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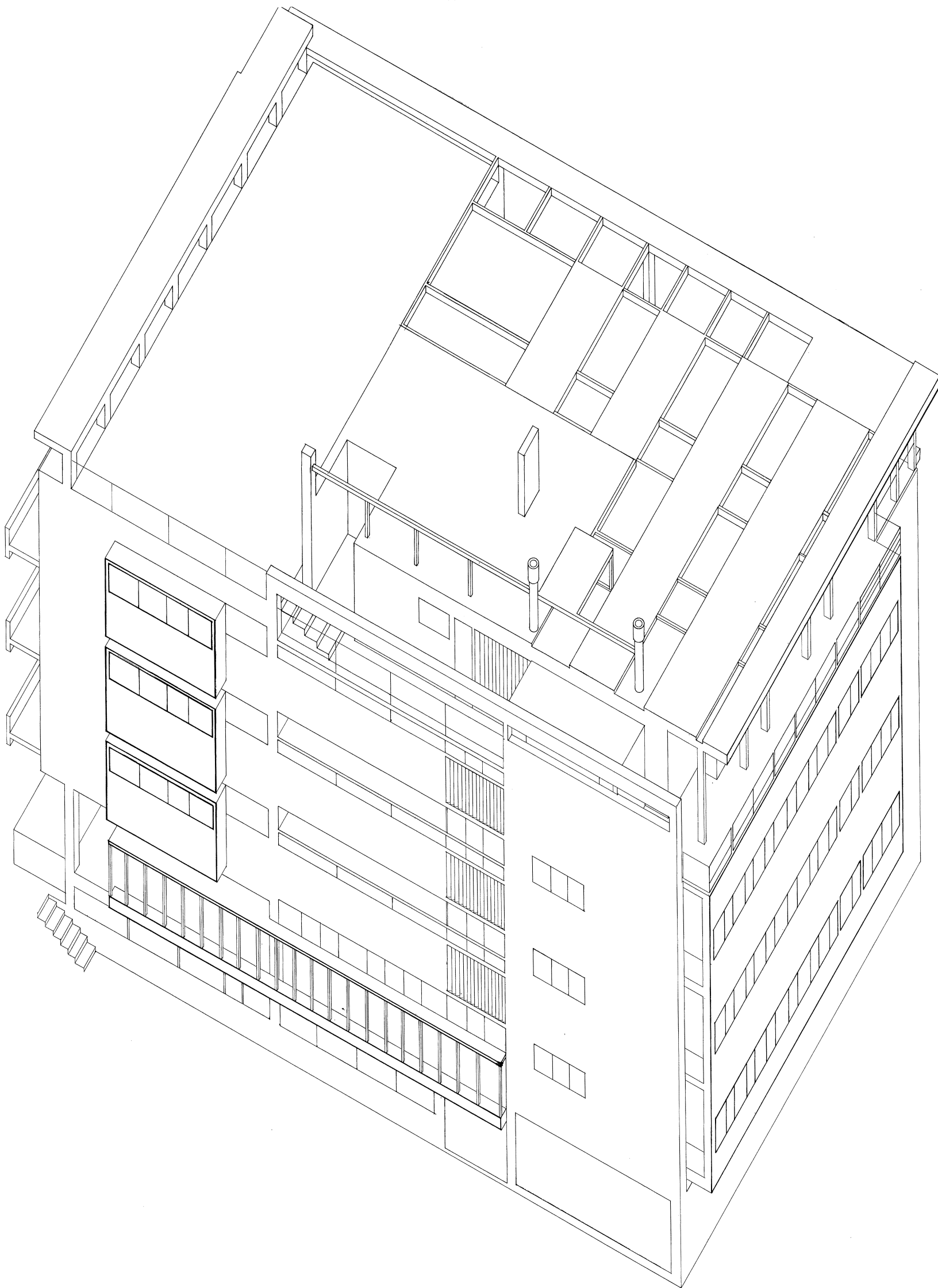
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**From Object to Relationship II: Giuseppe Terragni**  
**Casa Giuliani Frigerio**  
Peter D. Eisenman



Before I went to Cambridge in the autumn of 1960, I did not know the work of the Italian architect, Giuseppe Terragni. During that year Colin St. J. (Sandy) Wilson gave me a copy of Alberto Sartoris' 'Encyclopédie De L'Architecture Nouvelle' which had a section devoted to Terragni's work. The following summer, I travelled with Colin Rowe to Como, where I saw much of the work for the first time. For many of the intervening years I have been working almost intuitively, probing into the formal aspects of Terragni's work, with few preconceived ideas as to what might be the results. In order to give this work a focus, in 1966 I began looking into other disciplines where problems of form had been presented within some critical framework. This took me into linguistics, and more particularly to the work of Noam Chomsky in syntax. From this research it was possible to make several analogies between language and architecture, and more specifically to construct a crude hypothesis about the syntactic aspects of architectural form. This then helped to clarify some of the formal problems in the work of Terragni. Equally, as work in both these areas continued simultaneously, the empirical evidence gathered from the work on Terragni helped to refine and restructure the initial hypothesis. From this rather unscientific method two separate theses have developed: one concerning a theory of form in architecture; the other concerning the developing of ideas about transformational methods which can be interpreted from a formal analysis of the work of Terragni. The following article is two parts taken out of context from the latter work. Therefore, it is intended to be as much an introduction as it is an exploration, in that it is not a definitive presentation of a critical method; it merely presents some fragments, without a general matrix, of work in progress.

One of the dominant and recurring themes of Twentieth Century painting and architecture has been expressed in a concern for the rôle of the "object". This was especially true in the so-called "heroic" period of the Modern Movement. El Lissitzky, when he first came to Berlin in 1922, published a little-known magazine with the title of "Veshchsh, Gegenstand, Objet" — translated into English literally "Object". Kasimir Malevich, Lissitzky's teacher, had previously written a book which appeared in German in 1927 under the title of "Die Gegenstandlose Welt" — in English "The Objectless World". As the difference in these titles might imply, their ideas were essentially in opposition although a basic concern was the same. This concern was manifest in an attempt to divest objects of their traditional, or associational meanings; in a sense, to change society's known relationship with its object world. The underlying rationale for this activity was somehow involved with exposing society to the realization of the ultimate banality and poverty of the extant "object" world; and at the same time to suggest that it was possible, through the medium of form, and more precisely "new form" — understood as "objects" devoid of a traditional meaning or context — to suggest not only new meanings, but further, a new awareness of the physical world.

This same concern was made manifest in physical form through many different methods; Fernand Leger and others worked with forms of collage, taking commonplace objects and through a change in context sought to give them a symbolic and formal significance beyond their traditional reference. The distinction between a Leger and a Malevich, while perhaps obvious on a strictly formal level, is important in the context of the following discussion. Leger took traditional "objects" with known meaning, and by changing their context sought to invest them with new meaning. Malevich sought to do this, by creating a new object world of pure formal relationships — through geometric abstraction.

