely to the most obvious conclusion to be drawn from the new physical science; though one cannot know the truth man can at least know what he makes himself. This indeed became the most general and most generally accepted

attitude of the modern age and it is this conviction, rather than the doubt underlying it, that propelled one generation after another for more than three hundred years into an ever quickening pace of discovery and development,”¹ and of the latter, “It was only in the course of the eighteenth century revolutions that men began to be aware that a new beginning could be a political phenomenon, that it could be the result of what men had done and what they could consciously set out to do. From then on, a new continent and a new man rising from it were no longer needed to instill hope for a new order of things. The *novus ordo saeculorum* was no longer a blessing given by the grand scheme and design of Providence and novelty was no longer the proud and at the same time frightening possession of the few.”²

With Descartes, antiquity as received, lost its authority as an irreducible source of order, while architecture as appearance, as the mandala of the prince and the priest, lost its immediate power to inform and determine the world. As J. B. Bury has written, “Cartesianism affirmed the two positive axioms of the *supremacy of reason* and the *invariability of the laws of nature*; and its instrument was a new rigorous analytical method, which was applicable to history as well as to physical knowledge. The axioms of nature collided with the theory of an active Providence. The supremacy of reason shook the thrones from which authority and tradition had tyrannized over the brains of man. Cartesianism was equivalent to a declaration of the Independence of Man. It was in the atmosphere of the Cartesian spirit that a theory of Progress was to take shape. . . .”³

The shift from a geocentric to a heliocentric model of the universe came into being as the consequence of instrumentality, that is to say as a result of the intervention of an optical tool—the telescope (fig. 1). With this *homo faber*, or man the maker, came to his place in the modern world through a modification in his traditional role. From Galileo on, he was no longer valued solely for his product as an end result, but for his process as a means to an end. As Hannah Arendt remarks, fabrication which had hitherto disappeared into the product now became an end in itself since pure science was not interested in the appearance of objects, but in the capacity of objects to reveal the intrinsic structure lying behind

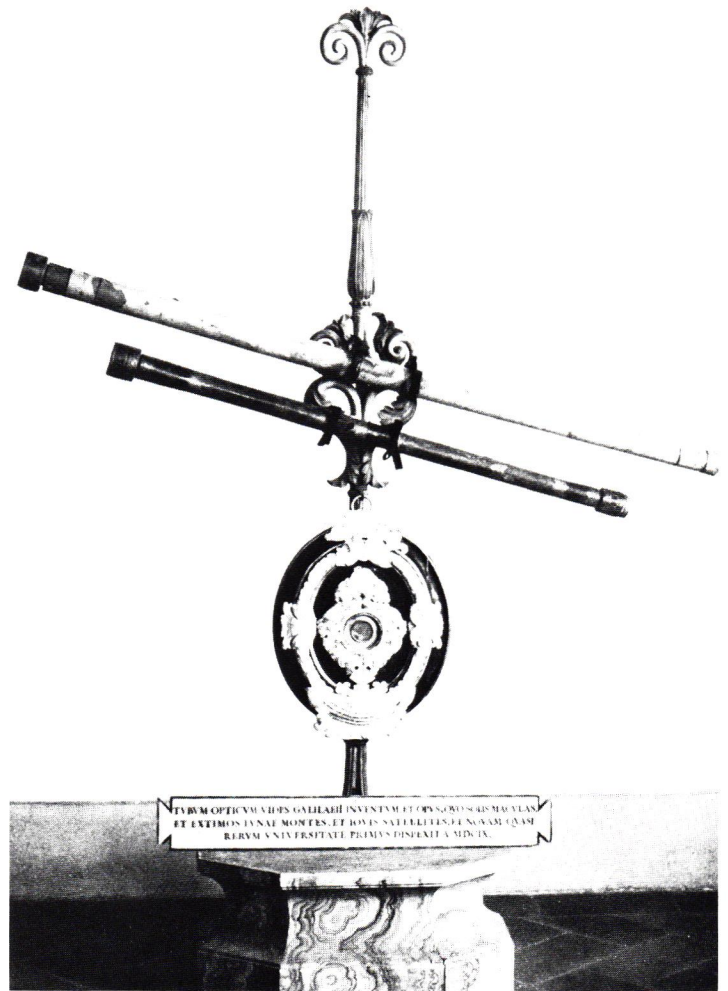
Figure 1. Galileo's telescope first developed and used by him as an observational instrument in the year 1610. With this optical device Galileo discovered the satellites of Jupiter and thereby established the first visible proof of the Copernican theory of the universe.

all appearance. It abandoned the passive contemplation of objects *per se* for the activation of objects in relation to nature. This had the effect of reversing the traditional hierarchic relation of contemplation and action, a shift which had profound consequences for the object of architecture. As Hannah Arendt has written, "As far as *homo faber* was concerned this modern shift of emphasis from the 'what' to the 'how,' from the thing itself to its fabrication process was by no means an unmixed blessing. It deprived man as maker and builder of those fixed and permanent standards and measurements which prior to the modern age have always served as his guides for his doing and criteria for his judgment. . . . Man began to consider himself part and parcel of the two superhuman, all encompassing processes of nature and history, both of which seemed doomed to an infinite progress without ever reaching any inherent telos or approaching any preordained idea."⁴

The Cartesian loss of confidence in appearances and in the general schemata of traditional truth together with the tendency of fabrication towards the achievement of exclusively utilitarian ends, began to erode the traditional object of architecture from within; although the evidence of this subtle erosion remained largely concealed throughout the Enlightenment. The real transformation in the overall process of production was yet to make its impact. Nonetheless by the mid-18th century the first of the post-Cartesian crises to befall architecture had already occurred.

The Crisis of 1747

The foundation of Perronet's *Ecoles des Ponts et Chausees* in 1747 was to divide for the first time the profession of engineering from that of architecture; that is to separate in formal terms those two aspects of architecture as defined in the Oxford English Dictionary; namely (1) the art and science of constructing *edifices* for human use from (2) the action and *process* of building. As I have argued elsewhere this dichotomy may be assimilated to the distinction which Hannah Arendt has made between *labor* as corresponding to life itself and *work* as corresponding to the unnaturalness of human existence which is not embedded in and whose mor-



1.

Figure 2. J. G. Soufflot's *Ste. Genevieve*, Paris, 1755, was in many respects a building out of the ideas embodied in Laugier's *Essai sur l'architecture* of 1753. Conceived as a continuous internal, peristylar space, it was a deliberate attempt at the lucidity and scale of the Gothic tradition in classical terms. Such a concept necessitated an unprecedented technology, such as was dra-

matically demonstrated in 1770 by Rondelet's reinforced stonework for the pronaos of the same church.

Figure 3. *Nymphenberg*. The Baroque Cartesian gesture of the ancien regime as depicted by Alain Resnais in the film "*L'année Dernière à Marienbad*" of 1961.

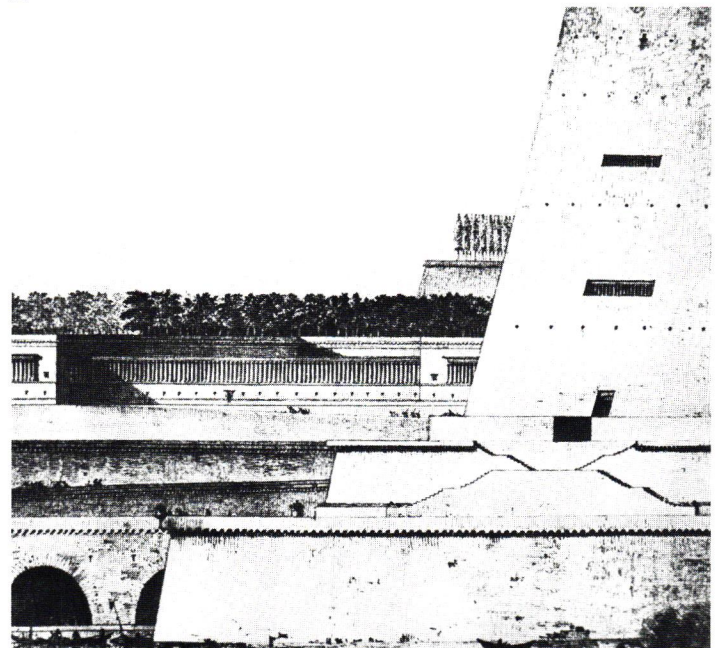
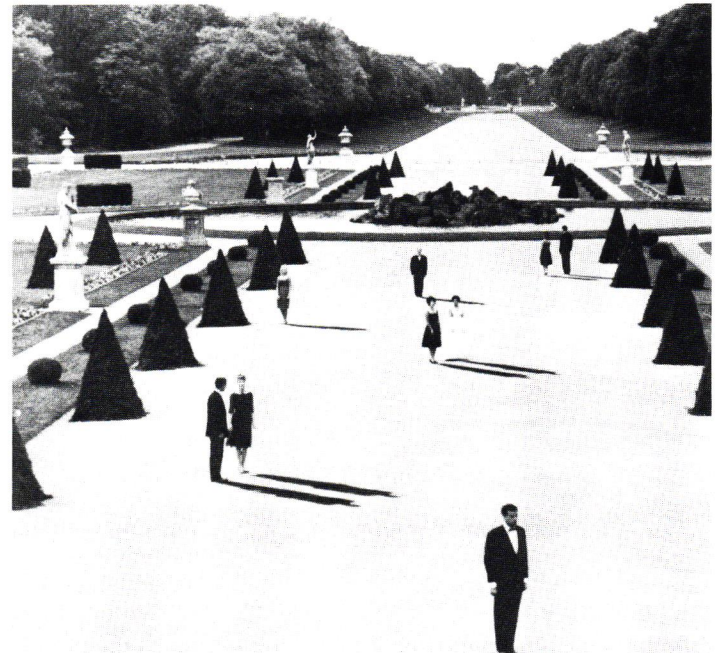
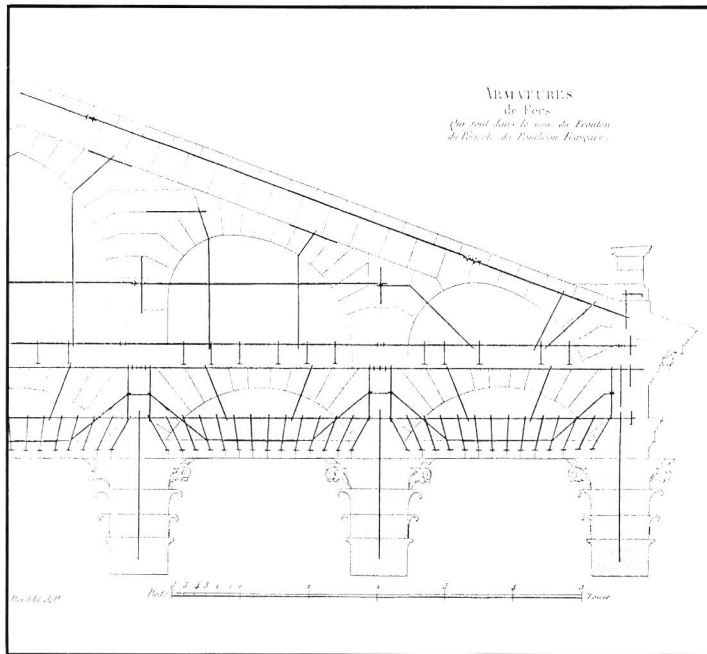


Figure 4. “A Palace for a Sovereign”
 projected by Etienne Boullée in 1785.
 The utopian distraction of unrealisable
 scale and inaccessible space. Boullée
 submitted an equally unrealisable
 proposal for the remodeling of Versailles.

tality is not compensated by the species ever recurring life cycle.⁵ By the same token, “The phrase ‘for human use’ imparts a specific human and anthropomorphic connotation to the whole of the first definition, alluding to the creation of the ‘human world.’ Conversely, it may be argued that in the second definition the use of the words ‘action’ and ‘process’ in the phrase ‘the action and process of building’ clearly implies a continuous act of building, forever incomplete, comparable to the continual process of biological labor. The additional fact that, according to the dictionary, the word ‘edifice’ may strictly be used only to refer to ‘a large and stately building such as a church, a palace and a fortress,’ serves only to support the connotation ‘work’ in the first definition. . . .”⁶

By virtue of formalizing this implicit distinction between *stasis* and *process*, engineering became liberated in 1747 from the socio-cultural imperatives of symbolic built form. From now on it could develop its full utilitarian potential, untrammled by symbolization, while architecture had henceforth to seek for its now fragmented object in the theoretical deliberations of the *Academie Royale*.

Undermined by the subtle secularization of the world since Galileo, deprived by Cartesian doubt of reassuring traditional truth, architectural theory found itself appealing to the testament of archaeology through its own loss of faith in the received culture of the Renaissance. At the same time it began to look for its ultimate rationale in the all encompassing processes of nature. Natural law was now asserted as the prime ordinating principle of architecture, while beyond the classical tradition of the Renaissance, men began to study and emulate the surviving profiles of antiquity. Modern archaeology and the modern study of history were both the direct outcome of drives such as these, the former beginning with Winckelmann in 1764 and the latter with Voltaire in 1751. Stripped by science of its hitherto magical coalescence the modern world began to fragment. Moreover, since appearance now belied truth, it became necessary to treat form as independent of content: the modern science of aesthetics coming into being with Baumgarten’s *Aesthetica* of 1750.

For their part architectural theoreticians, such as the Abbé Laugier in his *Essai sur l’Architecture* of 1753, began to advocate buildings of the utmost self evidence and lucidity, to the point of their becoming totally transparent (fig. 2). Light was now literally seen for the first time as the illumination of reason and as the sole agent capable of dematerializing inert mass. The wholesale production of glass, perfected as a technique in the 17th century, proffered a material by which to effect this penetration of appearance. Windows, which had hitherto been black apertures in classical masses, now became part of a continuous illuminated fabric. Thus Joseph Paxton’s Crystal Palace of 1851 found itself implicitly anticipated in the architectural theories of the mid-18th century. Laugier in 1753 justified the extensive glazing of a trabeated structure in the following words, “A building with isolated columns carrying an entablature has no need of doors or windows: but also open on every side is uninhabitable.”⁷

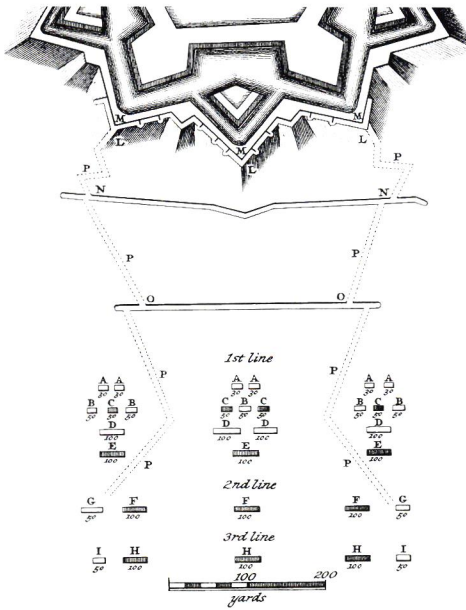
At the same time the ultimate Baroque Cartesian gesture of the *ancien regime*, Versailles—the manifestation of the world as an optical matrix, the analysis of sight in terms of landscaped *allées* seen as radiating from a single metaphorical source of monarchic power—could not be repeated (fig. 3). The spontaneous decline of the *ancien regime* (due to the confrontation of feudality with the rationality of the Enlightenment), the ascendancy of the bourgeoisie, the rise of the social and the intimate, the prospect of human perfectibility, the rediscovery of antiquity, the duality of light and nature as the essential sublime emanance of the Supreme Being, above all the influence of Rousseau and Newton, jointly conspired to distract architecture from the prospect of realization in its own time and to project it into an archaeologically distant past or into an unattainable utopian future. Its essential object in the palpable present had now become problematic. This utopian distraction could hardly be better displayed than in the works of Etienne Boullée, who projected spectacular masses of stone at the scale of natural escarpments—vast megaliths which, apart from their prohibitive size, were often shown penetrated by endless galleries of inaccessible space (fig. 4).

Trench warfare, the technique par excellence of the first world war had altered little as a basic method since Vauban's treatise on siegecraft published in 1740. It is a grotesque irony that this technique was still used when cities had already lost their strategic importance and when bastions no longer existed.

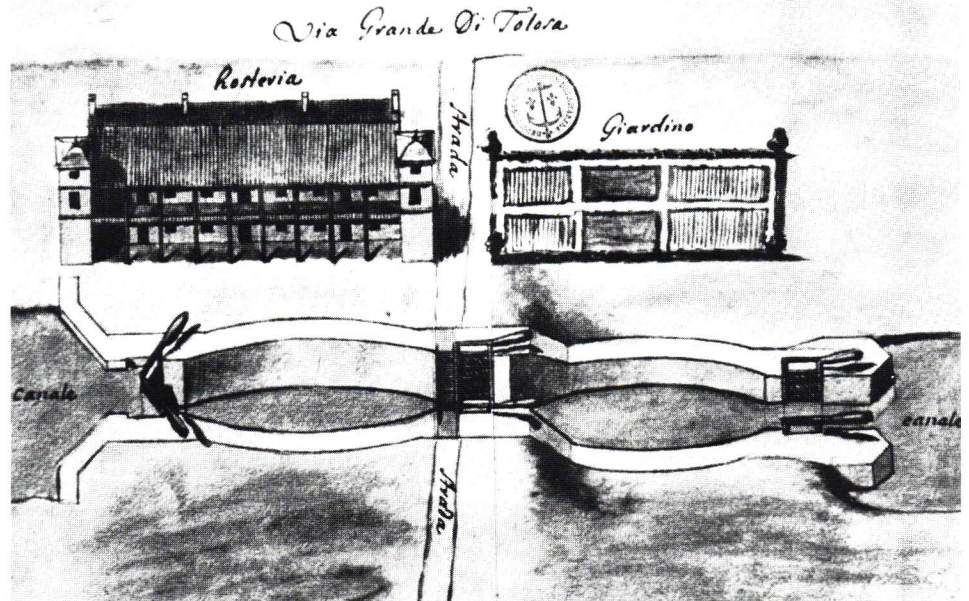
Figure 5. Mainz 1784, as fortified in 1740 by the German military engineer Maximilian von Welsch. The ultimate elaboration of the system of Vauban before it became redundant from both a military and economic point of view, around the middle of the 19th century. The final statement of engineering as an intrinsic part of architecture, in service of the reified city.

Figure 6. Paul Riquet's proposal of 1684 for the Canal de Languedoc designed to link the Atlantic and the Mediterranean via the rivers of the Midi. Detail showing the lock gates of Mongiscar as designed by Niquet in 1686.

62

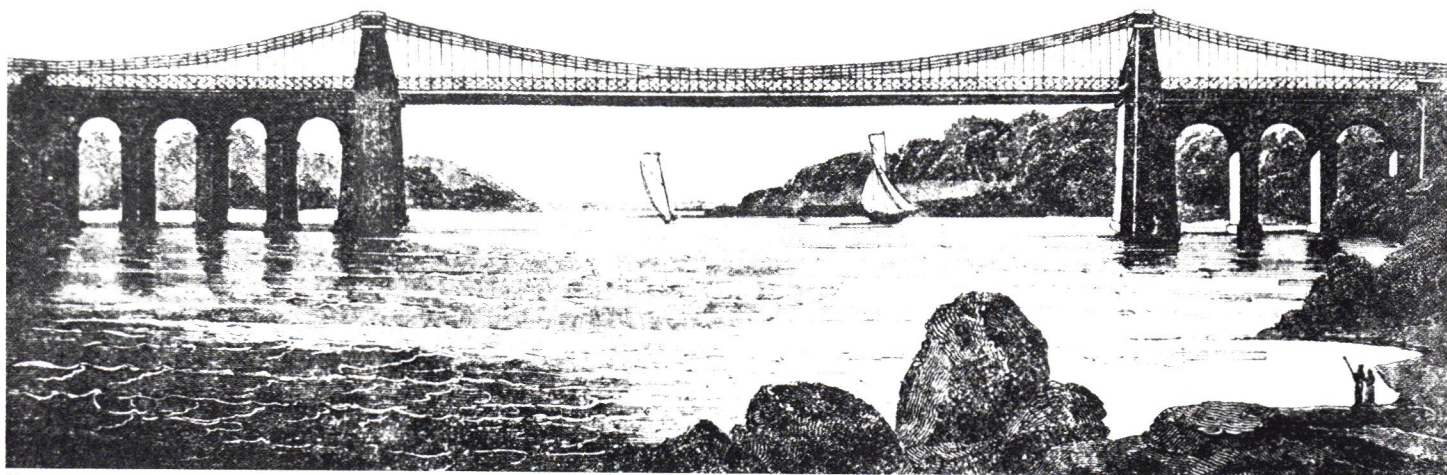


5. disegno o Figura della doppia Chiusa di Mongiscarto con l'osteria.



6.

Figure 7. The Menai Bridge, 1825, designed and built by Thomas Telford of which Karl Frederick Schinkel wrote, "We went down to see how the chains were fixed to the rock. They penetrate at least sixty feet and there secured against the rock. I made a drawing of the situation to retain the impression of this grandiose object."



7. While architecture as theory tended towards the dematerialization of mass, as in Laugier, or towards the surreality of pure but useless form, as in Boulée's idealization of the sphere as the essence of the sublime, civil engineering proceeded to work upon nature and to subject, for the first time, its untamed wastes to a measured infrastructure of metaled roads and embanked canals; to establish an extensive distribution net in anticipation of the profound changes that were about to occur in the overall means of production. Civil engineering, which had hitherto concerned itself solely with fortification, that is with the protection of the city as the prime reified object of civilization, now thrived as fabrication in the provision of a sequence of successive regional infrastructures—the processal public works of the road, canal and railway eras of the eighteenth and nineteenth centuries. Its province was now no longer the bastions, counterscarps and enfilades of its practice as part of architecture from the thirteenth to the seventeenth centuries (fig. 5). From now on its *lingua franca* was to be the embankments, cuttings, locks, metalings, aqueducts, viaducts, bridges and dams; the prerequisites of a universal system of distribution (fig. 6).

Its triumphant technique not only outstripped the performance of traditional materials and methods, but also afforded a more explicit form of structural expression, a form in which appearance was penetrated to reveal process. In a metaphorical sense this may be seen as *stasis* being permeated by *process*, for while the traditional object of architecture was to remain static, that of engineering had begun to exert itself as a dynamic force. From now on architecture looks to engineering for much of the substance of its symbolization, and we are not entirely surprised to find a late neoclassical architect, such as Karl Friedrich Schinkel, totally ignoring contemporary architecture on his visit to England in 1826 and recording instead the major engineering achievements of his time (fig. 7).

This split of engineering from architecture in 1747 was to subtly undermine the object of architecture throughout the 19th century and to tentatively resolve itself in the early 20th century as a mode of building to be predicated on the precepts of an economically determined functionalism. This

Figure 8. Hannes Meyer, Hans Wittwer, League of Nations entry, 1926-7. A systematic assembly of modular components reminiscent of the Crystal Palace. Meyer went out of his way to refer to this as his “building” for the League of Nations and to propose cladding the building in asbestos cement sheet rather than the traditional honorific material—stone.

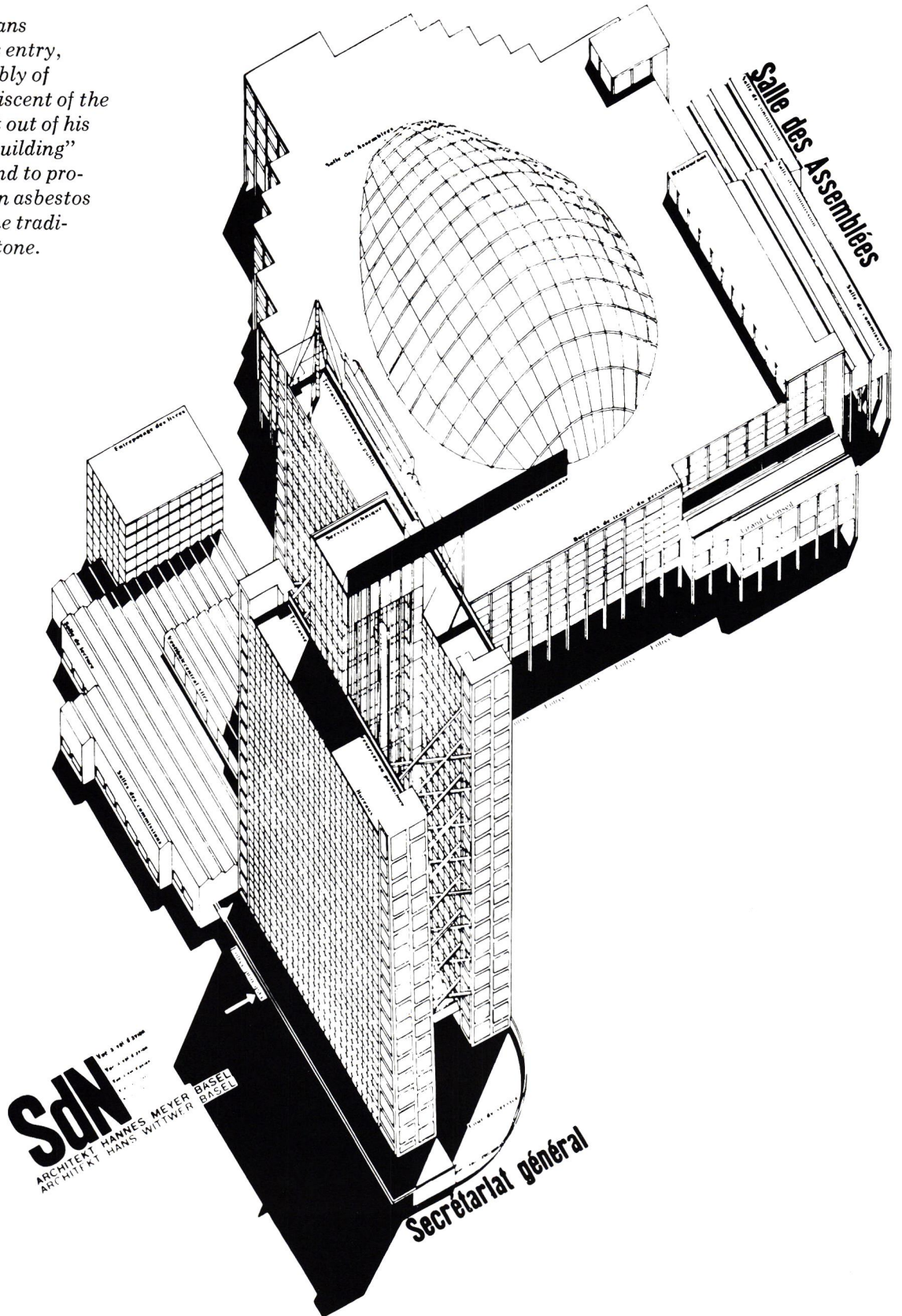
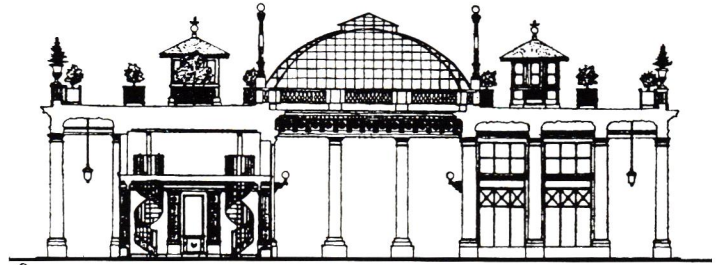


Figure 9. *Galerie d'Orleans, Paris.*
 Transverse section through the first
 arcade with a completely glazed roof
 built to the designs of Fontaine in 1829.
 As Walter Benjamin has pointed out,
 architecture becomes engineering
 through the agency of iron in the service
 of commodity consumption.



9.

materialist position was aphoristically expressed in Hannes Meyer's dictum of 1928, written while director of the Bauhaus before the collapse of the Weimar Republic, that ". . . all things in this world are a product of the formula: function times economics." He wrote in the same text, deriving his position from the Proletarian culture of the Russian Revolution, "All art is composition and hence unsuited to a particular end. All life is function and therefore not artistic. The idea of the composition of a dock is enough to make a cat laugh, but how is a town plan designed or the plan of a building? Composition or function? Art or life? . . . Architecture as the embodiment of the architect's emotions has no justification. Architecture as a continuous building tradition means being carried on the *tide of building history.*"⁸

It is clear that to be carried on the tide of building history means to evoke the vernacular as a naturally evolving conjunction of *technique* and *social need*. It is to postulate first, *nature* as manifest in the processes of applied science [i.e., engineering] and then *history* as the socio-political determination of man—as the two irreducible determinants of building. All unity is now seen to reside not in some preordained static ideal, as in antiquity, but in process itself, as made manifest through the proliferation of rationalized technique in response to changing need. Hannes Meyer's design for the League of Nations building of 1927, with its systematic modular assembly of components, clearly intends little else but such a manifestation (fig. 8). In this respect one can hardly overlook its significant derivation as technical method from Paxton's Crystal Palace.

The Crisis of 1851

Between 1830 and 1860, the sequential development of the ferrovitreous arcade, the market shed, the exhibition hall and the department store engendered a building typology dedicated to serve the processes of consumption (fig. 9). At this juncture engineering tended towards the spontaneous creation of a totally unprecedented syntax of building, wherein the essential modular technique of glass house construction would come to be combined at mid-century with

the prefabricated process of the railway. The achievement of Paxton's gargantuan greenhouse, to serve as a gigantic international department store, could not have been realized in the necessary space of four months had it not been for the railway engineer Charles Fox, who was to be responsible for all its ingenious connections and for the invention and supervision of its prefabricated modular assembly (fig. 10).

With the Crystal Palace, the question of "how" began, at a public level, to take precedence over the issue of "what," the latter being simplistically characterized in the critical words of John Ruskin, ". . . as nothing but a large greenhouse." It is of significance that its size, particularly in respect to its length, was in no way limited by its form, for it could in theory have been extended well beyond its symbolic length of 1,851 feet. In short, the essence of the Crystal Palace resided in its fabric as a process, its combination of pane, sash bar, louvre, gutter, beam, truss and column, to be endlessly repeated and rearranged just like the components of the railway system to which it was directly related. Paxton's Palace was infinitely extendable and capable of limitless permutation. Burton's proposal to reassemble its components into a tower 1000 feet high to be served by steam elevators (the vertical equivalent of the locomotive) testifies to the intrinsic openendedness of its system (fig. 11). Clearly the Palace would not in any classical sense of the word be said to have been *composed* and indeed, had it not been for a last minute outcry over tree preservation, it would have been erected without its central transept—the one feature which served to impart a certain fortuitous symmetry to its otherwise undifferentiated facade.

The particular reversal that the Great Exhibition represents of the traditional hierarchic order of ends and means, merits some examination since the consequence of such a reversal is different in respect to the Palace itself and the objects it contained. In both instances the "how" took precedence over the "what," but with such different results that the dramatic discrepancies to be found between the exhibition as building and the exhibition as an array of objects demands some explanation. This may be accounted for in the assigned status of the objects involved, for whereas the former was essentially the crystallization of *the primary system of pro-*

Figure 10. The prefabricated modular assembly of the Crystal Palace in 1851 under the supervision of Charles Fox. Note in particular the glazing wagons like railroad cars used in the glazing of the roof.

Figure 11. The Crystal Palace Re-Assembled. In 1852, an architect named Burton suggested, in anticipation of

Eiffel, that the palace be re-erected as a 1,000 foot high tower to be served by steam powered elevators.

Figure 12. The Great Exhibition of 1851; the machinery court displaying objects of the same formal and functional order as the building itself.