Architecture, unlike painting, is constrained by the presence of actual "objects" — with the real dimensions of form and space. Whereas in painting the relationship

of the forms can be used to create the illusion of space, in architecture the relationship of the forms *is* the space. Therefore, unless one talks of the reality of the painted surface, the canvas itself, painting is inherently involved in abstraction — i.e., the use of illusion in the creation of space. No such procedure is necessary in the creation of architectural space. The mere presence of some form of construction, whether it be two walls or a grid of columns and beams, will necessarily define, suggest, and imply space. Furthermore, in painting, the plane of the canvas provides a given frame of reference for the understanding of any abstract or conceptual structure within the painting. In architecture there is no given frame for understanding or delineating the abstract structure, as the viewpoint is constantly changing. Painting is understood through perception; architecture through apperception, or the sum of many perceptions.

Therefore, if one were to set the same problem for an architecture — that of finding new meaning from formal constructs — a necessary first step, because of the presence in architecture of actual physical relationships, would be to provide a means whereby abstract relationships were conceivable as independent of these actual relationships.<sup>2</sup> Here another comparison between painting and architecture might help clarify this difference. In the painting of Fernand Leger and also to a lesser degree in Juan Gris, the abstraction in a sense could be considered an actual one — that is dependent on the distortion of known objects; it was an abstraction of the percept. On the other hand, people like Piet Mondrian and Kasimir Malevich were dealing not so much with abstractions of objects as they were with structures of pure form, and thus with relationships derived from, what might be called, formal universals, or with abstractions of a conceptual nature.<sup>3</sup>

In architecture both types of relationships exist simultaneously. There is a surface aspect essentially concerned with the sensual qualities of the object; that is aspects of its surface, texture, color, shape, which engender responses that are essentially perceptual. There is also a deep aspect concerned with concep-

tual relationships which are not sensually perceived; such as frontality, obliqueness, recession, elongation, compression, and shear, which are understood in the mind. These are attributes which accrue to relationships between objects, rather than to the physical presence of the objects themselves. For example, flatness is a characteristic of an object while frontality is an attribute which an object may assume in relation to another object or in relation to a preferred viewpoint of an object. Frontality is not an empirical relationship, but rather is implied from the particular placement of form in a specific context. The usefulness of the spatial abstractions of the deep aspect is in their capacity to provide a structure for implied meaning as opposed to explicit meaning. In addition there must be a framework which would provide for some form of relationship between both these aspects. This then raises the question as to the nature of such a structure and how it can be developed to clarify the interpretation of spatial abstractions.

Here another analogy is useful; this time between architecture and language. In the context of the present discussion, language will be considered as one type of environment which can be said to have a structure; that is, it has a series of elements which have both definable properties and definable relationships between elements. These structures usually can be defined or described in terms of their differences or similarities to other like structures. The structure of a linguistic environment, or more explicitly a language, can be said to exhibit similar characteristics to a physical environment — and in this case to an architecture. Both language and architecture can be seen in terms of the three semiotic categories: pragmatics, semantics, and syntactics. Traditionally, architecture has been understood in these terms, even though its discourse has not been explicitly formulated in this manner. It is worth noting that most discussions of modern architecture have been mainly concerned either with pragmatic issues — the relation of form to function or technology; or with semantic issues — the relation of form to meaning and iconography. However, if architecture is to provide a seman-

tic interpretation either in terms of function and program — the elaboration of facts — or in iconographic terms — the elaboration of values — then by the above given terms it must have a syntactic component through which this meaning is mediated.

The notion of syntax is not a new one for an architecture. Until this century the construction of architectural grammars was a common occupation. Many of these grammars, whether or not they were modeled on the then existing form of language grammars, failed to realize certain differences between architecture and a written language. One important difference in this context, is that in architecture the object itself has no agreed upon or intrinsic meaning other than as its shape might be a natural sign, as in the case of an arrow, or as might accrue to a culturally received symbol, as in an Ionic colonnade. In language, the object-word is a sign having a common, agreed upon meaning. The information does not come directly from its formal structure, but from an agreed upon convention given to a particular structure of form. In language the formation of a word, its order and form are not arranged necessarily to engender an aesthetic response; the primary concern is not with the placement, shape, and size of letters or whether they can be rearranged in different combinations. In architecture, in a sense because there is no a priori convention or agreed meaning in respect of form a straight wall next to a curved wall has not only a deep level formal relationship but also produces an aesthetic response to the contrast or tension between the two forms. Thus unlike language there is a primary response to both the percept or surface aspect and to an abstract or deep aspect. This is a complicating fact when considering syntax in architecture. In any space the real physical qualities of objects and the perceptual response to them will always tend to obscure the conceptual response and make the use of abstraction as a syntactic means more difficult than in either painting or language. Therefore, if a syntax in architecture were to be developed, it would presume to mediate between the intended meaning which could be derived from a conceptual struc-

ture, and the possible distortions of this meaning which might occur through the lack of an understandable relationship between physical fact, and this conceptual structure. And because the physical fact does not represent an agreed upon sign structure, it may be argued that the syntactic dimension is therefore more crucial to an architecture than to a written language. Equally, since there is no sign system, there would seem to be no one specific syntax which could structure the physical fact. Therefore, the syntax component for an architecture might have to provide for any number of specific syntaxes. The proposition that a surface and deep aspect exist as a simultaneous condition in any architecture, and the corresponding need to provide a syntax capable of distinguishing between the physical relationships of real space and the implied relationships of conceptual space — between what is empirical and what is abstract — becomes central to the following discussion. It is here that the analogy to language and more specifically to the work of Noam Chomsky is important.