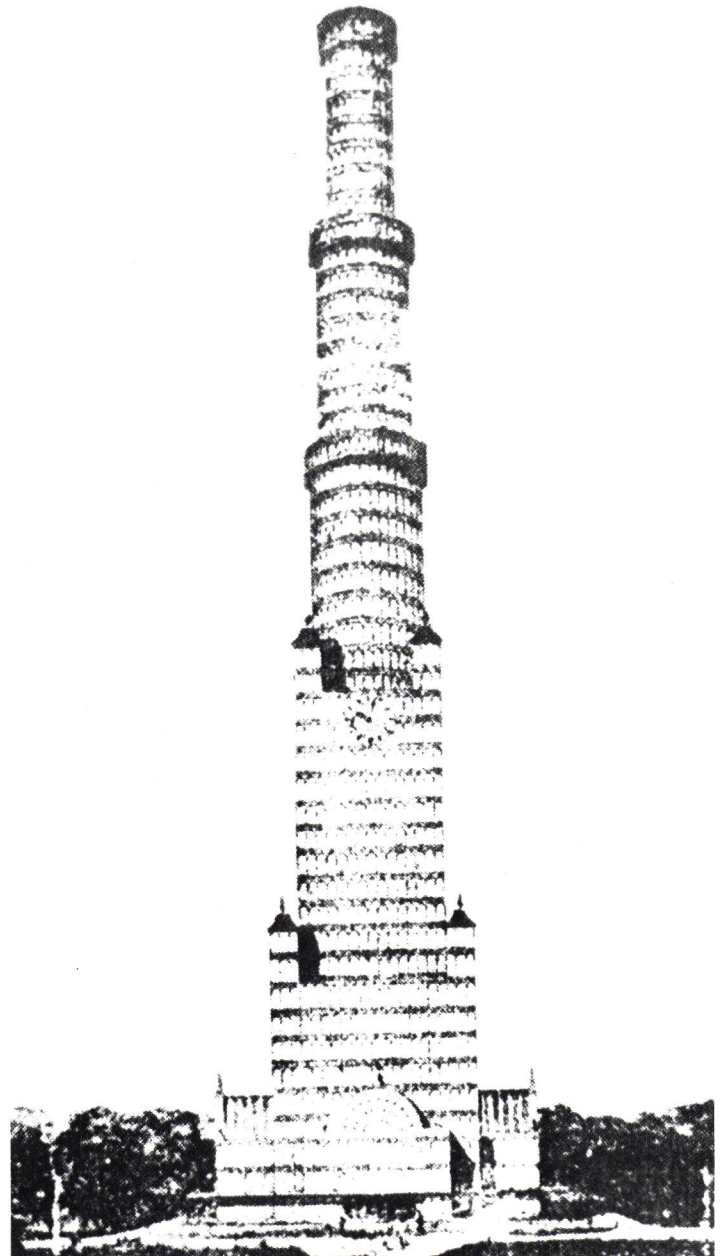
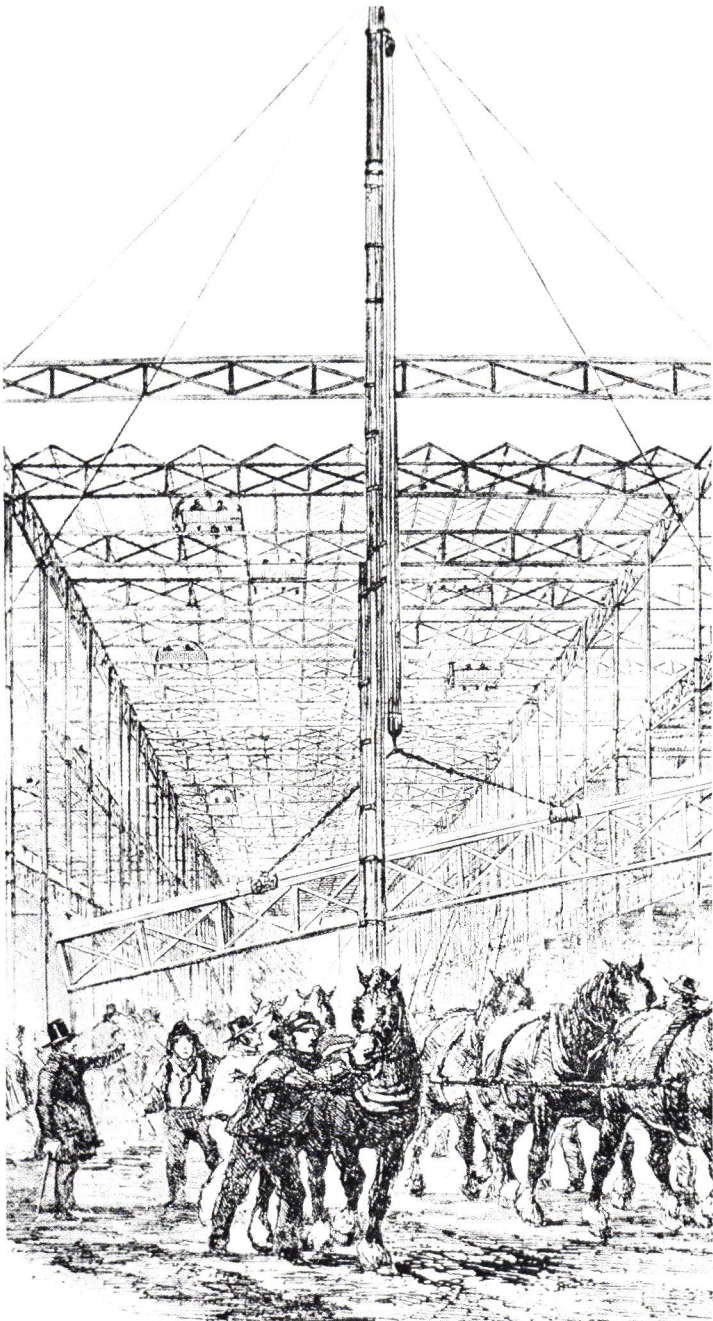
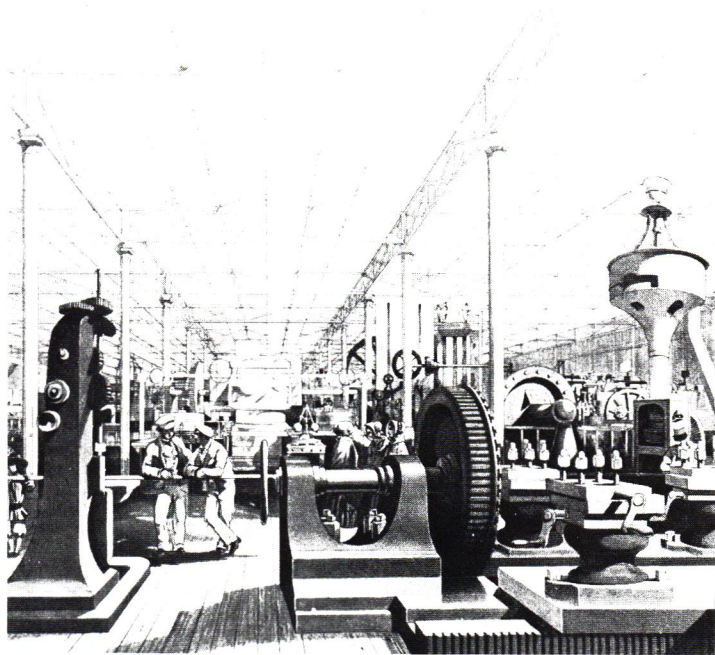
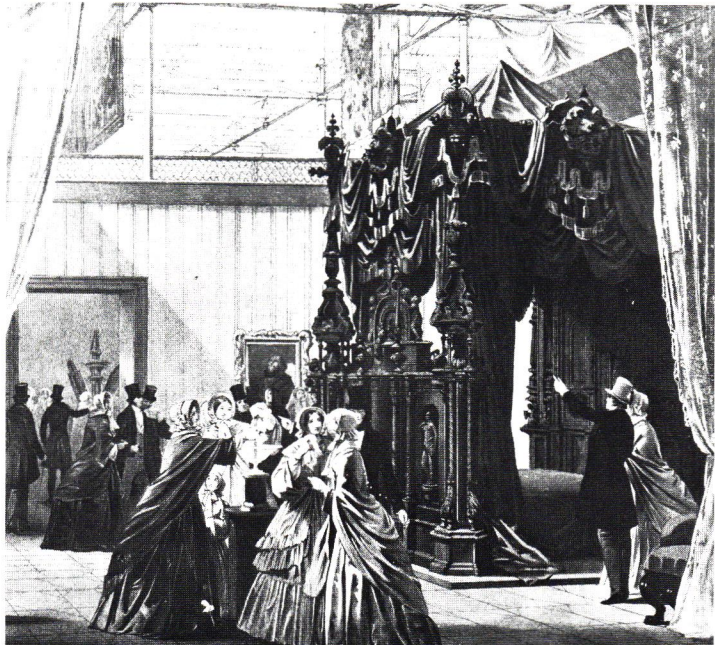


Figure 13. *The Great Exhibition of 1851.* Most of the objects exhibited were made from papier mâché. They were as divorced from the traditional materials that they so successfully simulated as they were from the form and function of the palace itself. A contemporary description in the official catalogue read: "It is more fitting for a corpse to lie in state than a place of repose."



12.



13.

duction and distribution, identical in its paleotechnicity to the cast iron lathes and the rolling stock that were displayed within its machine hall, the later was *the essential end product*, the creation of an instant culture of consumption, the provision of intimate artifacts for the theatrical establishment of a totally new class (figs. 12 & 13).

67

It is hardly an accident that the phenomena of wholesale *kitsch* appears exactly at this point of crisis, at this moment of the department store, in 1860, when bourgeois civilization, entering upon its first flood of affluence, finds itself equipped with a surplus of means over needs and is forced to create an instant culture of its own—that outside sheer utility is destined to lie suspended between the asceticism of production (the Puritan ethos) and the comfort of consumption (the heritage of license). As Herman Broch was to put it in his essay on *Kitsch* of 1951,

The courtly tradition was predominately an aesthetic one: its ethical conception was confined to set mystical portrayals of a God-willed hierarchy, to which, quite independently of an enlightened rational skepticism, men had to adjust with an attitude which was at once amused and stoical; in return, they were entitled to make their lives a work of art and to procure for themselves, by means of unbridled debauchery of the senses and of the mind, all the pleasures possible, including those of art. . . . The bourgeois tradition on the other hand, had a fundamentally ethical stamp. In Protestant countries this was influenced exclusively by the ascetic Puritan-Calvinist ideal, while in Catholic countries the parallel revolutionary movement (which was also a protest against the *libertinage* of the *ancien régime*) had made a virtue into a universal guiding principle. In both Catholic and Protestant countries man was thus spurred on to put his great spirit of sacrifice to the test—sometimes for love of the State, sometimes for love of God. In both cases alike, this ethical imperative was founded exclusively on reason, and in both cases this was opposed to art and decoration, or at least indifferent to them. The middle classes had to remain absolutely faithful to their severe tradition, so as to be able to make the distinction between themselves and the feudal aristocracy, seeing themselves as the class destined to come to power in its stead. . . . On the other hand the

spirit of enlightenment was not to be quenched in the age of industrialization, nor was it possible to restore the old faith which had provided the incentive for asceticism. To preserve this ascetic spirit, despite this, but without abandoning the rationalism of *libertinage* was, therefore, the insoluble question that the bourgeoisie had to solve.⁹

The bourgeois world, deprived by its sudden triumph of a traditional arena or time honored mode in which to ritualize its power, display its wealth and realize its image was forced by virtue of its inherent self-alienation to create an instant culture of aristocratic pretensions or alternatively to celebrate in liberal protest the lost tranquility of some pre-industrial world wherein production was founded in the communality of the medieaval Guild. In the first instance it attempted to domesticate the aristocratic landscape of *libertinage*, to tame the Baroque excesses of the *ancien regime*. In this connection the charade of constitutional monarchy may be seen as the *mise en scene* for the ultimate bourgeois fantasy. By the same token, as Broch has put it, “. . . the middle classes deceived themselves by saying that they had won a complete victory; throughout the nineteenth century they pretended that they had inaugurated great art and defeated *libertinage* for ever.”¹⁰

All of the middle class that is save for its liberal thinkers, architects and designers who were not so easily deceived and who struggled in their critical confusion (even to the extent of falling into *kitsch*) against the ever overwhelming sea of *kitsch* into which they were pathetically projected. The connection between utilitarianism and *kitsch* can hardly be overlooked. Jeremy Bentham's precept, “. . . the greatest happiness of the greatest number” is surely sufficient justification for its perpetuation. At all events the Crystal Palace was one vast emporium of *kitsch*, notwithstanding the utilitarianism of its structure and the machine functionalism of some of its objects. No one was more aware of the crisis of 1851 than the German architect and liberal revolutionary Gottfried Semper when he wrote with regard to the Great Exhibition in his essay “Science, Industry and Art” of 1852 that,

Unremittingly, science enriches itself and life with newly discovered useful materials and natural powers that work

miracles, with new methods and techniques, with new tools and machines. It is already evident that inventions no longer are, as they had been in earlier times, means for warding off want and for helping consumption; instead want and consumption are the means to market the inventions. The order of things has been reversed. . . . For speculation combines with means and presents us with palatable benefits; where there are none, speculation creates a thousand useful things, large and small; when it can no longer invent something new, long forgotten comforts are revived. Borrowing its tools from science, it masters the most difficult and troublesome tasks—the hardest porphyry and granite are cut like chalk and polished like wax, ivory is softened and pressed into shapes, caoutchouc and gutta percha are vulcanized and used to produce deceptive imitations of carvings in wood, metal or stone, whereby the natural aspects of the simulated materials are greatly surpassed. Metal is no longer cast or embossed, but is electrolytically deposited with hitherto unknown natural powers. . . . The machine sews, knits, embroiders, carves, paints, invades far into the domain of human art, and puts every human skill to shame. . . . The abundance of means is the first serious danger with which art has to struggle. This term is in fact a paradox (there is no abundance of means, but rather a lack of ability to master them), yet it is justified insofar as it correctly describes the absurdities of our situation.

Later Semper was to write of machine production:

Where will the depreciation of material that results from its treatment by machines, from the substitutes for it, and from so many new inventions lead? And where the depreciation of labor, of paintings, of fine art, and furnishing, which originates from the same causes? Of course, I am not speaking of depreciation in price but rather of depreciation in significance, in the idea. . . . How will time or science bring law and order into this until now thoroughly confused state of affairs?¹¹

Semper was not able to answer his rhetorical questions of 1852. He was to find no cure for the despair that he felt at the prospect of the Great Exhibition. The crisis that he so succinctly outlined was to remain unresolved both for him

and for all the subsequent followers of Pugin, Ruskin and Morris—the many disciples of the English Arts and Crafts reaction to the tide of industrial production. All the craft guild revivals and the design reform movements were not to prosper in their vain attempts to countervail the flood of industrialism. Only the Deutsche Werkbund, founded in 1911 by Herman Muthesius, as a consortium of industrialists and designers, had the remotest chance of success and this intended in the last analysis (however deluded it might have been) not the cultural, social and political reformism of the Arts and Crafts movement, nor Muthesius' egalitarian world of *gute form*, but rather a further expansion in Prussia's share of world trade. In the interim William Morris, the socialist, had to resign himself to producing wall papers and Pre-Raphaelite pseudo mediaeval furnishings for the upper bourgeoisie—the industrial *nouveau riche*. Morris' dream of a utopia where wind and water would once again be the only source of power, where the agrarian commune would constitute the space of public appearance, and where the guild would be the only source of work, food and furnishing was not to be realized. As he was to put it at the end of his life, with regard to the prospect of creating a culturally valid architecture for the 19th century, an architecture free from alienation, "The hope of our ignorance has passed away. But it has not given place to the hope born of knowledge."¹²

In the last analysis the overall crisis suffered by architecture after its mid-18th century divorce from engineering turned as much on the initiation of comfort and domesticity and on the flowering of social intercourse, as it did on those transformations progressively effected after 1750 in the basic means of production. As Hannah Arendt has written, "The astonishing flowering of poetry and music from the middle of the 18th century until the last third of the 19th century, accompanied by the rise of the novel, the only entirely social art form, coinciding with a no less striking decline of all the more public arts, especially architecture, is sufficient testimony to a close relationship between the social and the intimate."¹³

Even if largely determined by a mid-century escalation in machine production and distribution, the proliferation of

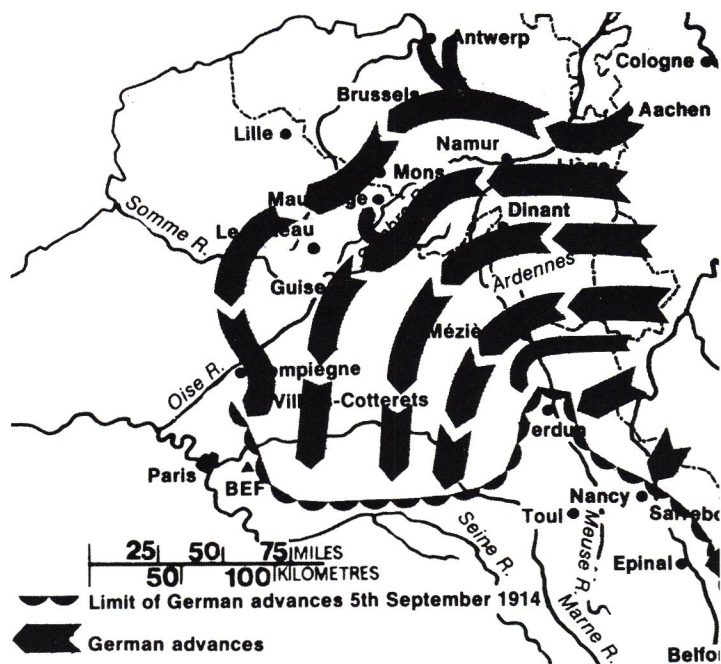
kitsch after 1860 is nothing if it is not a social manifestation, which sought spontaneously to provide through its pluralism of style that range of necessary fantasy for those emerging classes, who would have otherwise been bereft of style and who, in any event, irrespective of their status, lacked a fulfilling socio-cultural arena within which to reify and exercise their status and imminent power.

Meanwhile, what was already making mass society difficult to bear was not, to quote Hannah Arendt, "...the number of people involved or at least not primarily, but the fact that the world between them [had] lost its power to gather them together, to relate and to separate them."¹⁴ It is surely this disintegration of the public realm that accounts for the overriding concern of 19th century thinkers, architects and reformers for the recreation of a culturally viable community in which the "space of public appearance" would be brought into being after the manner of the ancient Greek polis. Thus some form of pre-industrial social armature, often conceived as an agrarian craft building, became the hypothetical key to the recreation of a coherent and authentic culture. Only this will account for the many socio-cultural models, proffered during this period, from John Ruskin's essay in political economy, his *Unto this Last* of 1862 to Ebenezer Howard's *Tomorrow: A Peaceful Path to Real Reform* of 1898, from Richard Wagner's *The Art Work of the Future* of 1858 to Peter Kropotkin's *Factories, Fields and Workshops* of 1899.

Such propositions were particularly prevalent in England and Germany where the specific vehicle adopted seems to have varied according to endemic cultural predilections—the garden city in an England that looked back nostalgically to a mythical yeoman past, the theatre in a Germany that was still yearning for a dramatic means by which to consolidate its national identity. Yet while men such as Wagner directed the main thrust of their reformist zeal towards an illusory space of public appearance, namely the theatre, others fulfilled themselves more directly in the formulation of the domestic environment as a total work of art. In short, Wagner's *Gesamtkunstwerk* became the aesthetic model for a wholesale bourgeois retreat from the barbarisms of an industrialized world. From Morris' *Red*

Figure 14. Von Schlieffen's "time table" plan prior to 1914, an upgrading of the elder Von Moltke's "war by time table" strategy of 1870 in which Von Schlieffen envisaged the instant out-flanking conquest of Paris by feeding troop concentrations by rail, through Aachen and across Belgium into France. The incomplete execution of this plan established the basis for a four year war of attrition.

70



14.



15.

House, built at Bexley Heath in 1859, to Wagner's *Tristan und Isolde* of the same date was but a step.

THE CRISIS OF 1918

The hypostasized triumph of 19th century production and technique, formally expressed in the *pompier* manner of the Paris exhibition of 1900, prevailed without interruption until the outbreak of the First World War. With the eruption of Von Moltke's so-called "time-table war" (wherein both the railway and machine tool technology were to play salient roles), industrial production and consumption acquired a new and horrific meaning, namely the mass production of death and the mass consumption of men. (Figs. 14, 16, 17) This holocaust, the first instance of "total war" directly involving the civilian population, had the effect of bursting the bubble of late 19th century romanticism—the largely private yet nonetheless xenophobic realms of the *Art Nouveau*, the *Jugendstijl* and the *Stile Floreale*. With Lenin's seizure of the Winter Palace in St. Petersburg in October 1917, the proud but fragile tower of the 19th century bourgeois culture collapsed and with it, not only the confident *fin de siecle* celebration of the State—the masquerade of constitutional monarchy—but also the claustrophobic individualism of the exotic *Gesamtkunstwerk*. (Fig. 15)

It is the German and Russian experience this time to arrive at "an architecture degree zero,"¹⁵ and the difference of their respective attitudes to this experience is of significance in itself. Industrial production, now disrupted and in many instances totally destroyed by the war, creates an austere objectless world, a cultural hiatus wherein men hitherto overwhelmed by the nightmare of industrialization may briefly speculate on an alternative condition. For a moment following the armistice of 1918 they are unencumbered by the remorseless cycle of production and consumption; for an instant they are activated by the extreme socio-economic crises in which they are immersed, in Germany by the Spartacist Revolt of 1919, in Russia by the trauma of Civil War lasting from 1917 to 1921. Bourgeois professionalism, so painstakingly institutionalized throughout the 19th cen-

Figure 15. *Gesamtkunstwerk* 1898. Furniture and dresses executed to the designs of Henry van de Velde. These pieces were conceived as integral to his house and studio *Bloemenwerf* built in Brussels in 1896.