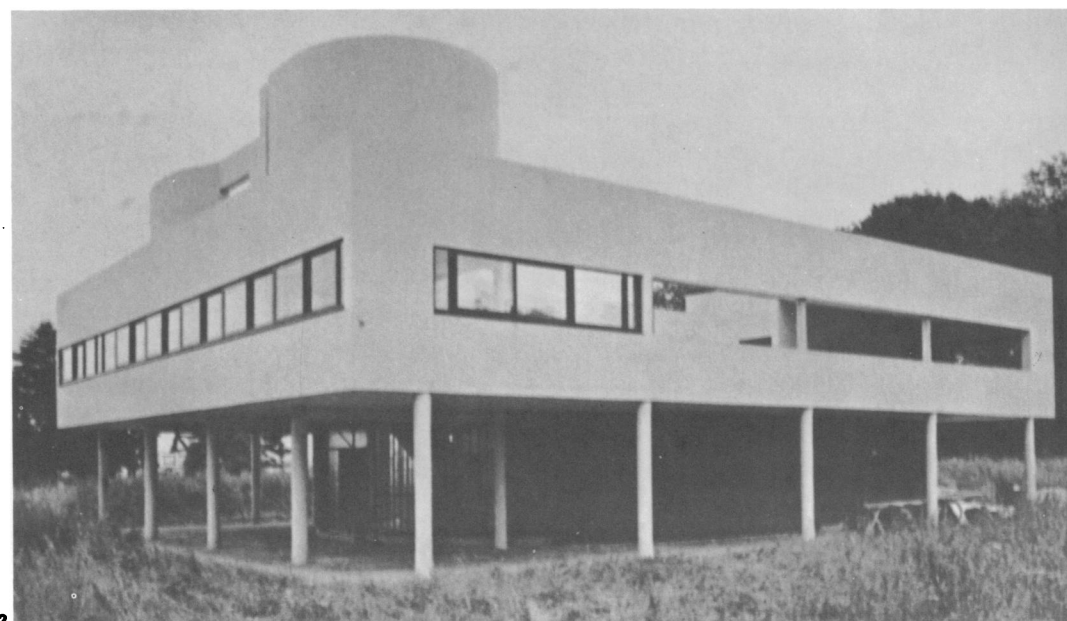
There are two ideas in Chomsky's work which seem central to this argument. First, that it is possible and even necessary to separate syntax from semantics;<sup>4</sup> and second, that within the former it is possible to discern two aspects — a surface syntax and a deep level syntax.<sup>5</sup> Chomsky defines surface structure as that aspect of a syntactic description which determines the phonetic form — the physical signal. The deep structure of a syntactic description he says determines its semantic interpretation.<sup>6</sup> 'Deep structures are generated by a base system of rules which are concerned with underlying relations, with an abstract order. A deep structure is implicit only; it is not expressed but is only represented in the mind.'<sup>7</sup> A deep structure may not necessarily display any similarity to the surface structure. Deep structures are concerned with providing an abstract or conceptual framework for the formal regularities common to all languages. In architecture it can be said that it is a deep structure which might provide the referent structure so that meaning might be derived from a particular relationship of specific forms.

This paper will concern itself first with exploring the nature of the relationship between the surface and deep aspects of architecture. If these deep aspects are to be made accessible, then second, there is a need to develop what will be called transformational methods for deriving and relating specific forms to formal universals. These transformational devices translate formal regularities into specific forms. One aspect of the specific transformational method, used below, is concerned with shifting the primary response to form from a perceptual to a conceptual nature — from object to relationship. What will be argued here is that while both deep and surface aspects have been implicitly acknowledged as part of an architectural environment, the manner in which these aspects can be used to inform an environment has not been explicitly formulated as part of an architectural discourse, partly because their relationship as mediated through a transformational structure has not been developed. This paper is therefore intended as an initial exploration into both the dual level syntactic dimension, and the transformational structure which might relate the two levels.

It is possible to distinguish this duality in an architectural context, by looking at two architects of the "Heroic Period" — Le Corbusier and Giuseppe Terragni — whose work because it exhibits a concern for syntax permits a critical distinction to be made.

Le Corbusier essentially took the forms of known objects — from machines, ships, and aircraft (Fig. 1 & 2) — and derived an imagery in a manner that to a degree paralleled the work of Leger. The intention of this imagery was to force a shift in meaning through its appearance in a new context. This intention can be seen as primarily a semantic one.

In Terragni there are obvious semantic implications as in his reference to historical buildings. For example, there is a similarity which can be seen in a comparison of the plans of the Casa del Fascio and the Palazzo Farnese and the Palazzo Thiene. But while the semantic reference is to the high culture of the Italian Renaissance, the ultimate intent in Terragni's use of such a plan would seem to divest such type forms of their tradi-



tional meaning, and instead use the formal type in a manner similar to a deep level syntactic structure to which his specific forms refer.

Le Corbusier often based his work on similar precedents, as in the case of the Villa Garches and its relationship to the Villa Malcontenta.<sup>8</sup> The critical distinction between Le Corbusier and Terragni, is that the particular object for Le Corbusier never loses its semantic dimension. Thus the syntactic ABABA structure of Garches refers not necessarily to the syntax of the Villa Malcontenta but rather to the semantic notion of a Renaissance "ideal". The syntactic dimension in Le Corbusier's work seems to be primarily concerned with its surface or perceptual aspect — with giving full semantic value to the object.<sup>9</sup>

In Terragni the iconography of the object is a secondary aspect, partially because his work followed after Le Corbusier in time; and thus after Le Corbusier had exploited the symbolic potential of these forms. Since any intentional iconography in Terragni's work is necessarily reduced, it is possible to examine his forms in their syntactic dimension, and in particular in their relation to the deep aspect of syntax.

One purpose of the following analysis is to suggest the acknowledgement of a deep level syntax in the work of Terragni, and to make more *explicit* the manner in which this deep level conditions the specific forms; a relationship which up to now has been mainly *implicit* in most discussions of his architecture. But in particular the analysis will study the specific transformational method used to explicate this relationship; in this case through the analysis of the specific form, which in the end can be understood primarily in a syntactic context.

It is perhaps a precarious undertaking to initiate the development of such a thesis through the analysis of a single building. However, as was stated in the preface, this article makes no claims as to its methodological rigor but rather is intended as one of a series of inquiries into the realm of syntax. And while formal analysis is a valuable art historical method, in itself it can become merely descriptive — an exercise in intellectual gymnastics. In the following discussion, formal an-

alysis will be used as a probing device to uncover traces of what seems to be an accessible dual level syntactic structure in the work of Terragni. It must be remembered that whether Terragni himself consciously worked with such a structure is not at issue here.

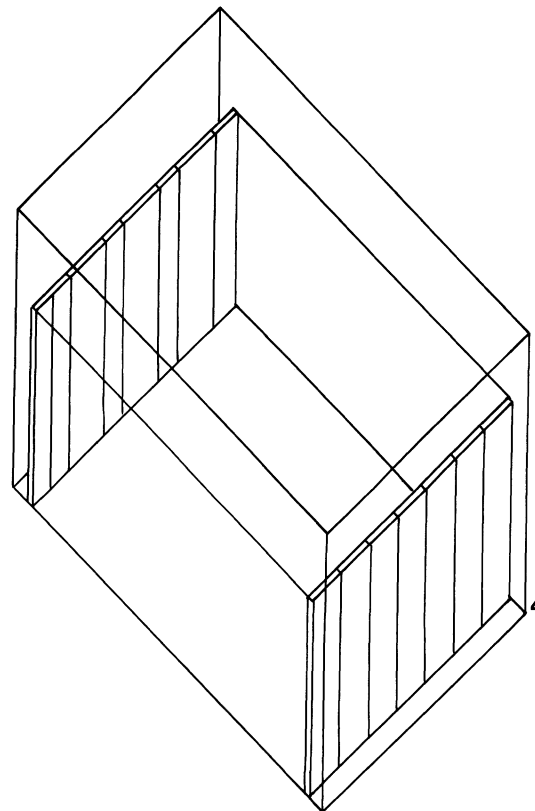
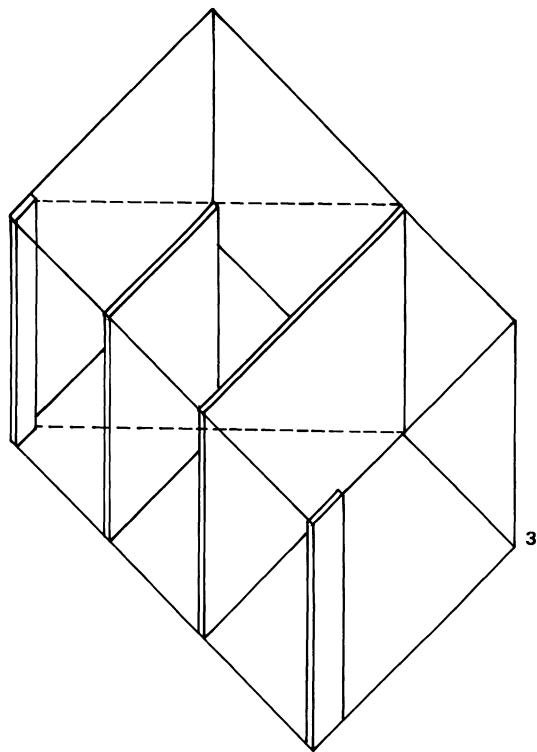
One transformational method which is evident in both the Casa del Fascio and the Casa Giuliani-Frigerio is the use of pictorial ambiguity. According to William Empson, one problem which might call for the use of ambiguity would be where it is necessary to create "a unitary situation between the logical conflict of the denotative and the connotative."<sup>10</sup> While Empson was referring to a linguistic environment, architecture also presents a similar conflict. It is possible to suggest that such a use of ambiguity in a conceptual as opposed to a perceptual sense<sup>11</sup> is one possible transformational method which might allow deep level structures to inform specific physical environments.<sup>12</sup> Thus, the use of conceptual ambiguity in the work of Giuseppe Terragni can be interpreted as a primary transformational device; the attempt to move from an object or percept orientation to a concern for making abstract formal relationships more accessible being one aspect of this method.

In Terragni's work, conceptual ambiguity is developed from the use of two basic and opposing conceptions of space. The first considers space as subtractive, or cut away from a solid. In this context space is considered to be metaphorically hollowed from an abstract solid volume. The second conception of space, which has Renaissance antecedents, considers space as additive, made up of a series of implied layers, much like a deck of cards. Subtractive space implies a center and is centripetal in conception; additive space is concerned more with the periphery, with edges and corners, and is centrifugal in conception.

Thus at a conceptual level, space in its most neutral state is seen as either solid-positive or void-negative. To define real space through some form of marking or notational system implies both a deep level syntax and a set of transformational rules. The initial marking of a

specific form can be considered as either additive, if one is filling up the void, or subtractive, if one is cutting away from the solid. In each case the distinction will be conceptual, in that the value given to the space — either positive or negative is not actual but implied. If, for example, one is taking away from a solid plane producing openings, these openings take on an intentional characteristic — a positive one — different from openings left over when a void has positive solid elements added to it. Thus in an analysis of space every marking in an additive process is a positive gesture, and becomes significant when compared to a range of other markings possible in a specific situation. Equally, every void in a subtractive process takes on this same intentional characteristic and can be understood through a similar process. Each mark, while obviously having a surface or perceptual character, also can be considered as being intentional to the development of a deep syntactic structure, which in turn may provide clarification of the building's semantic intention.

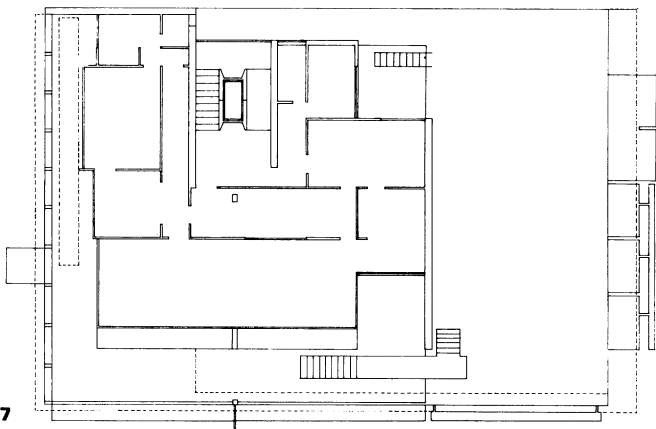
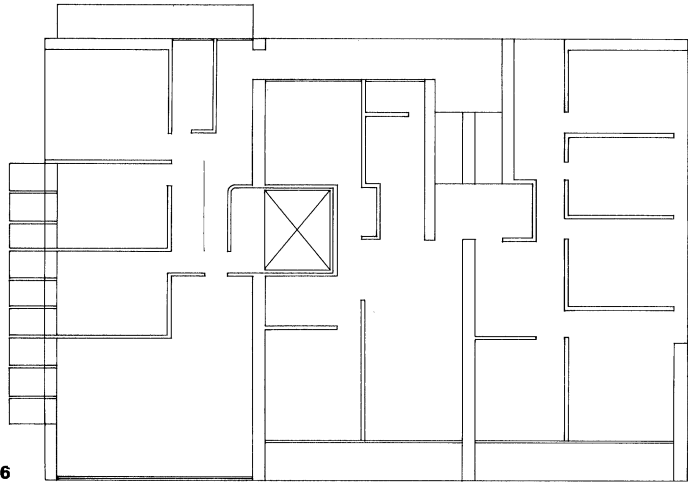
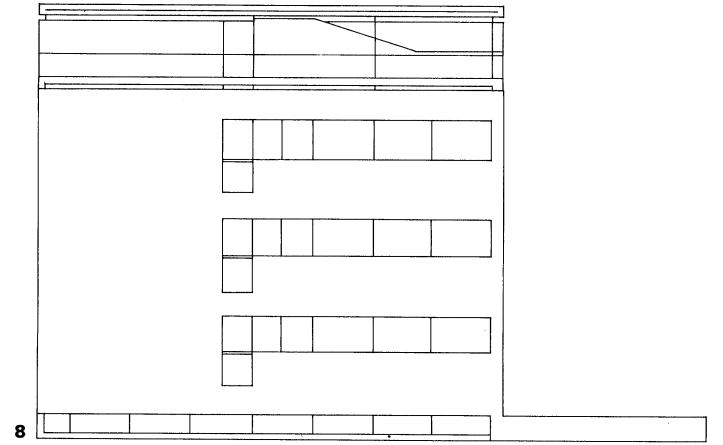
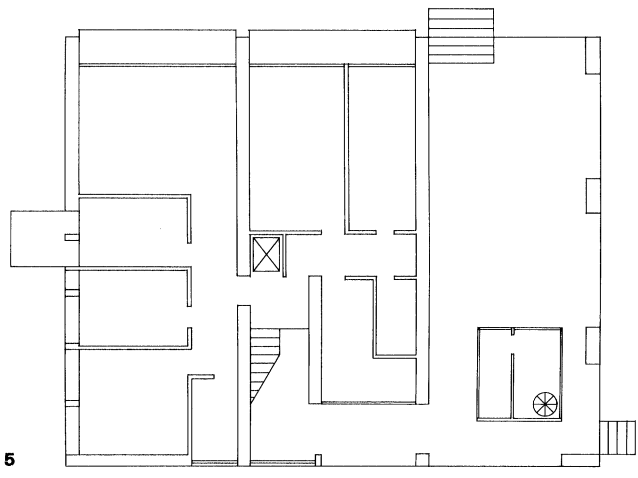
In Terragni's work an ambiguous condition is developed by superimposing an additive on a subtractive process — where both solids and voids carry a charge — which can be read simultaneously as oscillating between positive and negative. Thus while the dual reading resides in the percept, its effect is not so much an aesthetic one, as it is to provide a notation for what can be described as deep level structure. It is through such a method which shifts from a concern for the qualities of "object" to a concern for relationships between objects that the subsequent potential for these relationships to carry new meaning can be proposed.