Figure 16. Tanks en série like *Leviathans* being led into the final stages of the First World War. The tank, like the

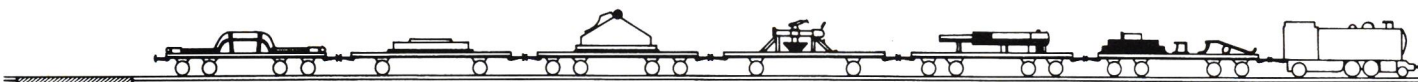
machine gun, personified and administered the mass production of death and the mass consumption of men.

Figure 17. The heavy hardware of the 1914 timetable war. A 420 mm. howitzer dismantled for rail travel. From right to left: the engine, the bed, the barrel, the cradle, the mounting, the base and the crane. Delivering a shell weighing

nearly a ton, it was effectively used to demolish the fortifications of Liège.



16.



17.

Figure 18. "The Cathedral of the Future," as imagined by Lyonel Feininger in his woodcut cover to the first Bauhaus proclamation of 1919.

72 tury, momentarily loosens its cultural hold. For a brief moment the mid-18th century division between architecture and engineering loses its significance. Art now rises into the ascendant as the potential embodiment of unalienated value and the artist briefly re-emerges as the highest form of the *homo faber*.

In Germany where the ownership of the means of production is left unchanged, the appeal of the reformist craft-guild remains undiminished. It takes on, however, a fantastic mystical form in which the values involved are anything but bourgeois and utilitarian. In this guise it sponsors that particular spirit of exaltation and reform out of which the Weimar Bauhaus is created, namely that movement known as the *Arbeitsrat für Kunst* or Worker's Soviet for Art, created in Berlin by Bruno Taut and Adolf Behne immediately after the armistice of 1918. Germany is on the threshold of a new social order at this time when soldiers and workers in open rebellion constitute themselves into *Arbeiter-und Soldatenräte* and demand in consequence the *Rätesystem* as the foundation stone of a new constitution. It is this spirit which permeates the *Arbeitsrat für Kunst*. This much is evident in Walter Gropius' introduction to an exhibition of the *Arbeitsrat für Kunst* in the Spring of 1919, a text which anticipates word for word his inaugural Bauhaus address to be made later in the same year: "We must want, imagine and create the new architectural concept co-operatively. Painters, sculptors, break down the barriers around architecture and become co-builders and comrades-in-arms towards arts' ultimate goal; the creative idea of the cathedral of the future (*Die Zukunftskathedrale*) which will once more encompass everything in one form—architecture and sculpture and painting"¹⁰ (fig. 18).

This Wagnerian call for a new religious building uniting all men in their creative work was a reconstitution of the Pre-Raphaelite dream, but this time it was for obvious reasons free of any literal dependence on traditional liturgy or form. Being not appearance, spirit not ritual, became the main drives of this impulse, and glass, the quintessence of transparency and light, became the essential material for its realization. Once again the prime image of the Enlightenment, lucidity, re-emerges as the touchstone of a new social



order. Of this prospect Behne was to write in 1918, “It is not the crazy caprice of a poet that glass architecture will bring a new culture. It is a fact. New social welfare organizations, hospitals, inventions or technical innovations and improvements—these will not bring a new culture, but a glass architecture will. . . . Therefore the European is right when he fears that glass architecture might become uncomfortable. Certainly it will be so. And that is not its least advantage. For first of all the European must be wrenched out of his coziness.”¹¹

This anarchic call for the transformation of culture through an anti-bourgeois stoicism was well complemented by Taut’s fantastic vision of an *Alpine Architektur* wherein existing urban populations would have found themselves repatriated to the land to live out their lives in totally artificial Alpine environments, secured from the ravages of climate by a continuous membrane of glass. There they would have found themselves grouped about a hypothetical *Haus des Himmels* in the center of the settlement, wherein according to Taut’s utopian vision, the wise men would be perpetually convened for the purposes of governing the community (fig. 19). We cannot casually dismiss this non-denominational religious fantasy, this pseudo-anarchic return to William Morris’ *No-where*, as the mere posturing of a socially concerned bourgeois aesthete. Rather, we must see in it a positive disillusion with industrialization *per se* and a disgust with that intrinsically alienated system of values that its processes had supported to the point of self destruction. By the same token we cannot but recognize the negative delusion of positing an unrealizable dream of an *Alpine Architektur* as a satisfactory place of human habitation, or of a *Haus des Himmels* as some mystical reconstituted “space of public appearance.” Eschewing rationality, despairing of causality and logical analysis as the proven handmaidens of a nihilistic instrumentality, Taut fell once again into the Romantic mode of envisaging an arbitrary Nietzschean hierarchy and with this into the compulsive fallacy of bourgeois reformism, namely its faith in the transformation of society through the creation of an instant culture.

The situation in Russia immediately after the Revolution of 1917 was entirely different. The bourgeois world was sud-

denly terminated. The means of production, such as they were, were definitively in the hands of the State. The imminent era of State Capitalism, even with its incipient beginnings in the compromise of NEP of 1922, was hardly to be foreseen. Within the urbanized populace the intrinsic relations obtaining between man and man and men and objects now stood mutually and consciously transformed by a definitive break in history.

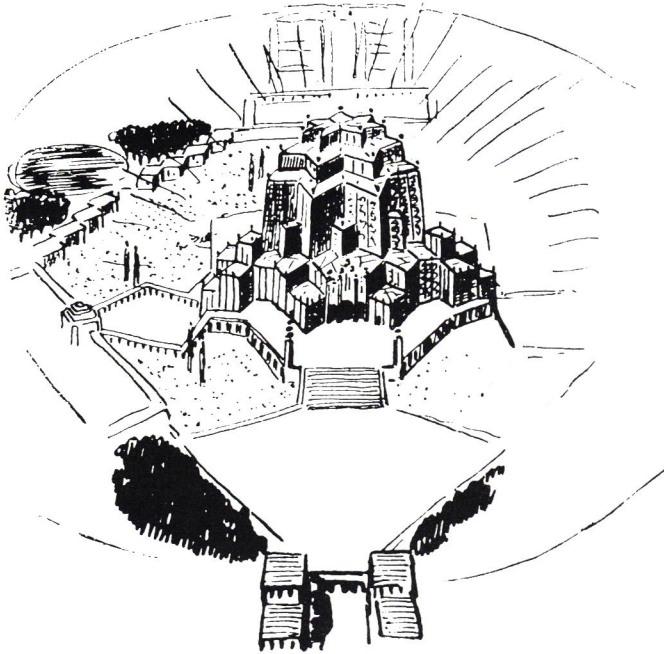
For the Russian workers’ Soviets, the space of public appearance was no longer a fantastic *Narodnik* dream, as in Gropius’ *Zukunftskathedrale* or in Taut’s *Haus des Himmels*, but rather a living everyday reality. As Hannah Arendt has written of the Russian workers’ Soviets of 1905 and 1917:

The councils, obviously, were spaces of freedom. As such, they invariably refused to regard themselves as temporary organs of revolution and, on the contrary, made all attempts at establishing themselves as permanent organs of government. Far from wishing to make the revolution permanent, their explicitly expressed goal was “to lay the foundations of a republic acclaimed in all its consequences, the only government which will close forever the era of invasions and civil wars;” no paradise on earth, no classless society, no dream of socialist or communist fraternity, but the establishment of “the true Republic” was the “reward” hoped for at the end of the struggle. And what had been true in Paris in 1871 remained true for Russia in 1905, when the “not merely destructive but constructive” intentions of the first Soviets were so manifest that contemporary witnesses “could sense the emergence of formation of a force which one day might be able to effect the transformation of the State.”¹²

Theoretically all objects, whether utilitarian or not, now stood oriented towards the same teleology, namely the fundamental disalienation of all men. The function of production was no longer solely the inverted process of consumption, and objects which had hitherto stood against the producers as the product of labor to be appropriated by capital, now embodied the very content of life and its necessary objectification. Both 19th century *Narodnik* reformism and bourgeois utilitarianism now became mutually absorbed within the object, and to this end the largely illiterate Soviet society

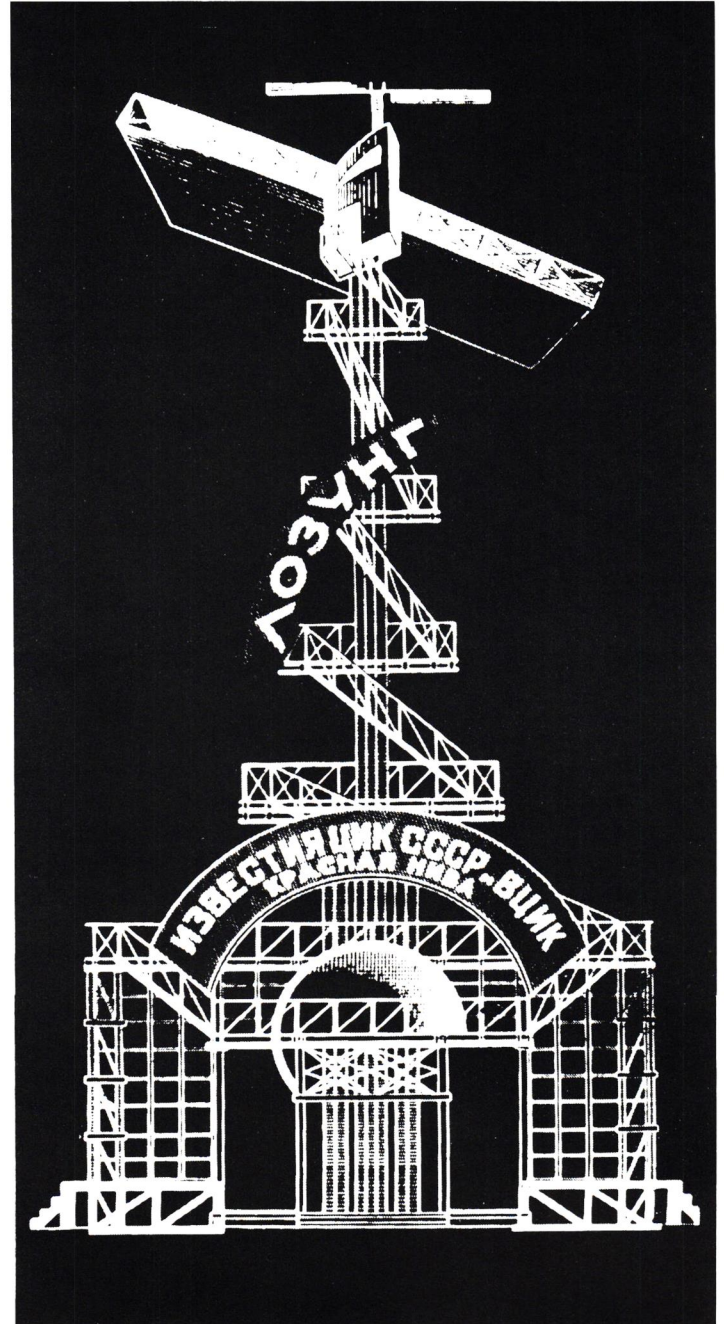
Figure 19. "Haus des Himmels," 1920. Bruno Taut's Scheerbartian project for the center of an ideal garden commune as published in the first issue of *Frülicht*. In the center is a coloured crystal temple dedicated to the act of spiritual assembly; to the left and right are the houses of the poets and painters respectively.

74



19.

Figure 20. Moscow Agricultural Pavilion 1932. *Izvestia* Kiosk designed by A. Exter, A. Gladkov and I. Stenberg.



20.

Figure 21. Project for the Pravda building in Leningrad, 1923 by A. L. V. Vesnin. Architectonic form complemented by searchlight, digital clock, flag, loudspeaker, rotating bill board, etc.

provided the opportunity for the object to play a unique role in the space of public appearance, since everything required to be re-semanticized, as it were, in a situation where objects and their contextual disposition, rather than the written word, were to become the currency and the testament of the people. As in mediaeval times, the disposition of an object or a man in space now took on an informative role. By the same token, as in the traditional Russian *lubok* or icon, the slogan and the image of an object became almost mutually interchangeable, the word fusing into a sign while the object by virtue of its simplification began to function as inscription. At this juncture the most rudimentary open timber scaffolding became capable of evoking the total constructive intention of the Soviets, while soon after the Revolution of 1917, the block capital inscription of Lenin's name became the immediate icon of the new socialist state (fig. 20).

None succeeded more forcefully in inventing a theoretical superstructure for this process of *resemanticization* than the Social Democrat Alexander Malinovsky, otherwise known as Bogdanov (the God gifted), who was to abandon the Social Democrats for the Bolsheviks in the revolutionary crisis of 1903 and to found, three years later, the organization for Proletarian culture, otherwise known as the *Proletkult* movement. This movement was to dedicate itself to the regeneration of culture through a new unity of science, industry and art. The *Proletkult* was to afford the collectivity a means for transcending both traditional culture and its own production into a new order of unity.

The traditional fields of art, architecture and engineering now found themselves inundated and overrun by the world of objects in action. Buildings were no longer hermetic finished compositions but rather aggregations of elements in the process of being enacted. Their component parts were not only signs of actual productive relationships, as in Paxton's Crystal Palace, but also the context for more explicit iconography and information. Equipped with flags, clocks, searchlights, cinematic projectors, radio aerials, loudspeakers, slogans and bill boards, they deliberately carried the dialectic of socialism into the street. They constituted both its manifest incarnation and its literal meaning (fig. 21). By the same token Proletkult furniture no longer optimized



76 cushioned comfort as in the upholstered interiors of late 19th century bourgeois affluence but gave priority instead to the use of unworked standard timber sections and therein to the universal primitive nature of its production and to its inherent potential for disassembly, mobility, conversion and re-use (fig. 22). Furniture was thus returned to its etymological origins, as indicated by the French word *meubles*. In essence it became indistinguishable from the demountable set pieces or play machines of the *agit prop* stage, just as the acrobatic slapstick routines of the circus became fused into “agitatory” presentations of Western classical theatre. Art, life, theatre, circus, cinema, and architecture now began to be consciously merged into one continuum in which there was no longer any self evident point of interruption. This “art of the street,” as it were, manifested itself most intensely in the theatricalization of everyday life, in the *agit prop* propaganda trains and boats designed by the *Proletkult* and in the “monumental plan” launched by the authorities immediately after the Revolution, with the express purpose of covering every available surface with slogans and abstract icons representing the new order (fig. 23). All was process, yet all was public. At the same time all the categories of the old world momentarily ceased to have any significance. In the midst of hunger, crisis, civil war and political conflict the whole of life had become a total work of art through an emphasis on totality rather than on art. Overnight, fine artists vehemently abandoned their traditional calling and diverted their entire creative energies to the field of applied art. These men became preoccupied with the design of light, collapsible furniture, with the furnishing of durable worker’s clothing, and with the design of more efficient pieces of equipment. Something of their essential position may be gleaned from the rhetorical polemic of the *Program of the Productivist Group* which concluded with the words, “Down with Art! Long live the Technic! Religion is a lie! Art is a lie! Down with guarding the traditions of art! Long live the constructivist technician!”¹⁹

The post-war cultural impact of 1918, which was first a triumph and then a debacle, remains with us today, and the way in which we still experience its effect merits some examination. There is no question but that the whole object of modern design received its basic paradigm via the Bauhaus

of 1923 from the Proletarian Culture of the Russian Revolution. For although much of the origin of modern functionalism lies embedded in the utilitarianism of the 19th century, its elevation into a value and a sign—as the *ding an sich* of human culture—is the prime contribution of the *Proletkult* of the early Russian Soviets. In a sense it is this essence that the Bauhaus assimilated and “translated” into the product design ethos of the mid-20th century.²⁰

This origin more than anything else may go far towards explaining the perennial incompatibility that obtains between rigorous modern design and the world in which we live. For whereas the one presupposes, despite its subtle reabsorption into the production cycle, some pre-determined state of scarcity or of homeostatis (where objects are not produced for the purpose of their instant consumption), the latter remains in or alternatively has regressed into, a state where the possibilities of an unalienated culture have been vitiated either by bureaucratic loss of nerve in the East or by “admass sonambulism” in the West. Where the former presupposes some sterile orthodoxy divorced from life, the latter predicates the apparent and deceptive pluralism of *kitsch*. In both instances the common crisis indicates a crisis of identity and power: the failure of the center to know who it is or by what ultimate right it rules; the failure of the periphery to know not only its own historical identity but also to understand why it is ruled and to what end. As Hannah Arendt reminds us, the triumph of 1789 caused the bourgeoisie to acquire the trappings of the deposed aristocracy and to imitate their noble style of life. By something of the same token the revolutionaries of 1917 fell into the simulation of the bourgeois state and culture they had previously overthrown; as a direct means of asserting and maintaining the legitimacy of their absolute power.

The constructivist technician may well have failed the Revolution through his failure to acknowledge the reality of such psychological dependency or, more seriously, through his technical incapacity or through his inability to realize that a rhetoric of technique must perforce give way to the struggle to transform an underdeveloped economy into a modern industrial state. Conversely, one may argue that the party bureaucrat failed the Revolution in as much as he could not

Figure 22. Varvara Stepanova's de-mountable set pieces for Meyerhold's 1922 production of Tarelkin's Death. These pieces, together with the actor's overalls, characterized the "productivist" approach to the direct fabrication of nomadic Proletkult furnishings.



22.

Figure 23. An agit prop train in action in 1919, the word and image of the Revolution being carried to an illiterate populace. The movie camera is already featured in the decor of the train as the informational channel of the immediate future.



23.

78 permit the participatory culture of the *Proletkult* to continue, particularly as it was predicated on its own spontaneous space of public appearance. In the name of power and security he needed instead to assert art as the codification of disciplinary values oriented not towards the evolution of a more human way of life but rather towards the statistical determination of productive behaviour, the paradigm of the *Stakanovite*.