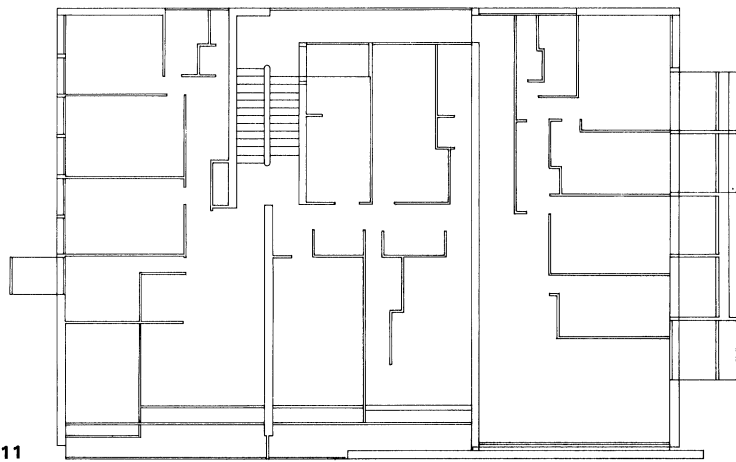
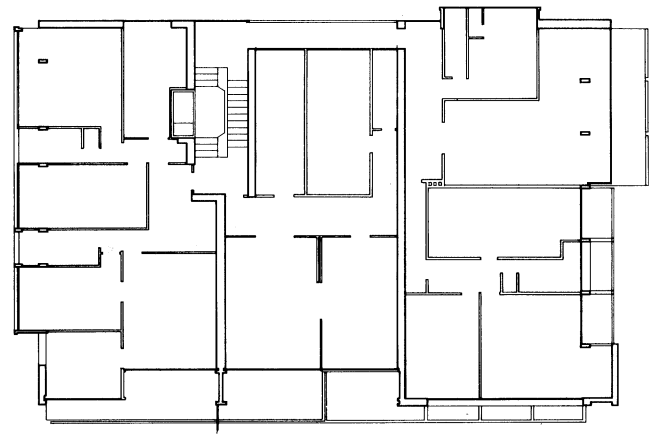
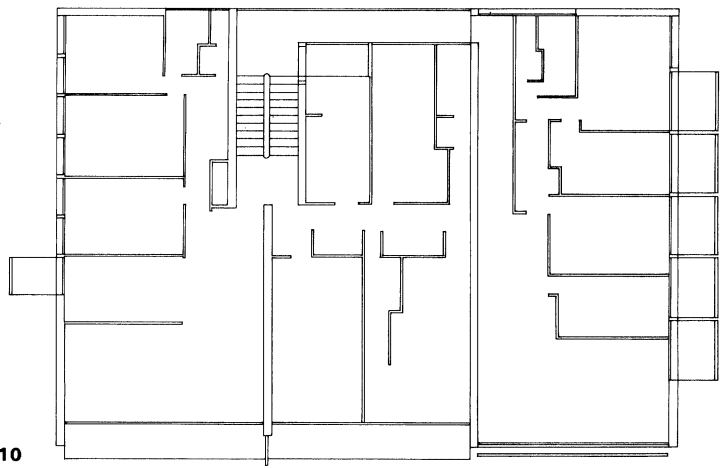
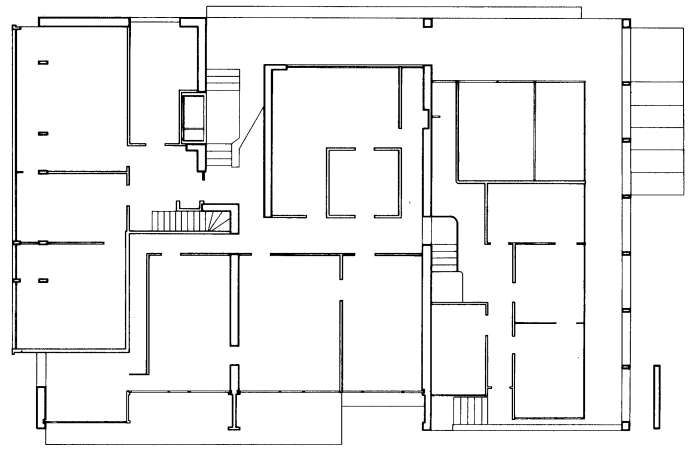
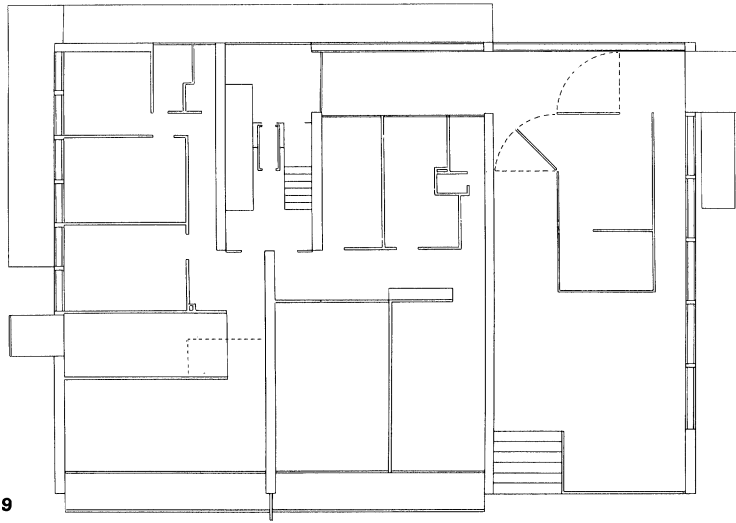