Within this historical paradox the basic crisis of a teleology re-emerges not only for architecture but for the orientation of human culture as a whole. Bogdanov was more than fully aware of this problem when, as James Billington has written: “In the manner of Saint Simon, rather than Marx, Bogdanov argued that the destructive conflicts of the past would never be resolved without a positive new religion; that the unifying role once played in society by a central temple of worship and religious faith must now be played by the living temple of the proletariat and by a pragmatic socially oriented philosophy ‘empirion-ism.’”²¹

As we rush headlong into the reverberating crisis of the future, it becomes increasingly clear that what transpired in Russia in 1918 determined both the predicament and cultural threshold of all that we have subsequently experienced as men set within the raceway of the 20th century. With Bogdanov architecture arrived at a ‘degree zero’ from which it has not been possible to return despite the *kitsch* consumerism of much of the building in which we are largely destined to live out our lives. It stood then at the threshold of a promise that remains unresolved. With its commitment to advancing the proletariat on three parallel fronts, the political, the economic and the cultural, it posited culture as a space of public appearance in itself. To Lenin’s outrage it postulated the cultural as a formative element equal to the jurisdiction of the party. It advocated the social determination of the environment as the very substance and meaning of human culture. It implied a continuum of objects reduced to their non-fantasized significance; to their intrinsic meaning in relation to society as a whole. At one level functionalism for the *Proletkult* meant that things were not produced in order to be consumed, at another it committed itself to production as some ultimate end. In this it participated in

the dilemma that still bedevils both East and West, namely how one may escape the endless cyclical chain of means and ends without admitting to any telos or end in itself—or to put it another way, how one may determine any final form without having a model of some ultimate state. One may appreciate all too clearly why Bogdanov was preoccupied with the idea of a new religion; with the challenge of interjecting some ultimate ideal into the spectrum of materialism.

The crisis of 1918 was the crisis of architecture in as much as men acknowledged for the first time that there was no escape from the processes of history, that the unity of antiquity was lost forever and the production without end, without any limiting theory of material and spiritual need presupposed a limitless consumption—the never ending fantasmagoria of *kitsch*. Today, we are caught up within an ideology of waste, whereof as Hannah Arendt has written: “In our need for more and more rapid replacement of the worldly things around us, we can no longer afford to use them, to respect and preserve their inherent durability, we must consume, devour, as it were, our houses and furniture and cars as though they were the good things of life which would spoil uselessly if they are not drawn swiftly into the never ending cycle of man’s metabolism with nature. It is as though we had forced open the distinguishing boundaries which protected the world, the human artifice from nature, from the biological processes which surround it, delivering and abandoning to them the always threatened stability of a human world”²² (figs. 24 & 25).

In this passage architecture as opposed to cyclical production is revealed by Arendt as being fully contingent on the preservation of a truly political realm at an effective scale, since rationality itself, i.e., rational truth or as Habermas has characterized it, *purposeful rational action*, in no way guarantees the appearance of the human world upon which architecture reflexively depends.²³ For lacking an ultimate end, lacking the metaphysical unity of antiquity or of Christendom, lacking above all even the possibility of a scientific determination of needs, architecture can only be predicated ultimately on the political arena. In this respect it becomes increasingly apparent that the only way in which our self-consuming ideology of waste will be overcome and architec-

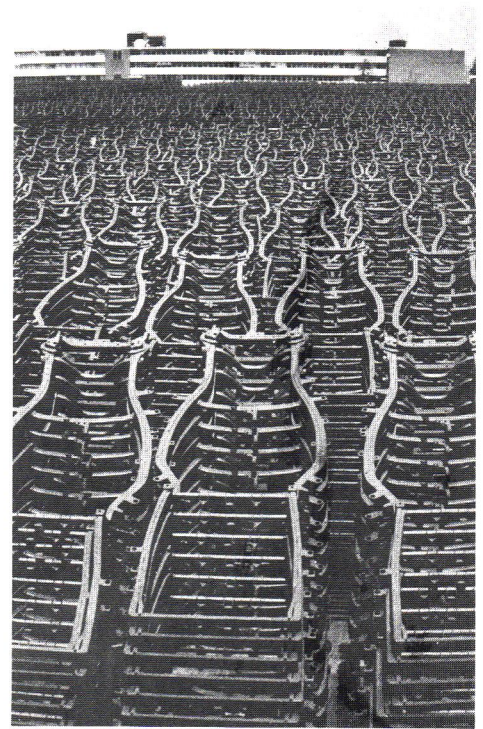
Figure 24. Andy Warhol. "Saturday Disaster," 1964. Almost all of Warhol's work has carried as its overt content an elliptical commentary on the cultural reality of Western industrialized society. His ambiguous attitude to American pluralism, his feeling for mass production and the American way of death are constantly returned to in his work. Hence his "Saturday Disaster"

which aestheticizes the 1,800,000 people who have been killed in automobile or related accidents since the first Model T Ford.

Figure 25. Automobile production, 1959. A 10-day stock pile of body frames stacked outside the Ford Rouge River plant in Dearborn, Michigan.



24.



25.

80 ture redeemed is through the participatory democratic determination of the nature of our environment. The alternative is to remain subject to that which Arendt has described as the most tyrannical government of all, namely, the government of nobody—the totalitarianism of technique.

Notes

1. Hannah Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1958; New York: Doubleday Anchor Book, 1959), p. 257.
2. Hannah Arendt, *On Revolution* (New York: Viking Press, 1955; Compass Book Edition, 1965), p. 40.
3. J. B. Bury, *The Idea of Progress* (New York: Macmillan Co., 1932; Dover Books, 1955), p. 65.
4. Arendt, *Human Condition*, p. 280.
5. Kenneth Frampton, "Labor, Work and Architecture" in *Meaning in Architecture*, ed. Charles Jencks and George Baird (New York: Braziller, 1970), pp. 151-167. Arendt's brief and beautiful distinction between labor and work should perhaps be quoted here in full. It is taken from *The Human Condition*, p. 9. "Labor is the activity which corresponds to the biological process of the human body, whose spontaneous growth, metabolism, and eventual decay are bound to the vital necessities produced and fed into the life process by labor. The human condition of labor is life itself. Work is the activity which corresponds to the unnaturalness of human existence, which is not embedded in, and whose mortality is not compensated by, the species ever recurring life cycle. Work provides an 'artificial' world of things, distinctly different from all natural surroundings. Within its borders each individual life is housed, while this world is meant to outlast and transcend them all. The human condition of work is worldliness."
6. Frampton, "Labor, Work and Architecture," p. 152.
7. Abbé Laugier, *Essai sur l'Architecture* (Paris: Seconde Edition, 1755), p. 49.
8. Hannes Meyer, "Bauen 1928." First published in *bauhaus*, year 2, no. 4. Two English translations have recently been made available. One is in Claude Schnaidt, *Hannes Meyer: Buildings, Projects and Writings* (London: Tiranti, 1965), p. 95. The other is in *Programs and Manifestos of 20th Century Architecture*, ed. Ulrich Conrads (Cambridge, Mass.: MIT Press, 1970), p. 117. The phrase "the tide of the building history" is taken from Schnaidt's translation.
9. Herman Broch, "Notes on the Problem of Kitsch" in *Kitsch: The World of Bad Taste*, ed. Gillo Dorfles (New York: Universe Books, 1969), p. 54.
10. Broch, "Notes on the Problem of Kitsch," p. 65.
11. Gottfried Semper, *Wissenschaft, Industrie und Kunst* (Braunschweig, 1852). Excerpts in English from H. M. Wingler, *The Bauhaus* (Cambridge, Mass.: The MIT Press, 1969), p. 18.
12. William Morris, "The Revival of Architecture" (1888), *Some Architectural Writers of the Nineteenth Century*, ed. Nicholas Pevsner (Oxford: Clarendon Press, 1972), p. 323. Given the argument of this present essay, Morris' conclusions about architecture made at the end of his life are worth quoting in full. "History taught us the evolution of Architecture, it is now teaching us the evolution of society; and it is clear to us, and even to many who refuse to acknowledge it, that the society which is developing out of ours will not need or endure mechanical drudgery as the lot of the general population; that the new society will not be hag-ridden as we are by the necessity for producing ever more and more market wares for a profit, whether any one needs them or not; that it will produce to live, and not live to produce, as we do. Under such conditions architecture as a part of the life of people in general, will again become possible, and I believe that when it is possible, it will have a real new birth, and add so much to the pleasure of life that we shall wonder how as people we ever were able to live without it. Meantime we are waiting for that new development of society, some of us in cowardly inaction, some of us amidst hopeful work towards the change; but at least we are all waiting for what must be the work, not of leisure and taste of a few scholars, authors and artists, but of the necessities and aspirations of the workmen throughout the civilized world."
13. Arendt, *Human Condition*, p. 36.
14. Arendt, *Human Condition*, p. 48.
15. I have borrowed the elusive term "degree zero" from Roland Barthes study *Le Degre Zero de L'Ecriture*, Paris, 1953; translated from the French by Annette Lavers and Colin Smith and published by Jonathan Cope, London in 1967 as *Writing Degree Zero*. I have used this term to suggest a cultural break in which the traditional cultural system is totally vitiated, resulting in a "black hole" so to speak within which an unforeseen socio-cultural complex begins to accrete. Of the evolution of literature in the 19th and 20th centuries Barthes has written: "From an initial nonexistence in which thought, by happy miracle, seemed to stand out against a backcloth of words, writing thus passed through all the stages of a progressive solidification; it was first the object of a gaze, (Châteaubriand) then of creative action, finally of murder, (Mallarmé), and has reached in our time a last metamorphosis, absence: in those neutral modes of writing, called here 'the zero degree' of writing; we can easily discern a negative momentum, and an inability to maintain it within time's flow, as if literature, having tended for a hundred years now to transmute its surface into a form with no antecedents, could no longer find purity anywhere but in the absence of all

signs, finally proposing the realization of this Orphean dream; a writer without Literature." At the end of his study Barthes concludes, "There is therefore in every present mode of writing a double postulation: there is the impetus of a break and the impetus of a coming to power, there is the very shape of every revolutionary situation, the fundamental ambiguity of which is that Revolution must of necessity borrow, from what it wants to destroy, the very image of what it wants to possess. Like modern art in its entirety, literary writing carries at the same time the alienation of History and the dream of History; as a Necessity, it testifies to the division of languages, which is inseparable from the division of classes; as Freedom, it is the consciousness of this division and the very effort which seeks to surmount it. Feeling permanently guilty of its own solitude, it is nonetheless an imagination eagerly desiring a felicity of words, it hastens towards a dreamed-of language whose freshness, by a kind of ideal anticipation, might portray the perfection of some new Adamic world where language would no longer be alienated. The proliferation of modes of writing brings a new Literature into being in so far as the latter invents its language only in order to be a project: Literature becomes the Utopia of language."

16. Walter Gropius, "Introduction to the Exhibition of Unknown Artists," (Berlin 1919, organized by the *Arbeitsrat für Kunst*) quoted by Ulrich Conrads and Hans G. Sperlich, *Fantastic Architecture* trans., ed. and exp. C. G. Collins and G. R. Collins (London, 1963), pp. 137-38.

17. Adolf Behne, as quoted by Conrads and Spereich, *Fantastic Architecture*, pp. 137-38. Behne's comments on "the crazy caprice of a poet," was a direct reference to the Berlin poet Paul Scheerbart whose *Glasarchitektur*, published in 1914, was a prime source of inspiration to the architects of the *Arbeitsrat für Kunst*.

18. Arendt, *On Revolution*, p. 268. Hannah Arendt is quoting in this passage from Frank Jellinek, *The Paris Commune of 1871* (London: 1937), pp. 129ff., and then from Oscar Anweiler, *Die Ratebewegung in Russland 1905-1921* (Leiden: 1958), p. 110.

19. For the full text of the program see *Gabo* (Cambridge: Harvard University Press, 1957), p. 153. This program was signed by Vladimir Tatlin and Alexei Gan. A parallel text, entitled "Constructivism" was written by Alexei Gan in Moscow in 1920. It was first published by Tver in 1922. In this essay, Gan quotes Bogdanov to the following effect; "During the primitive age, art was not the basis of a formal expression of ideologies. It served purely practical purposes and had only a utilitarian significance: it was the organising element in work, creating that 'unity of mood' among those taking part and a co-ordination of this mood with the work in hand." See Camilla Gray, *The Great Experiment: Russian Art 1863-1922* (London: Thames and Hudson, 1962), pp. 284-287.

20. The orientation of the Bauhaus workshops changed after the spring of 1923 when Johannes Itten resigned, yielding this key

position on the Bauhaus faculty to Laszlo Moholy-Nagy. Before joining the Bauhaus, Moholy-Nagy had made contact with Alexander Rodchenko and El Lissitzky, both of whom had taught in the Soviet *Vchutemas*, after their foundation in the early 20's. The translation referred to is one in which the so-called production art of the *Vchutemas*, the object design that derived its authority from an economic culture of materials, came to be aestheticized in the Bauhaus workshops. The aluminum tube and canvas chair designed under Rodchenko's direction in 1926 contrasts with Marcel Breuer's Vassily chair designed in the Bauhaus metal workshop in 1925. The respective dates, according to Quilici and Wingler, give precedence to the latter but one is left with an uncomfortable feeling that the position is the reverse.

21. J. Billington, *The Icon and the Axe* (New York: Knopf, 1968), p. 489.

22. Arendt, *The Human Condition*, p. 109.

23. Jürgen Habermas, "Technology and Science as 'Ideology,'" *Toward a Rational Society*, trans. Jeremy J. Shapiro (Boston: Beacon Press, 1971), pp. 81-122.

82 Figure Credits

Figure 1. Ernan McMullin, *Galileo, Man of Science* (New York: Basic Books, Inc., 1967), fig. 4.

Figure 2. Marc Antoine Laugier, *Essai sur l'Architecture*, second edition (Paris: Chez Duchesne, 1755), frontispiece.

Figure 3. The Museum of Modern Art/Film Stills Archives, 11 West 53rd Street, New York, New York.

Figure 4. *The Visionary Architects* (Houston: University of St. Thomas, 1968), pl. 24.

Figure 5. E. A. Gutkind, *Urban Development in Central Europe* (London: The Free Press of Glencoe, 1964), p. 274.

Figure 6. Michel Parent and Jacques Verroust, *Vauban* (Paris: Editions Jacques Fréal, 1971), pl. 41.

Figure 7. F. D. Klingender, *Art and the Industrial Revolution*, ed. Arthur Elton (New York: Schocken Books, 1970), pl. 41.

Figure 8. Claude Schnaidt, *Hannes Meyer: Buildings, Projects and Writings* (London: Tiranti, 1965).

Figure 9. Johann Friedrich Geist, *Passagen ein Bautyp des 19. Jahrhunderts* (Munich: Prestel-Verlag, 1969), p. 286.

Figure 10. Christopher Hobhouse, *1851 and the Crystal Palace* (London: Butler and Tanner Ltd., 1950), p. 48.

Figure 11. Aaron Sharf, *Art and Industry*, Open University Course, *Industrialization and Culture*, units 33 and 34 (Edinburgh and London: The Open University Press, 1971), fig. 54.

Figures 12 & 13. *A. Dickinson's Comprehensive Pictures of The Great Exhibition* (London, 1854).

Figure 14. A. J. P. Taylor, *War by Timetable* (London: Macdonald & Co., 1969), p. 115.

Figure 15. Lawrence Stallings, ed., *The First World War: A Photographic History* (New York: Simon & Schuster, 1933), p. 110.

Figure 16. Joseph Jobé, ed., *Guns: An Illustrated History of Artillery* (Greenwich, Conn.: New York Graphic Society, 1971), p. 173.

Figure 17. A. M. Hammacher, *Le Monde de Henry van de Velde* (Anvers: Fonds Mercator and Paris: Librairie Hachette, 1967), p. 92.

Figure 18. Herbert Bayer, Walter Gropius and Ise Gropius, eds., *Bauhaus 1919-1928* (Boston: C. T. Bradford Co., 1952), p. 17.

Figure 19. Bruno Taut, *Frühlicht 1920-1922: Eine Folge für die Verwirklichung des neuen Baugedankens* (Berlin: Ullstein, 1965), p. 34.

Figure 20. *Art and Architecture: USSR, 1917-32*, Catalog for exhibition held at The Institute for Architecture and Urban Studies. June, 1971 (New York: Wittenborn & Co., 1971), p. 4.

Figure 21. Vittorio de Feo, *USSR: architettura 1917-1936* (Editori Riuniti, 1963), p. 100.

Figure 22. Vieri Quilici, *L'architettura del costruttivismo* (Bari: Editori Laterza, 1969), fig. 17.

Figure 23. *Transform the world! Poetry must be made by all!*, Exhibition catalog (Stockholm: Moderna Museet, 1969), p. 54.

Figure 24. Leo Castelli Gallery, 4 E. 77th Street, New York.

Figure 25. Photo by Joe Clark.

Since the beginning of the 19th century the model of an architectural utopia has served as a projected strategy for the redemption of alienated society through physical form. The author briefly examines the vicissitudes of this particular projection throughout the 19th century and concludes by challenging the potentially regressive nature of its extension into the present. 83

Anthony Vidler was born in England in 1941. He was educated at the University of Cambridge where he received a degree in architecture. Since 1965 he has taught at Princeton University, where he now holds the position of Associate Professor. His major work as an architectural critic and scholar has been restricted in the main to French developments between 1750 and the early 20th century, with particular emphasis on the contribution of the utopian socialists to the ideology of modern architecture.

84 *The social edifice then has been abandoned: the crowd has burst into the wood-yard. Columns, capitals and plinths, wood, stone and metal have been distributed in portions and drawn by lot and, with all these materials collected for a magnificent temple an ignorant and barbarous property has built huts. The work before us then is not only to recover the plan of the edifice, but to dislodge the occupants who maintain that their city is superb and at the very mention of restoration appear in battle array at their gates.¹*

Pierre Joseph Proudhon
1848

The almost universal predilection of mankind to live in *huts*, where it might have had *palaces*, has always embarrassed and frustrated architects and architecturally minded utopians. Proudhon's image of the crowd dismembering the utopian ideal of community referred in his time to the death of *phalanstery*; today the image of the architect attempting forlornly to breach the walls of populist suburbia is equally telling. In essence the problem revealed by Proudhon's scenario is of the conflict between "ordered" ideal and "disorderly" reality, between utopia and existence, and the dichotomy has always been of especial interest to architects and planners who have ever tended to solve real problems with the aid of ideal solutions.

Time and again, the intransigence and incomprehension of society in the face of holistically structured plans for its redemption has confounded the omnipotence of architects. Ledoux found it almost impossible to believe that his magnificent toll-gates for Paris should have become the target of revolutionary fury in the days before the storming of the Bastille; rather than recognize that toll-gates, however splendid or idealized in their forms as centers of recreation for the community, are in the end read as toll-gates, he preferred to characterize the mob as barbarous and short sighted. All Fourier hoped for was a single individual with capital who would help finance the new social world of Harmony. Puzzled by the apparent reticence of princes and industrialists to come forward out of self interest to found the experimental community, he nevertheless returned at noon

Figure 1. In the mid-18th century, Laugier's representation of the muse of architecture turning back to a more natural, primitive model—the "small rustic hut"—established a type form for Rousseauesque naturalism.

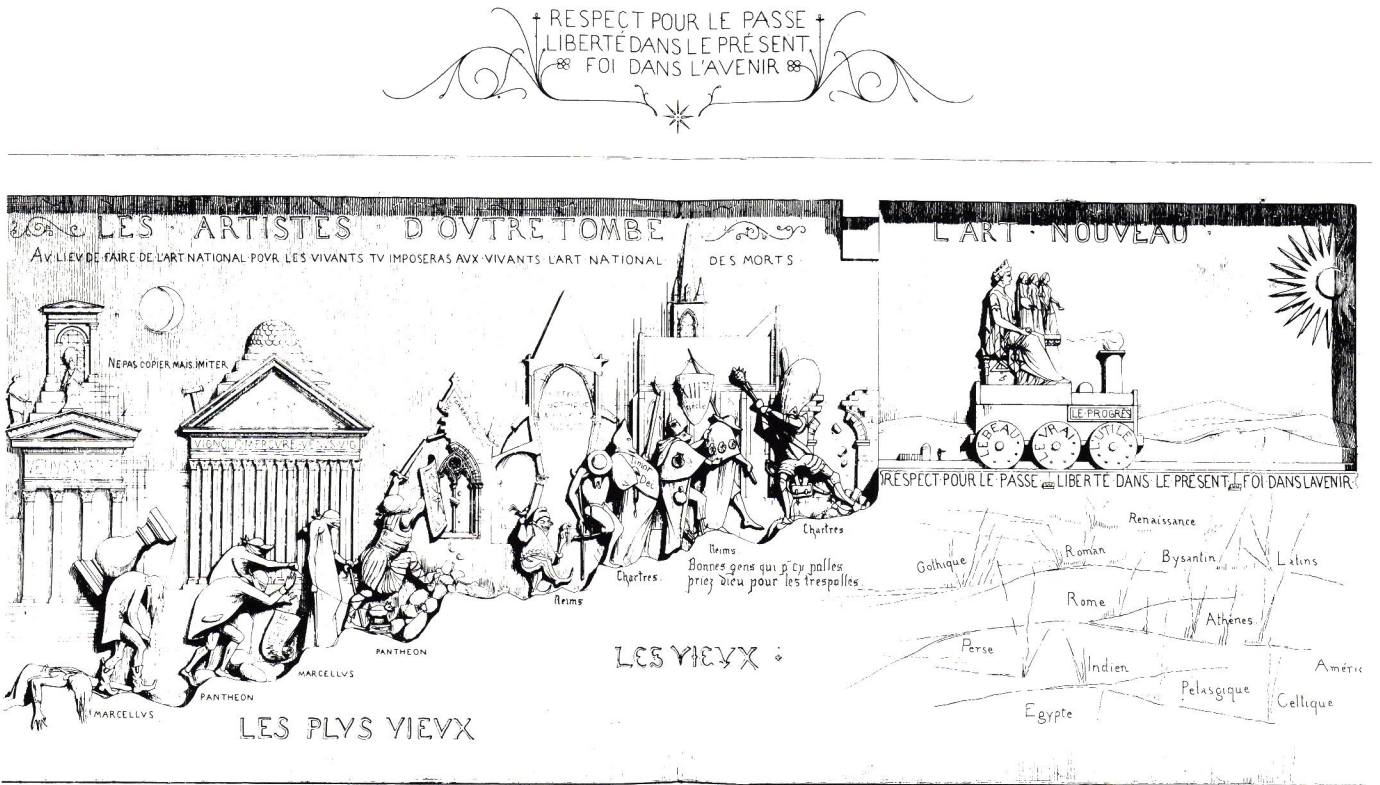
to his lodgings every day of his life in order to await the saviour. His followers lost their fortunes, their reputations, their liberty and sometimes their sanity in attempts to show even the smallest group of individuals the benefits of harmonious association under one roof. Jeremy Bentham, with a different version of social utopia, ceaselessly petitioned a continually resistant government to set up the universal Panopticon. Saint-Simon dreamed of canals and roads, and told unheeding industrialists and technocrats, politicians and administrators of their mutual interests in social progress; his followers invested in railroads and boulevards trying to establish universal communication. Powerful visions of social idealism indeed, and seemingly blind to their obvious defeat.

For obvious their defeat was, probably as soon as each doctrine had been developed, and certainly by 1848. Proudhon himself had announced the end of utopianism, the positivists of the eighteen-twenties and thirties had never recognized it on their map of progress, and Marx and Engels confirmed its demise in the categories of social thought presented in the Communist Manifesto. In practice, most of the communities set up under the inspiration of the utopians had failed to sustain community life for more than a few years, and the architectural determinism implied by their builders had likewise failed to stimulate social bonds where mutual interest had collapsed. The very word *utopia* was beginning to take on the characteristics of abuse, fear and hatred that it provoked among intellectuals and workers alike. Eugene Sue, novelist and politician, a Fourierist at heart and a realist in his novels, depicted the downfall of *phalanstery* in similar terms to Proudhon, but with the distinct difference that whereas Proudhon seemed to mourn the death of the ideal — an architect standing before the ruins of his grand scheme — Sue is prepared to understand more sympathetically the motives and needs of those who would attack utopia, as well as the evident benefits accruing to those who make utopia work for them. In his novel, *The Wandering Jew*, Sue presents the scene of idyllic peace reigning in the community set up on Fourieristic principles by an enlightened factory owner, M. Hardy. The Communal Dwelling-house is described in loving detail:

the rising sun bathed in light this imposing mass of buildings, situated a league from Paris, in a gay and salubrious



Figure 2. By the mid-19th century, with the impossibility of retrieving the Golden Age finally demonstrated, Daly seats Architecture on a steam engine called Progress, moving toward a sunlit future where architecture at least can see the possibility of making l'art nouveau.



Roberts arch. 1860 no 100

LES ARTISTES D'OUTRE-TOMBE
HYMNE DES VIEUX

Tu mépriseras
le Parthéon tu haïras le
Parthéon et tu jeteras et Rome et
Athènes aux pieds de Reims et de Char-
tres. Phidias et Léonard seront pour toi des
impôts à qui Dieu refuse le sentiment du beau.
Tu précéderas traites à l'Art et contempleras
du picot et Brandeschi et Bramante et Léonard
de Vinci et Raphaël et Michel-Ange et Cellini. Tu
te feras plus liturgique que l'Eglise plus catholique
que le Pape. Tu annonceras que les successeurs
de St Pierre, Laurent, ton pauvre pour comprendre
l'art chrétien et que le christianisme lui-même
depuis trois cents ans, est à ce point impotent et
gléat qu'il ne pu mesurer aux artistes une forme
d'art digne de sa splendeur décroissante.

L'ARCHITECTURE CONTEMPORAINE

(Illustration de l'article « La Liberté dans l'Art » par M^r César Daly.
Voy le 7^m Vol. p. 390. de la Revue de l'Architecture, etc.)

LES ARTISTES D'OUTRE-TOMBE
HYMNE DES PLUS VIEUX

Tu n'auras que
l'antique. Tu adoras la pla-
te-bande tu rendras hommage au
pléin-entier mais tu maudiras l'ogive. Tu
classeras les maures et les berges des visux.
Romaine et tu auras le droit d'ignorer ce que de
ton pays. Tu apprendras comment les anciens hono-
raient Mercure le voleur, et Vénus l'impudique, et tu
lors tu auras plus qu'un fou pour glorifier le
Christ qui change les volutes du temple et la Vierge imma-
culée type de pudeur et de maternité. Tu anathématiseras
les Métrons et les Lucrèces qui ne commencent jamais. L'
art grec et la charnières les mérites de Vitruve, que n'as
connut pas davantage. Tu dessineras le Parthéon et le thé-
âtre de Marcellus, le théâtre de Marcellus et le Parthéon.
de marces Parthéon et le théâtre de Marcellus car ils
sont la loi et les prophètes. Mais avant tout d'oublier
tu maudiras le moyen âge, ses pompes et ses au-
tres et tu n'as pas adonné et ont gardent
bien de les étudier dans la crainte
de les connaître.

locality, from which were visible the woody and picturesque hills. Nothing could be plainer and yet more cheerful than the aspect of the Common Dwelling-house of the workmen. Its slanting roof of red tiles projected over white walls, divided here and there by broad rows of bricks, which contrasted agreeably with the green color of the blinds on the first and second stories. These buildings, open to the south and east, were surrounded by a large garden of about ten acres, partly planted with trees and partly laid out in fruit and kitchen-gardens.

Seemingly a fairy-tale community in a fairy-tale setting, yet, as Sue took care to emphasize, neither totally utopian, nor completely without merit: this hermetic society, enclosed by its gardens and high walls, was in fact set up “to bestow on a considerable number of human creatures an ideal prosperity compared with the frightful, almost homicidal doom to which they are generally condemned.” A utopia, however, which necessarily left a far more considerable number outside its walls and deprived of its benefits. The eighteenth century vision of utopia, as asylum harboring those who desire to escape from their society – the Ledoux ideal of a “world within a world” – is now being turned inside out and shown as the castle defending the riches of a privileged class and preventing their general distribution. The workers outside M. Hardy’s establishment could hardly fail to draw painful comparisons between their miserable condition and the comfort and ease enjoyed by those inside. In the end they were bound to be the unconscious instruments of destruction, breaking down the walls, smashing the machines and putting the commune to fire; in Sue’s perception the act was inevitable and in no way reflected ill on the character of the workers either inside or out. In other circumstances all would be worthy citizens, industrious and moral.

Perhaps ultimately it was such ambiguity, such inability either to discount the value of utopia or to be blind to its problems, that led to the survival of communitarian dreams for the next century; certainly it would be difficult to be entirely cynical about the motives of those idealists-turned-realists who ingenuously adumbrated paternalism and self interest with phalanstery under the guise of public housing. Architects like Cesar Daly, one of the inner circle of Fourier’s disciples, designer of the first experimental phalanx and close

friend of Victor Considerant, and who apparently turned away from idle dreams of harmony when he established the highly professional *Revue Générale de l’Architecture* in 1840, was in fact active in the Fourierist movement until his death, corresponding with the members of the *école* and supporting numerous attempts to establish the phalanstery. We should then look for utopianism in a less overt form in the pages of the *Revue* and similar journals (an explicit socialism would hardly be acceptable in a serious professional enterprise demanding wide circulation); the political stance of Daly’s magazine remains on the level of an unassailable and uncontroversial humanitarianism. The utopian impulse is in the end absorbed and developed through the medium of a reconstituted *professionalism*. A professionalism that on the surface interests itself solely in the “progress of the art” on aesthetic and technological levels and accepts a social role simply by accepting the responsibility for building for the whole of the social order. Yet implicit in the very idea of aesthetic progress was, of course, the corresponding progress of society; implicit in the idea of a new art was the idea of a new society. A century before, Laugier had represented the muse of architecture turning back to a more natural, primitive model – the “small rustic hut” – establishing a type form for Rousseauesque naturalism; now, in 1848, the impossibility of retrieving the Golden Age finally demonstrated, the irrepressible Daly seats Architecture on a steam engine called Progress swiftly moving toward a sunlit future out of the night of the dead past³. With “respect for the past, liberty in the present and faith in the future,” architecture at least can see the possibility of making *l’art nouveau*; perhaps society will follow in its wake. With hopes for political reform largely in abeyance, with the potential for revolution apparently far in the future, social idealism can be exercised in the construction of a new aesthetic order and political activism sublimated in the building of public works.

It might seem paradoxical that under the guise of art utopianism could flourish and generate attitudes that in their turn would become the controlling structures of twentieth century architecture and urbanism; that in the face of denial and unrelenting criticism the realm of no-place should have remained such a seductive paradigm, and yet this condition has by no means been confined to architectural thought.

88 “God forbid,” cried Bacon, “that we should give out a dream of our own imagination for a pattern of the world” — reason, calm inductive enquiry and observation is enough for man, who is after all no more than the servant and interpreter of nature; still it was Bacon who then proceeded to draw up one of the most archetypal of utopias, the *New Atlantis*, a formulation of social progress that in his own words was “a model more vast and high than can possibly be imitated.”⁴ Its extreme utopian characteristics were savagely satirized in the next century by Swift in his description of Laputa in the third book of *Gulliver’s Travels*; its high scientific purpose was emulated by Condorcet and Saint-Simon and became the credo of the Polytechnicians of the nineteenth century. It was, after all, one of the destinations of Daly’s architectural train. And what of Proudhon, who steadfastly refused to erect a new utopian doctrine, who believed that “if the present finds few defenders, the disgust with utopia is no less universal”; did not Proudhon find himself drawn to the paintings of Courbet as much for their depiction of rural virtues and peasant values (the utopia of Retif de la Bretonne) as much for their implied connection with “social realism”? Art itself, for Proudhon the anti-utopian, was the very means of its realization: “an idealistic representation of nature and of ourselves with an eye toward the physical and moral perfecting of our species.” Thus the particular aptness of his metaphor: confronted by the onslaught of the crowd, the dismantling of his ideal, the architect has in the end to be true to his utopian mission. The recovery of the lost plan of the Social Edifice, the expulsion of the populace from their self-made city, and the re-building of social unity through unities of dwelling has become an almost unquestioned common-place of architectural endeavor to the present, each generation re-defining the outward form of the social palace according to prevailing ideas of *l’art nouveau* and accepting the inherent utopianism with remarkable equanimity.

For Charles Fourier the problem of defining the new architecture appropriate to the future society of harmony resided in the obvious fact that since the architecture of any society is formed *by* that society, and since harmony was not yet in existence, it was a logical impossibility to preconceive its forms. He consistently held to this premise, believing that

architecture is the mirror of a social structure, and that each social form achieves its eventual embodiment in environmental form; it was left to his followers to actually *draw* the Phalanstery as a socialist version of Versailles. All Fourier could do was to create a *model* of the possible harmony and illustrate it with a description of its own appropriate architecture. Once established, it would be for the social community itself to develop its shelter by trial and error. But in the utopianism of the later nineteenth century and early twentieth the equation between society and architecture has been reversed; we find the feeling that if you once managed to build the architectural form of a new community, the inhabitants of the form would by some process of adaptation begin to follow its dictates — the architecture itself would be the agent of social change. Now this shift in thought might very well be attributed to the frustration and impatience of architects confronting a political impasse, especially around 1848; objects are more easily controlled than people. This would, however, hardly account for the extraordinary staying power of the myth of environmental redemption, and unless we are willing to dismiss the urban visions of the modern movement as the fantasy worlds of minds retreating from reality, political impotence remains at best a partial explanation. That is, if we are to read *La Ville Contemporaine* and *La Ville Radieuse* as serious propositions advanced in all seriousness to address a major social problem, we have to admit that the idea of architecture shaping and controlling society has taken over almost completely. And here we find the modern movement adumbrating its reinterpretation of community utopia with yet another utopia of eighteenth century descent — that inversion of phalanstery, the Benthamite Panopticon.

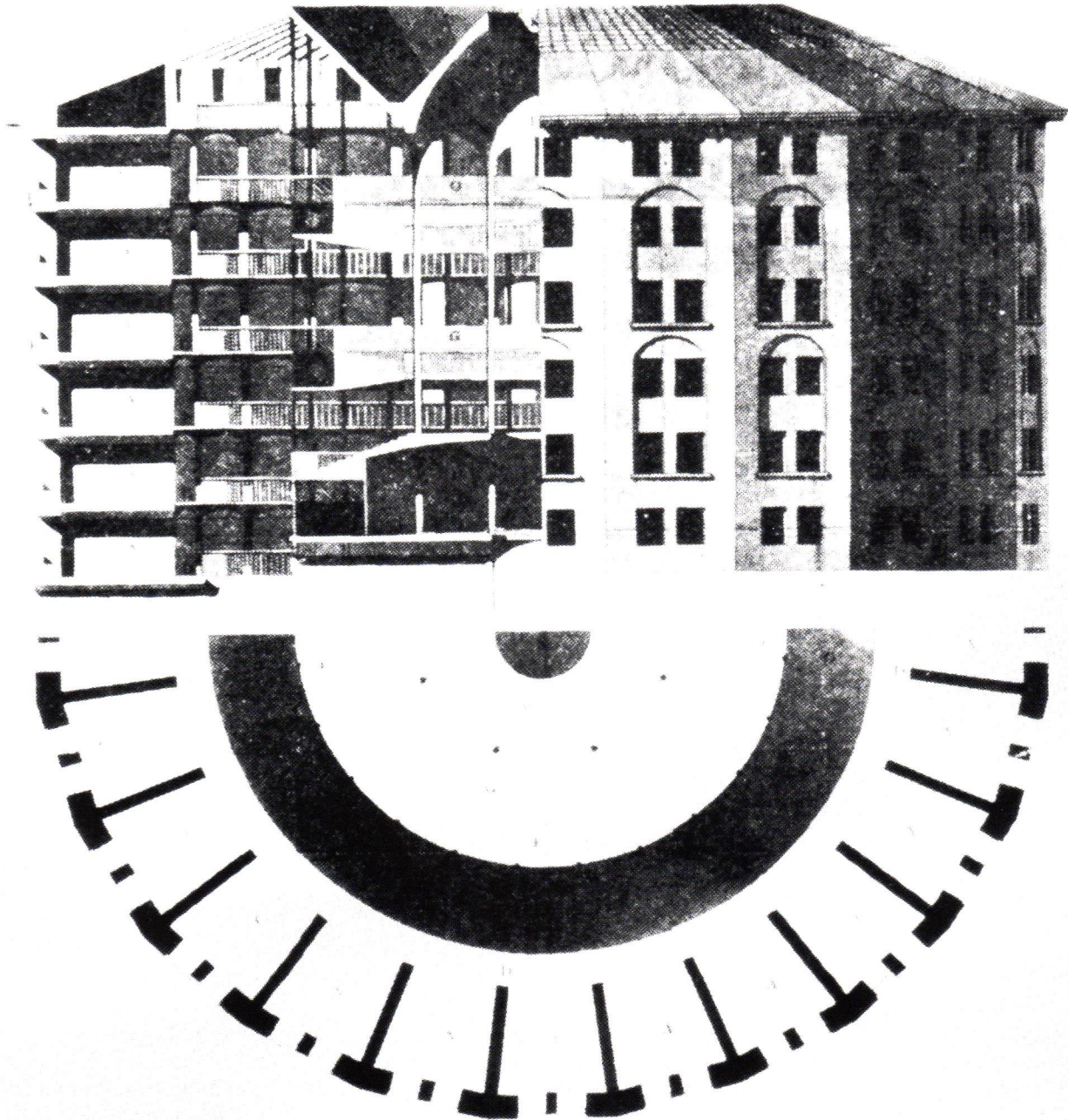
Ostensibly a harmless poor-house for the charitable relief of the indigent, in its time considered a radically reformist idea, the Panopticon was conceived by Bentham as the universal panacea:

Morals reformed — health preserved — industry invigorated — instruction diffused — public burthens lightened — economy seated as it were upon a rock — the gordian knot of the Poor Laws not cut, but untied — all by a simple idea in Architecture!