In the analysis of the different stages in the development of the Casa Giuliani-Frigerio, the existence of a deep level structure becomes apparent; and further the relationship between physical fact and the latent conceptual structure is made more understandable. This relationship is initially revealed in the dialectic between a planar or additive structure and a volumetric or subtractive structure. In an early scheme (A), a volumetric reading predominates (Fig. 3); although there is a lateral tripartite division of the plan (Fig. 4), little spatial striation is developed either parallel to or cutting laterally across these planes. In subsequent schemes these planes act as datum references for projections and recessions; the particular nature of these inflections or distortions of the initial "solid" volume being understood with respect to these datum planes in both plan and elevation.

From the earliest sketches, the shear walls mark a square on the ground floor plan (Fig. 5); the three typical floors mark a square and a half, which happens also to approximate the building limits of the site (Fig. 6); the penthouse apartment reiterates the original square of the ground plane (Fig. 7). This square is further articulated in section, by a half level division in each typical floor.

The north elevation of Scheme A (Fig. 8) exhibits the first indication of the intention to erode the primary volumetric reading, in the placement of a horizontal slot at the lower part of the facade. This can be interpreted in two ways: it begins to destroy the credibility of a solid reading, by placing the void in such a way that it would seem to be holding up the "solid"; and because of this, it begins to give a planar or membrane-like quality to this surface, therein suggesting an incipient planar structure to the internal volume as an alternative reading.





A second set of schemes (Scheme B) is distinguished by the reversal of the stairway location from the west to the east face of the building (Fig. 9). This condition obtains in all subsequent schemes. Thus, while the north and south facades remain essentially the same in terms of the formal structure, the east and west facades are reversed. The rationale for this move, as will be seen later, contributes to the development of the specific syntax.

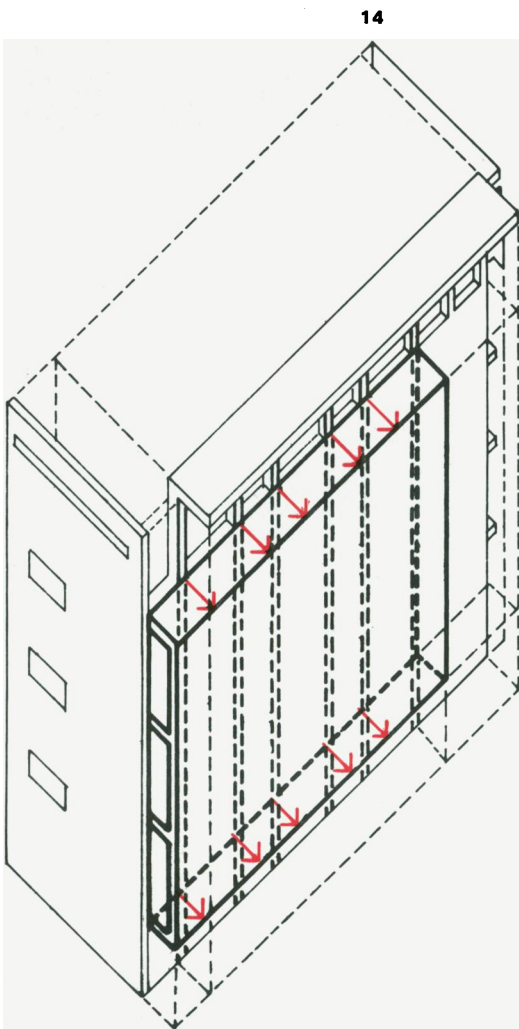
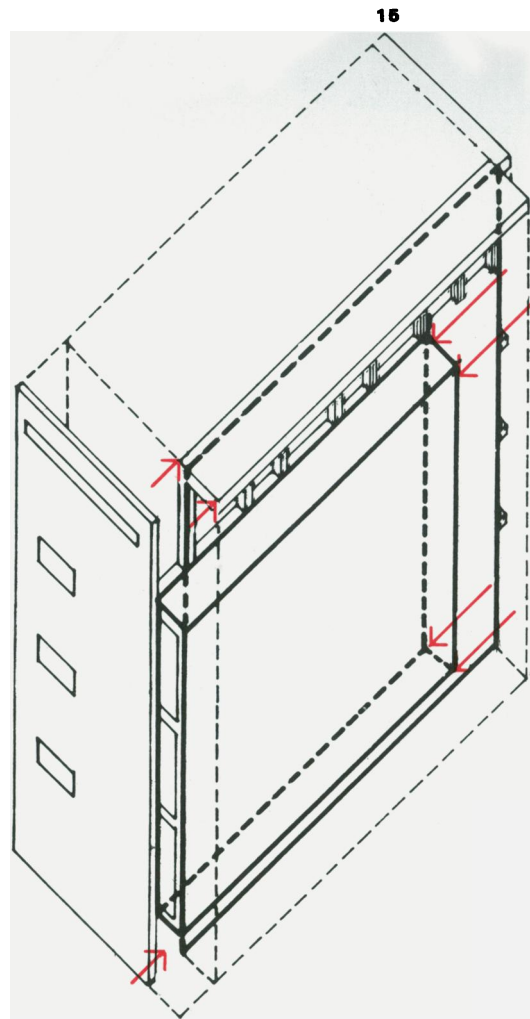
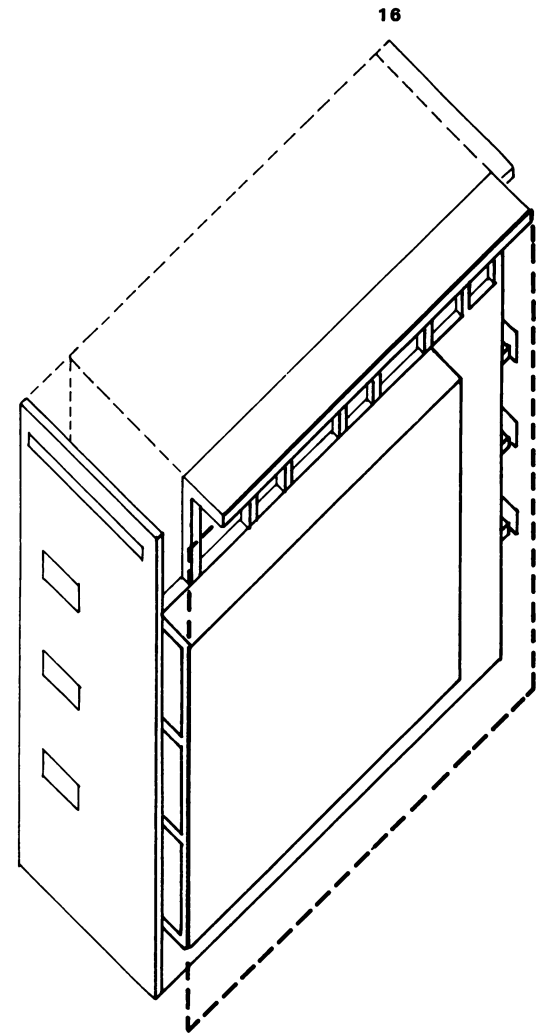
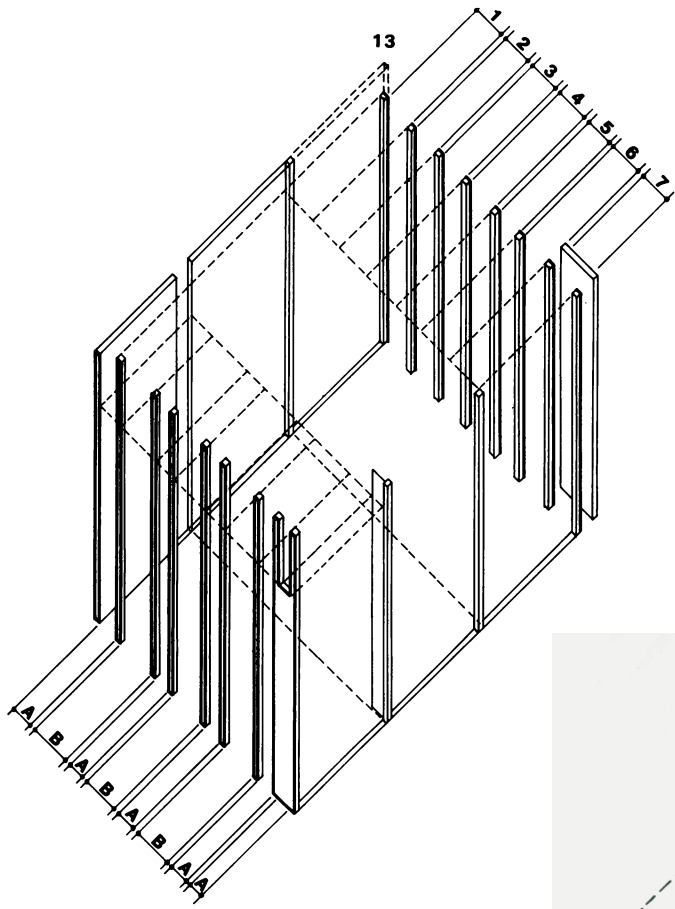
The organization of the plan in Scheme B is still tripartite (Fig. 10). However, the stair, instead of being located within the middle bay, now straddles the bearing wall between the end and the middle bay.