This simple idea in architecture, the idea of planning a struc-

Figure 3. At the end of the 18th century, Bentham conceived of his Panopticon as the universal panacea. Its essential message has been clearly heard throughout modern times: change the environment and you change the society; ergo, envisage a perfect society, design and build its architecture, and the one will control the other. While attitudes toward

reform have changed radically over the last two centuries, the architects of the first quarter of this century nevertheless found common ground with Bentham.



90 ture that would act as a control mechanism for its inhabitants, was, in Bentham's terms, "a new mode of obtaining power of mind over mind, in a quantity hitherto without example, and that to a degree equally without example." "Such the engine," Bentham concludes, "such is the work that may be done with it." Architecture in the machine age has itself become another machine with defined functions, designed according to specification and operating according to rules of performance. Its occupants have little choice – they inevitably become working components of the machine. Bentham wonders whether a society of machines is in fact the ideal he erects: he quickly dismisses such problematic doubts by applying his happiness principle. "Call them monks," he writes, "call them soldiers, call them machines: so they were but happy ones I should not care."⁵

If this smacks of totalitarianism, it is true that the Panopticon was first conceived as the ideal prison, and *later* applied universally to almost every institutional structure; it is also true that attitudes toward reform have changed radically over the last two centuries, but the essential message has been clearly heard throughout modern times – change the environment, you change the society; *ergo*, envisage a perfect society, design and build its architecture, and the one will control the other. So obvious was this simple architectural idea, useful for "any sort of establishment in which persons of any description are to be kept under inspection" (that included, for Bentham, prisons, poor-houses, houses of industry, work-houses, manufactories, mad-houses, lazarettos, hospitals and schools), that its author marvelled,

Considering the extensive variety of purposes to which this principle may be applied, and the certain efficacy which, as far as I can trust my own conceptions, it promises to them all, my wonder is, not only that this plan should never have hitherto been put in practice, but how any other should ever have been thought of.

If University College, London, has found it difficult to exorcise the spirit of Bentham, modern architectural utopianism, has, albeit unconsciously, demonstrated the indestructibility of his architectural principles. Indeed the architects of the first quarter of this century would find common ground with Bentham even in the aesthetic principles of Panopticon, principles that stem directly from its definition of functional re-

quirements: summarized, and ranked in order of importance, they read,

HEALTH; depending on freedom from *damp*, facility of *ventilation*, security against the spread of infection, thence, occasional faculty of separation.

COMFORT; depending on exemption from excessive *cold*, *heat*, *bad smells*, *noise* and *observation* of superiors when not necessary.

INDUSTRY; depending on *size*, *form*, *dimensions* and *lightsomeness* of the whole building and of each apartment, according to the nature of the business carried on in it, *compactness* (i.e. distance between apartment and apartment throughout—the shorter the better).

MORALITY in as far as it depends upon DISCIPLINE; for the perfection of which there should be *universal transparency*.⁶

Thus, as with contemporary elementarism, health, comfort and privacy depend almost entirely on efficient air-changes, heating and cooling, separation of one activity from another by isolation, all defined negatively (that is, as minimal standards). Industry – the code word for social activity – depends on saving time by saving distance and on proper day-lighting conditions. Finally, morality (dependent on discipline) is to be ensured by universal transparency of the most literal kind. The inspection principle, "simultaneous inspectability at all times," operates efficiently when all can be seen: perhaps the ideal of a *glass architecture*, of the open plan, is the final democratization of inspection.

Thus, at its inception, the architecture of utilitarian functionalism was infused with moral determinism and utopian fervor; in retrospect its formal principles – transparency, elementarism, machine imagery, economy, technological utopianism – seem not so innocent, nor so purely liberating as the creators of the new spirit would have had us believe. The control of the social mind was in the end the aim of most urban utopias of the twenties however beneficent the expected results. Radiant the city was, but it was also pan-optical – if not in the conscious mind of its creator, certainly as a received image for society at large. Those ever prescient creators of dystopia, Wells and Zamiatin, spelt out its true message long before the architects conceived its typical forms. In one of his greatest anti-utopian novels, *When the*

Sleeper Wakes, Wells described the familiar situation of the hero waking after a trance lasting two centuries in the twenty-first century; his estate has grown to envelop half the world, his managers control the blue clad inhabitants as servants of an advanced technology. The new city is a three dimensional infra-structure of services and transportation routes: all is air-conditioned, cool, white, translucent – the Golden Age of the machine. But this was perfection in outward form only:

Here was no utopia. The ancient antithesis of luxury, waste and sensuality on the one hand and abject poverty on the other, still prevailed. And not only were the buildings of the city gigantic and the crowds in the street gigantic, but the voices in the ways, the very atmosphere, spoke of gigantic discontent.⁷

The crowd is again at the gates: Sue had shown it in microcosm, now Wells saw the machine panopticon destroyed in a similar way. Always the problem of the crowd, muttering, gathering in the ways, roaring and then breaking and burning. How could the flaneurs resist? Their transparent arcades were fragile and hardly bastions of power. In Zamiatin's *We* of 1924, on the other hand, the masters have finally gained control: the city, giant, grey, gridded and numbered, is protected from nature, and thus from the appeal of freedom by the green belt par excellence—the Great Green Wall. If the inhabitants find their role as machine robots not to their liking there is always lobotomy to serve the purpose of creating happiness. As Le Corbusier aptly epitomized the problem in the final chapter of that most traditional of architectural theories, *Vers une architecture*: architecture or revolution.

Now it may seem that the pathology of modern architecture expounded above conclusively establishes the death of a nineteenth century vision of progress confronting the realities of twentieth century social awareness, much in the same way that Marx and Engels proclaimed the death of utopian socialism and the birth of a scientific kind. And yet, architects, planners and politicians continue to present us with images, postulations, predictions for a new urbanism and architecture that will, despite all past experience, at last provide a vehicle for salvation. System designers and engineers dream of a world so rationally ordered as to allow of no evil—mechanisms of planning innocent of any ulterior motive

of political or economic interest—while romantics, poets and many architects beside, propose arcologies and dymaxion synergies that will once and for all solve the world problem with antique architectural splendor. So disparate seems the need for such visions of a possible future that the word *utopia* itself, fallen into disrepute among positivists and idealists alike following the strictures of Marx, has become not only fashionable but legitimate. The very word has radical chic—it supplants “structuralism” last year and “systems theory” the year before and it is the secure province of the avant-garde.

Perhaps we would have no quarrel with such a movement in ideas, a movement supported by emerging “sciences” of futurology and prediction, if we could be certain that the utopianism it embodies is of the *critical* kind, the kind that is of value because it attacks every principle of existing society and recognizes, in the present, tendencies that are yet undefined and indistinct; if we could see in it the attempt to work out, like a Fourier, the critical structure for a state of existence that does not exist, as an anti-paradigm for observing the present. As it is, we see only the exhausted projections of idealistic systems created in the nineteenth century as means of allowing the existing structure of power and interest to absorb and in some cases adopt their premises. Thus, ever since the now famous study by Boguslaw, *The New Utopians*, utopian thinking whether past or present, has become almost synonymous with the act of model making or of systems design, undertaken by the operations researcher, the systems engineer or even the sociologist. A utopian theory, a literary or architectonic utopia, or even a mildly philosophical observation on the possible nature of social order, are immediately characterized as *models* of social and environmental systems: they are invested with objectives, goals and missions; what they are supposed to do is called a performance requirement; they suffer, like most systems, from inputs, outputs and constraints; if they are tried out in practice, feedback may even be observed. In such a manner has the contemporary researcher overcome his inherent distrust of things subjective, things critical, and his fear of myth, fable, allegory, satire and fairy-story. In the time of Fourier and Sade, such speculations were at least recognized for the subversive objects they were, and immediately consigned to

92 the mad-houses of Charenton. Now they are absorbed by being accredited the proper objects of disinterested research. Either this, or else the utopia, is acceptable anyway: non-critical and phantasmagoric, it threatens no one, and may even support many. We remember those German idealists characterized by Marx, “whose speculative cobwebs, embroidered with the flowers of rhetoric, steeped in the dew of sickly sentiment” served to wonderfully increase the sale of their goods amongst the public.

Notes

1. Pierre-Joseph Proudhon, *Système des contradictions économique ou philosophie de la misère* (Paris, 1846), Chapter 1, part ii.
2. Eugene Sue, *Le Juif Errant* (Paris, 1845), vol. II, part 2, Chapter L.
3. I am indebted to Colin Rowe for drawing my attention to this particular allegory.
4. Francis Bacon, *New Atlantis* (London, 1624), Preface.
5. Jeremy Bentham, *Panopticon, or the Inspection House* (London, 1791), Letter xxi.
6. Jeremy Bentham, “Plan of an Industry House,” *Outline of a work entitled Pauper Management Improved* (London, 1797), section ii. It was, of course Robert Evans who recently re-introduced Panopticon into the theoretical debate.
7. H. G. Wells, *When the Sleeper Wakes* (London, 1899), p. 69.

Figure Credits

- Figure 1. Marc Antoine Laugier, *Essai sur l'Architecture*, 2nd. edition (Paris: Chez Duchesne, 1753), frontispiece.
- Figure 2. César Daly, “La Libertie dans l'Art,” *La Revue Générale de l'Architecture et des travaux publics*, Vol. 7 (Paris, 1847), p. 392.
- Figure 3. Robin Evans, “Bentham’s Panopticon,” *AAQ*, Summer 1971, p. 21.

**Semiotics and Architecture :
Ideological Consumption
or Theoretical Work**

Diana Agrest and Mario Gandelsonas

Theories of architecture and design have largely been oriented towards the perpetuation of the fundamental structure of Western society, while seeking at the same time to maintain design as a valid operation within this established order. The authors challenge this adaptive role of architectural theory through their analysis of the absorption of semiotics as a “theoretical blockade,” and argue that theory can only be considered a production of knowledge when its ideological basis is totally transformed.

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94 In the last twenty years the production of “theories” of architecture and design has dramatically accelerated in a way that emphasizes the particular role of architectural theory as it has been continuously developed over five centuries. The function of these “theories,” now as always, has been to adapt architecture to the needs of Western social formations,¹ serving as the connection between the overall structure of a society and its architecture.² In this way architecture has been modified to respond to *changing* social demands; architecture thereby *becoming* assimilated to society through “theoretical” operations. The corresponding changes introduced by “theory” into architectural practice serve to perpetuate the basic structure of the society and at the same time maintain architecture itself as an institution within Western social formations.³

In a previous article⁴ we established the process of production of knowledge as a theoretical project which is aimed neither at adapting architecture to the “needs” of the social formations nor to maintaining the architectural institution as we know it. At this juncture one is concerned with *theory* in a strict sense, as opposed to the adaptive “theory,” which we call *ideology*.

Ideology can be seen as a certain set of representations and beliefs — religious, moral, political, aesthetic — which refer to nature, to society and to the life and activities of men in relation to nature and society. Ideology has the social function of maintaining the overall structure of society by inducing men to accept in their consciousness the place and role assigned to them by this structure. At the same time it works as an *obstacle* to real knowledge by preventing both the constitution of theory and its development.

Its function is not to produce knowledge but to actively set itself against such production. Ideology in a way alludes to reality, but it only offers an illusion of this reality.⁵ The summation of Western architectural “knowledge” in its entire range, from commonplace intuition to sophisticated “theories” and histories of architecture, is to be recognized as ideology rather than as theory. This ideology has explicitly claimed to serve the *practical* needs of society, by ordering and controlling the built environment. Nevertheless, we hold

that the underlying function of this ideology is in fact the pragmatic one of both serving and preserving the overall structure of society in Western social formations. It serves to perpetuate the capitalist mode of production, and architectural practice as part of it. Thus, even if ideology affords knowledge of the world, it is a *certain* knowledge, which is limited and distorted by this overriding function.

We propose that there is a need for a theory, which should be clearly distinguished from the adaptive “theory” or, what we call here architectural ideology. In these terms architectural theory is the process of production of knowledge which is built upon a *dialectical* relationship with architectural ideology; that is, it grows out of this ideology and at the same time is in radical opposition to it. It is this dialectical relationship which distinguishes and separates theory from ideology.

In opposition to ideology, we propose a *theory* of architecture, which is necessarily placed outside ideology. This theory describes and explains the relationships between society and the built environments of different cultures and modes of production.⁶ The theoretical work uses as its raw material no real or concrete things but beliefs, notions and concepts regarding these things. These notions are transformed by means of certain conceptual tools, the consequent product being knowledge of things.⁷ Architectural ideology, considered as part of a bourgeois society and culture, provides part of the raw material on which the conceptual tools must be brought to work.

The *relationships* between theory and ideology might be viewed as a continuous struggle where ideology defends a type of knowledge whose major effect is the preservation of existing social systems and their institutions, rather than the explanation of reality. There have been many examples in history of this relationship. Ptolemy’s theory of the universe, which corroborated Biblical texts, was supported by the Church for centuries against any other models which could explain more accurately the same reality. In opposition, Copernicus’ theory was the result of a conceptual mutation within such an ideology. He literally destroyed Ptolemy’s notion of geocentrism, and he separated his theory from this ideology by “projecting the earth into the skies.”⁸ In return,

the condemnation of Copernicus by the Church through its attempt to suppress a new concept of the world where man was no longer the center of the world, and where the Cosmos was no longer ordered around him, shows another aspect of this struggle. The theoretical ideology, which originally opposed the Copernican conception, finally *absorbed* it to reaccommodate the theoretical structure. In this process of dialectical relationship between theory and ideology two different stages must be distinguished: the first is that of *productive transformation*, when the ideology is initially transformed to provide a theoretical basis; the second is that of *methodological reproduction*, when the theory is developed as an entity separated from ideology. In this sense, Copernicus' studies correspond to the first stage, where the theoretical work consists essentially in the subversion of a given ideology.

In architecture, we have yet to see a Copernicus to introduce the first stage of theoretical explanation. Indeed we have only recently begun to perceive the need to analyze the relationships between theory and ideology.

Several architectural ideologies have had a more or less systematized appearance, which has been emphasized through the ambiguous title of "theory." In recent years this ambiguity has been accentuated by several pseudo-theoretical developments that use models from different fields, such as mathematics, logic, behaviorism or philosophy. When these models are applied, they introduce a superficial order while leaving the basic ideological structure unchanged. This introduction of models from other fields is to be regarded as ideological consumption, and may be witnessed as temporary fashion at the level of technique.⁹ *But the consumption of theories, which can be considered in themselves tools for the development of theory on architecture, acts as a special form of ideological obstacle, which we call theoretical blockade.*

Many theories pretending to be theory in a strict sense are in fact the precise opposite. They function as an *obstacle* to theoretical production. But the many "semiotic theories of architecture" which have been produced in recent years, serve only to consume a theory of semiotics—that in our opinion might provide a range of tools for the production of

knowledge *on* architecture. They constitute the essence of a theoretical blockade.

This transposition of linguistic and semiotic concepts to the field of architecture only maintains architectural ideology. Such a procedure cannot be confused with a theoretical process which must be based on the critique and subversion of the ideological notions. In our opinion, semiotics can help in this critical task, as an important tool for the *production of knowledge*, only if we understand the semiotic concepts in relation to a general semiotic theory and not as isolated formulas. This implies that semiotic concepts related to a semiotic theory must be distinguished from similar concepts related to other theoretical fields. For example, while the concept of "code" belongs both to semiotics and communication theory, it performs a different role in each theory. Most present uses of semiotics fail to develop explicitly the distinction between notions belonging to different theoretical fields—semiotics, communication theory and traditional semantics—which they use in a random and arbitrary fashion.

One aspect of theoretical blockade seems to us to arise in a situation when those responsible for developing "theory" neither distinguish nor relate with sufficient precision distinctly different discourses whose epistemological base and orientation is patently divergent. This can be seen in the existing confusion in the use of the notions of communication and signification. To understand more clearly the nature of this confusion one can look at George Baird's "La Dimension Amoureuse in Architecture."¹⁰ Baird writes, for example, "In the most modern sense of the distinction, the langue of a social phenomenon is considered to be its 'code,' and the parole its 'message.' In some respects, this distinction is the most interesting because it introduces into semiology a number of precise mathematical techniques of analysis, commonly grouped under the name 'information theory.'"¹¹ The confusion here is that langue and parole are related to the notion of signification, and code and message to the notion of communication. Langue-parole and code-message can only be cross-linked in very few and exceptional cases. The confusion between these two notions produces a situation where there is no clear definition and distinction made between communications theory and semiotics considered as

96 a theory of signification. This problem can be seen in another statement by Baird where these two theoretical fields are again considered to be interchangeable: “Taking its cue from Levi-Strauss’ structural anthropology, modern *semiology* looks on all social phenomena as *communication* systems; not only the obvious ones... but also... architecture.”¹²

If semiotics is to become an important tool for the development of architectural theory, it would seem important to clarify the distinction between the notion of *communication* and the notion of *signification*, and their particular relevance for architecture.