The single balcony projection remains on the north facade. However, the south facade has undergone a transformation and exhibits an ambiguity in the vertical dimension. In the plan of Scheme B the west wall can be read as a screen by virtue of its extension to the south, thus breaking the solid volumetric corner (Fig. 11). Equally, the southwest corner shows another aspect of the intentional erosion, where the balcony which projects beyond the solid corner now lines up with the vertical edge of the west facade. In the earlier scheme this balcony merely projected out from the internal volume which was seen as a solid. Now its position initiates a planar stratification on the south facade. In Scheme B there is an equal division of the north facade into eight parts, while the opposite south facade is divided into only seven equal bays. This different division of the facades reinforces the discontinuous nature of the internal longitudinal striation from north to south.

In Schemes C & D the conceptual ambiguity of the north facade is developed (Fig. 12). There are two major changes in the formal structure of the north facade which appear in these two schemes which clarify the specific syntax being evolved by Terragni. The first is the



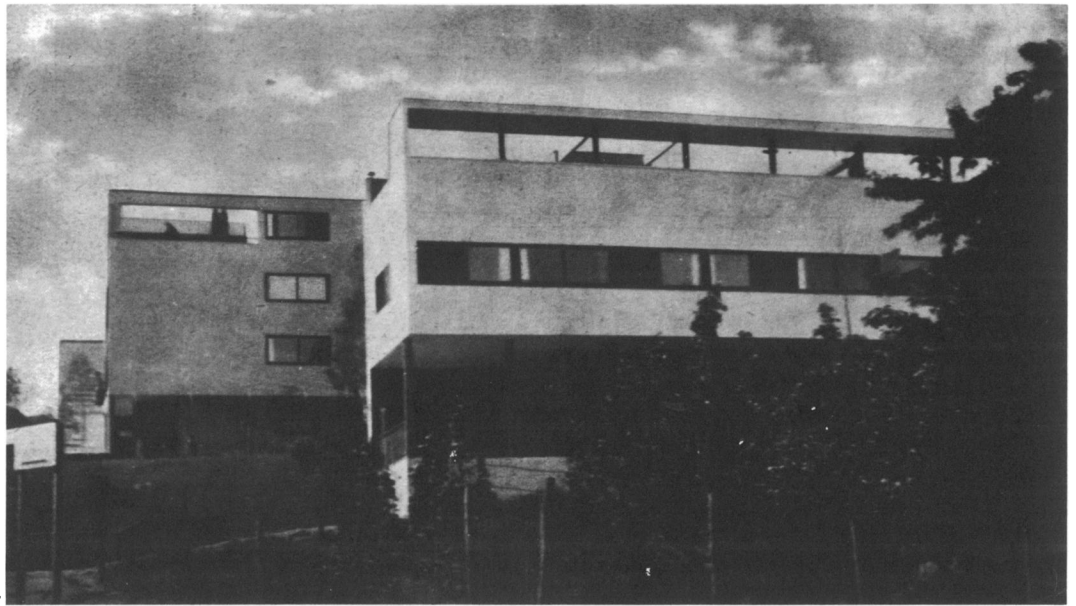
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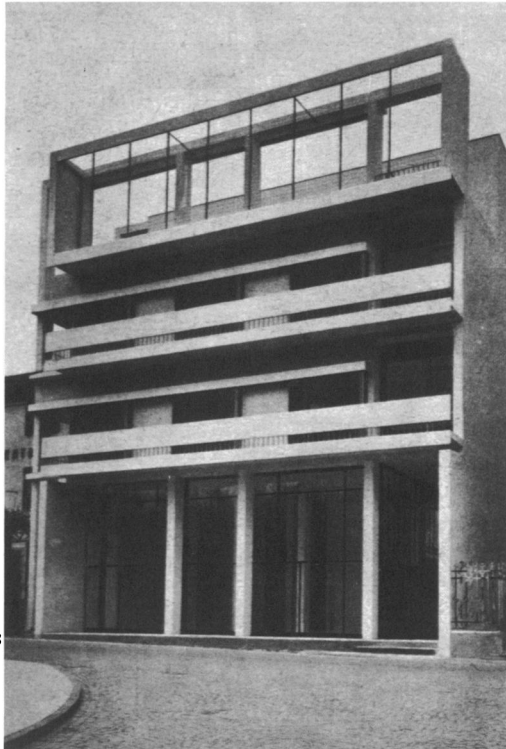
change in the bay structure from the eight equal bays of the earlier schemes, to an alternating AbAb bay organization (Fig. 13). This further emphasizes the discontinuity in the longitudinal striation and presents a framework for a volume-plane ambiguity which is subsequently developed on the north facade. A second and perhaps more significant change occurs in the transition from Scheme C to Scheme D. This involves an extension of the internal volume through the column line which had previously marked the volumetric edge of the building, in a manner similar to the south facade (Fig. 14). This change marks the lateral layering of the original volume which reads as one aspect of the transformational structure. This volumetric extension seems purposely conceived as an element which does not carry across the entire facade, in order to create a condition of shear (Fig. 15). This condition allows a dual reading: either the facade has been extended, in an additive manner, as a sequence of planes, or the outer edge has been eroded to reveal an internal "solid" volume (Fig. 16).