Semiotics, the theory of the different systems of signs, is considered to be only a first stage towards a future general theory of ideologies.¹³ In this present stage semiotics not only can provide models, but it can also suggest theoretical strategies in our battle against a specific ideology, architectural ideology.

In the definition of semiotics as given by Saussure,¹⁴ the notion of communication does not appear for the precise reason that it is a different and distinct phenomenon from signification. The study of the phenomenon of communication, which analyzes how signs are sent and received, differs from and cannot be confused with a study which analyzes “what the signs consist of” or “what laws determine them.”¹⁵

The notion of communication in fact is related to a characteristic that is common to all systems of signs; namely that they provide a means for communicating between individuals. In contrast, the notion of signification depends on the particular internal structure within a given cultural system, such as that appointed to architecture, cinema or literature. The particular structure of such cultural phenomena stems from their *existence* as social institutions and not from their *use* by individuals. In architecture, for example, the particular signification of Japanese buildings is related to the internal structure of an architectural system of signs which is determined by the social and cultural context, and not by their functional use, which is similar to the use of buildings in other cultures, i.e., shelter, gathering, etc. In other words, the notion of communication is related to the function and

use of a system whereas the notion of signification indicates internal relation within a system. Communication is concerned with the *use* and *effects* of signs, while signification is concerned with the *nature* of signs and the *rules* governing them.¹⁶ This difference implies, first, that even if we understand the factors which are part of the process of communication, we may still not know anything about the nature of signification itself; secondly, that since signification depends on the specific nature of the different systems of signs, it has to be redefined for each different semiotic system according to the way its internal structure works and according to what makes each internal structure different. This, then, is precisely the subject matter of semiotics—to consider the different semiotic systems as devices which produce signification, and to determine how this signification is produced.

Saussure’s procedure for defining semiotics, linguistics and linguistic signification demands examination both as a device for the discussion of ideological notions and to establish the heuristic value of semiotic concepts and procedures as a tool for the production of a theory *on* architecture. In Saussure, language itself is subsumed by the notion of semiotics. The definition of linguistics requires a simultaneous definition of semiotics. Saussure defines semiotics (*semiologie*) as the science of the different systems of signs and the study of “*langue*” (the system of language) as the study of only one of the various semiotic systems. He then defines the concept of “*sign*” (the units of the system) as a double entity composed of a “*signifier*” (the acoustic image) and “*signified*” (the concept). Following this, signification is defined as a relation, internal to the sign, linking signifier and signified. He then demonstrates the arbitrary character of signification in the sign and shows how it is determined by another relation—the relationship between signs external to the signs themselves, which Saussure calls *value*.

With this definition Saussure opposes the concept of signification in traditional semantics. In traditional semantics, as shown, for example, in the semiological triangle of Ogden and Richards, it is the particular conjunction of a form and a meaning which gives rise to the word; that is, meaning itself is considered as inherent to the word.¹⁷ For Saussure, on the other hand, words only take meaning according to their place

within language considered as a semiotic system; that is, the word has no inherent meaning in itself. Saussure is opposed to the thesis of inherent meaning, where the meanings of the components of language mirror their content, or in other words, where language is seen as a representation of a thought that exists before or independent of any linguistic realization.¹⁸ Saussure postulates language as being a device – and not a mirror – for communication. This device is seen as a system of signs, which in turn is structured upon an internal, arbitrary relationship. As Barthes remarks: “Starting from the fact that in human language the choice of sounds is not imposed on us by the meaning itself (the *ox* does not determine the sound *ox*, since in any case the sound is different in other languages), Saussure had spoken of an *arbitrary* relation between signifier and signified.”¹⁹ Instead of considering this relation – as determined by *thought* – Saussure considers it as the result of a social contract. “The association of sound and representation is the outcome of a collective training.”²⁰

The consideration of architecture as a system of signs has theoretical validity if it is used as a negative conceptual tool; that is, only when notions such as *arbitrariness* or *value* are used for a critique of architecture as an ideology. Saussure defines arbitrariness as a tool to oppose and criticize the ideological conception of language as representation. This thesis of arbitrariness allows Saussure to do away with the representative thesis about the nature of language. Because he understands language as a system which is not determined by its content, he establishes the conditions for the definition of an autonomous, theoretical object of linguistics: the *langue*. The importance of arbitrariness in language rests not only with the notion itself, but with the introduction of socio-cultural hypotheses in linguistics that replace the naturalistic hypothesis. The concept of arbitrariness has not yet been introduced in semiotic theories of architecture, just as the distinction between traditional semantics and semiotics has never been made in architecture.

Traditional semantics makes explicit an implicit conception of meaning which has served as a basis for architectural ideology from classical treatises to the functionalist approach. In the sense of traditional semantics, *objects* in the

environment have been understood to *have inherent meaning*. Traditional semantic concepts therefore only reinforce and maintain architectural ideology in its function as an obstacle to the production of knowledge. The conception of inherent meaning is incompatible with the semiotic conception of meaning as determined by system. Because of this, important semiotic concepts such as arbitrariness and value are lost. It is also difficult to establish the notion of arbitrariness in architecture because it contradicts ideological notions, such as function or expression, which are understood to be naturally communicated by architectural objects, as if their meanings were inherent to objects. To postulate the linkage between object and meaning as arbitrary, implies a denial of the supposed natural linkage between the function and the form of an object, which in turn exposes its socio-cultural nature. That is, to attribute a certain function to an architectural fact implies an underlying convention. In other words, an architectural object is understood as such, not because it has a certain inherent meaning which is “natural” to it, but because meaning has been attributed to it as the result of *cultural convention*.

This analysis of the arbitrary linkage between architectural object and function or other meanings invalidates the notion of function as the unique determinant of the form of the object. It also invalidates the idea of meaning as inherent to the object. Consequently, it is necessary to modify the traditional notion of meaning. The consideration of meaning introduced in a theory of architecture through the notion of arbitrariness must oppose ideological notions such as function or inherent meaning. The fact that these two notions serve as an obstacle for the introduction of *arbitrariness* explains, first, why there has been no suggestion for its application to the field of architecture and, second, why a notion such as *motivation* has been introduced instead. For example, Charles Jencks, in “Semiology and Architecture,” says, “this is perhaps the most fundamental idea of semiology and meaning in architecture: the idea that any form in the environment or sign in language is motivated, or capable of being motivated.”²¹ Such a notion perpetuates the understanding of the built environment as a result of functional demands, or as communicating a meaning which is determined by what has “motivated it.” This merely rein-

98 forces ideological views which emphasize the natural or causal character of architectural form while denying its conventional and socio-cultural nature. The notion of arbitrariness which shows that the form-function pair cannot be explained in itself, indicates the necessity to explain it in terms of its relationships with other pairs within a system of conventions. In general, we can say that if any sign would be an imitation of what it represents, then one could explain it in itself, without the necessity of its having a relation with other signs in a system. But as this is not the case, we must investigate the nature of this relation.²²

As we said above, the relationship between signs, which links them within a system, is defined by Saussure as *value*. It is possible to say that with the notion of value Saussure breaks from traditional semantics into the field of modern linguistics. Here meaning is no longer an intrinsic property of an isolated sign; rather, it is defined by the differences or the relation of values that are established between signs within a formal system of relations: the *langue*.

For the definition of value Saussure compares language and economics: “*For a sign* (or an economic ‘value’) to exist . . . it must be possible, on the one hand, to *exchange dissimilar* things (work and wage) and on the other, to *compare* similar things with each other. That is, one can *exchange* five dollars for bread, soap or a cinema ticket, but one can also *compare* this five dollars with ten or fifty dollars, etc.; in the same way, a ‘word’ can be ‘exchanged’ for an *idea* (that is, for something dissimilar); but it can also be compared with *other words* (that is, something similar): in English the word *mutton* derives its value only from its co-existence with *sheep*; the meaning is truly fixed only at the end of this double determination: signification and value.”²³ Value, therefore, comes “from the reciprocal situation of the pieces of the language.” It is even more important than signification. “What quantity of idea or phonic matter a sign contains is of less importance than what there is around it . . .”²⁴

Is it possible to construct a system in the domain of objects using this semiotic procedure? We think it is. However, we think the definition of that system requires a series of methodological precautions.

First it is necessary to define the specific characteristics of the “architecture” with which we are going to deal. In other words, which “architecture” are we going to deal with in terms of its situation? Is it Western architecture or Indian architecture? Or are we going to define architecture by a time sequence, such as Renaissance or Modern? A comparative analysis of the concept of value within Western architecture, with the concept of value within other systems of the same culture (the natural language, for example) might be helpful in determining some specific characteristics of architecture. What should be avoided in this analysis is the mechanical application of the model of *langue* to architecture—an operation which has occurred in several semiotic studies. The mechanical application of this model, which was specifically developed for language, to other semiotic systems, such as architecture, only acknowledges the recognition of what is similar to language on the ideological level but does not define the *differences* in inner structure between language and the other semiotic systems. Even if it is possible to see the *langue* as a complex system of underlying rules, and therefore to compare it with the explicit and implicit systems of rules in architecture, architectural rules are determined by a certain sect belonging to a determined social class, while the *langue* is the property of everyone in general and no one in particular. These architectural systems of rules do not show any of the properties of those of the *langue*—they are not finite, they are not organized in a simple way, nor do they determine the manifestation of the system. Moreover, architectural rules are in a constant state of flux and change radically.

The mechanical application of the model *langue*/speech to Western architecture reinforces architectural ideology by denying the differences between architecture and language and by ignoring the place of natural language in architecture.²⁵ Moreover, and perhaps more important, it denies that “something” which defines a major difference between architecture and language—that is, the creative aspect of architecture. In language the individual can *use* but not *modify* the system of language (*langue*). In contrast to language, the architect can and does modify the system, which is fabricated on a system of conventions. The result of applying in a mechanical way the concept of *langue* to architecture

is that the fabricated, conventional character of the system is hidden, appearing instead as if it were natural, as in language. The model langue/speech does not explain but overlooks creativity in architecture. Creativity in architecture is a complex play of conservation and variation of shapes and ideological notions within certain determined limits.²⁶ In our opinion an analysis of creativity could more properly be based on the notion of value. It must begin by using as raw material the ideological systems of rules which assign and maintain certain value relationships between shapes and meanings, for their design, use or interpretation. The description of the structure of these rules is a first necessary step of semiotic analysis, where the concepts and the adequate tools capable of overcoming specific ideological obstacles must be produced. This preliminary work of description, which is our immediate concern, must be distinguished, however, from the *explanation* of the underlying system of rules which produce the ideological structure, a task which is our ultimate objective.²⁷

The discussion of ideological notions by means of semiotic conceptual tools comprises another problem which also must be faced. Ideology works as an obstacle to the production of theory, not only by virtue of the fact that it perpetuates ideological notions, such as function or inherent meaning, but also by virtue of the fact that it perpetuates traditional boundaries defining the various fields—ideological regions—such as literature, urban design and architecture, where those notions function.²⁸ Ideological notions always imply an ideological region to which they belong, and conversely, any ideological region is built upon an apparently more or less systematized set of ideological notions.

What we call theoretical blockade is related not only to the misuse of semiotic concepts but also to a more general problem—a confusion between an ideological region and an object of study. The application of semiotic concepts to architecture, as we have indicated, supposes a semiotic theory and method being applied to architecture. In our view it makes little sense to build a semiotics of architecture, which presupposes a theory divided according to the existing divisions of painting, literature, cinema, urban design, architecture, etc. An ideological approach which identifies a semiotics of

architecture implies the acceptance of the existing division of the above practices and denies the fact that such divisions have an institutional and conventional character. Consequently, the theoretical system or object of study is confused with real, concrete and singular objects. This difference between theoretical and real object can be seen in social sciences such as linguistics or historic materialism. For example, the theoretical object of structural linguistics is not speech but the concept of *langue*, which is developed through the study of real objects—i.e. different languages. The theoretical object of historic materialism is not a given social formation such as France or England but the concept of *history*, which is developed through the study of different modes of production in real social formations. In a similar way the theoretical object of a semiotics of the built environment must be the development of an abstract conceptual structure which explains the production of signification in the configuration of the built environment, which in turn will produce knowledge of concrete objects such as Western architecture. The production of this conceptual structure requires conceptual tools which in the present initial stage do not exist and which must be elaborated according to *demands* of the theoretical work. This elaboration will be made on the basis of semiotic abstract concepts and semiotic theoretical strategies employed as heuristic devices. In our conception of theory, its ultimate *raison d'être* is the knowledge of concrete objects, in this case of the built environment in a certain time and place. But this knowledge is only a result of a process of transformation of notions belonging to an architectural ideology. A theory as production of knowledge, as we have indicated, is only to be developed through a constant struggle with ideology. The production of knowledge can only be done by disassembling not only ideological notions but also through methodically erasing the boundaries separating different practices within a culture and through looking towards other cultures and situated at other points in time. Theoretical work cannot be realized from inside architectural ideology, but from a theoretical “outside” separated from and against that ideology. This must be the first step in the construction of a materialist dialectic theory of architecture as part of a more general theory of ideology.

- 100 1. Social formation (*formation sociale*) is a Marxist concept denoting "society." "Social formation is the concrete complex whole comprising economic practice, political practice and ideological practice at a certain place and stage of development." Louis Althusser, *For Marx* (New York: First Vintage Books, 1970), p. 251.
2. There are other functions of architecture and design theories to which we do not refer in this article, i.e., the theory that has the function of establishing a certain ordering of design operations within architectural practice.
3. Transformations in society introduce reforms that allow the existing system to survive. However, these are never real changes—since the structural relationships are not being touched—but are merely transformations of that system. For example, the development of the capitalist mode of production through various different stages—mercantilism, industrial capitalism, imperialism, etc.—has been based on a series of transformations achieved in different domains which did not in any way modify the fundamental class structure.
4. Diana Agrest and Mario Gandelsonas, "arquitectura/Arquitectura," *Materia, Cuadernos de Trabajo* (Buenos Aires, 1972).
5. To be more precise we should say ideologies (plural) even if in this article we refer to a particular ideology, bourgeois ideology.
6. This is only a partial definition related to the specific subject of this article: the relationship between theory and architectural ideology. This partial character stems from the fact that the important theoretical problem of the relation existing between architectural practice and the "unconscious" (Freud) has not been considered in this article.
7. We try to follow here the chapter "Methodology" in Karl Marx, *Introduction to Political Economics* recently elaborated upon by Althusser in *For Marx*. We consider these works a fundamental basis for any dialectic materialist approach to theory as opposed to any form of idealistic conception of theory. See Althusser's qualification of idealistic theory under the categories of "empiricism" and "formalism." We use the term theory, however, in such a way as to contrast it with what must now be considered only the Western conception of theory and to emphasize its present provisory character as only a stage in the development of a more general theory of ideologies.
8. Alexander Koyre, *La Revolution Astronomique* (Paris: Hermann, 1961), p. 16.
9. Diana Agrest, "Epistemological Remarks on Urban Planning Models," lecture, I.A.U.S., New York, 1972.
10. Charles Jencks and George Baird, *Meaning in Architecture* (New York: Braziller, 1970).
11. Jencks and Baird, *Meaning in Architecture*, p. 82.
12. Jencks and Baird, *Meaning in Architecture*, p. 87.
13. Julia Kristeva, "Le Lieu Semiotique," *Essays in Semiotics*, ed. J. Kristeva, J. Rey-Debove, and J. K. Umiker (The Hague and Paris: Mouton, 1971). See also Eliseo Veron, "Condiciones de produccion modelos generativos y manifestacion ideologica," *El Proceso Ideologico* (Buenos Aires: Ed. Tiempo Contemporaneo, 1971).
14. Ferdinand de Saussure, *Course in General Linguistics* (New York: McGraw-Hill, 1966).
15. de Saussure, *Course*, p. 16.
16. Paolo Valesio, "Toward a Study of the Nature of Signs," *Semiotica* III 2 (1971): p. 160.
17. John Lyons, *Introduction to Theoretical Linguistics* (Cambridge University Press, 1968), p. 404.
18. Oswald Ducrot and Tzvetan Todorov, *Dictionarie Encyclopedique des Sciences du Langage* (Paris: Seuil, 1972), pp. 15-16.
19. Roland Barthes, *Elements of Semiology* (New York: Hill and Wang, 1968), p. 50.
20. Barthes, *Elements*, p. 50.
21. Jencks and Baird, *Meaning in Architecture*, p. 11.
22. This comparison does not refer to the similarities of form-function pairs and signs but to the similarities of the *relationships* between form-function pairs and the *value relationships* between signs. To take the concept of *value* for theoretical development in architecture can be justified not only on the basis of recent analyses which demonstrate its validity [Jaques Derrida, *De la Grammatologie* (Paris: Ed. du Minuit, 1967)] but also from Roman Jakobson's writings on metaphor and metonymy in R. Jakobson, *Essais de linguistique generale* (Paris: Ed. du Minuit, 1963). A similar position is taken by Christian Metz in various works on "the semiotics of movies."
23. Barthes, *Elements*, p. 55.
24. Barthes, *Elements*, p. 55.
25. Mario Gandelsonas, "Beyond Function," in preparation.
26. Mario Gandelsonas, "Linguistics in Architecture" *Casabella* 374 (February, 1973).
27. Diana Agrest and Mario Gandelsonas, "Critical Remarks on Semiology and Architecture," to be published in *Semiotica* VI (1973).
28. Julia Kristeva, "Le Texte Clos," *Languages* 12 (Paris: Didier-Larousse, 1968). See also Jean Louis Scheffer's review of L. Marin, "Elements pour une Semiotique Picturale," *Semiotica* IV 5 (1971).