There are several precedents for the particular shape of the north facade; one which could best be described as a bent plane. One would have to be Le Corbusier's building at the Weissenhof Siedlung (Fig. 17). Another is Cesare Cattaneo's apartment block at Cernobbio (Fig. 18). Terragni's use of this shape has an integrated and necessary relationship to the conceptual structure. The bent plane works in two ways to articulate the intention to contrast a reading of eroded solid with a sequence of spatial layers.

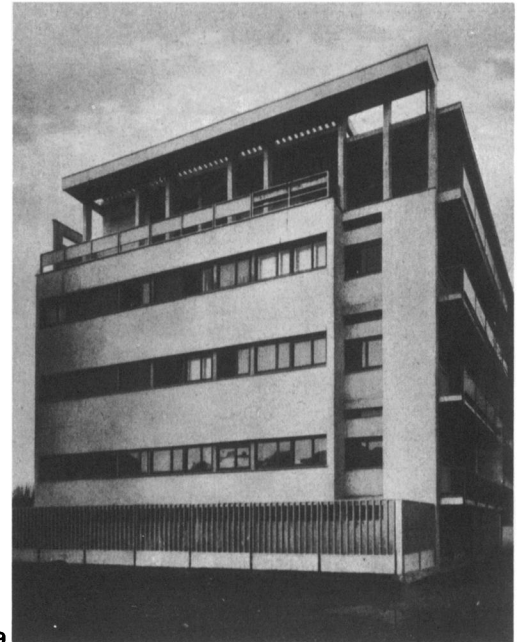
First, if the north elevation is considered as a conceptual solid which has been eroded, the horizontal top edge of the bent surface must be seen to act as a frame marking the limits of the initial solid; and with the surface of the three story block of typical floors, forms a conceptual vertical plane from which all indentations and setbacks can be read as erosions (Fig. 19).



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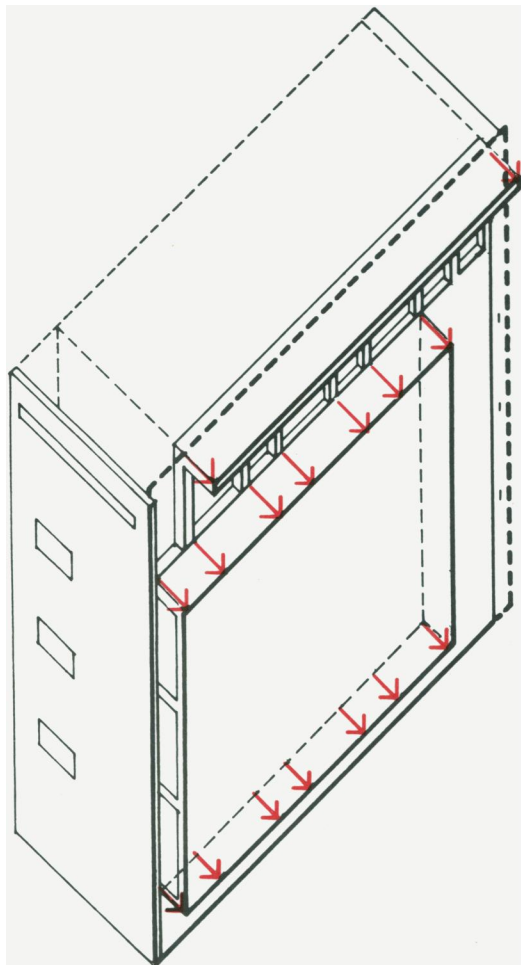
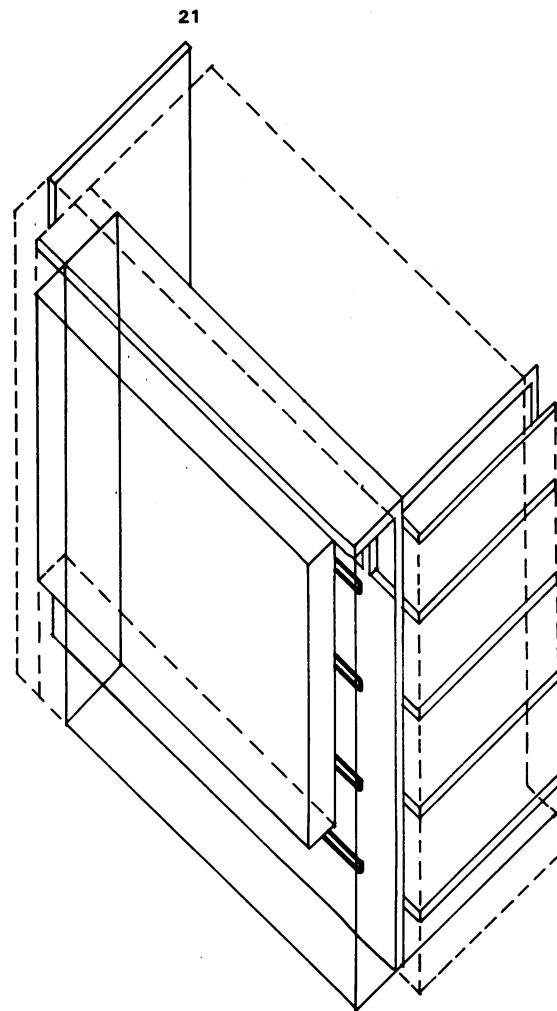
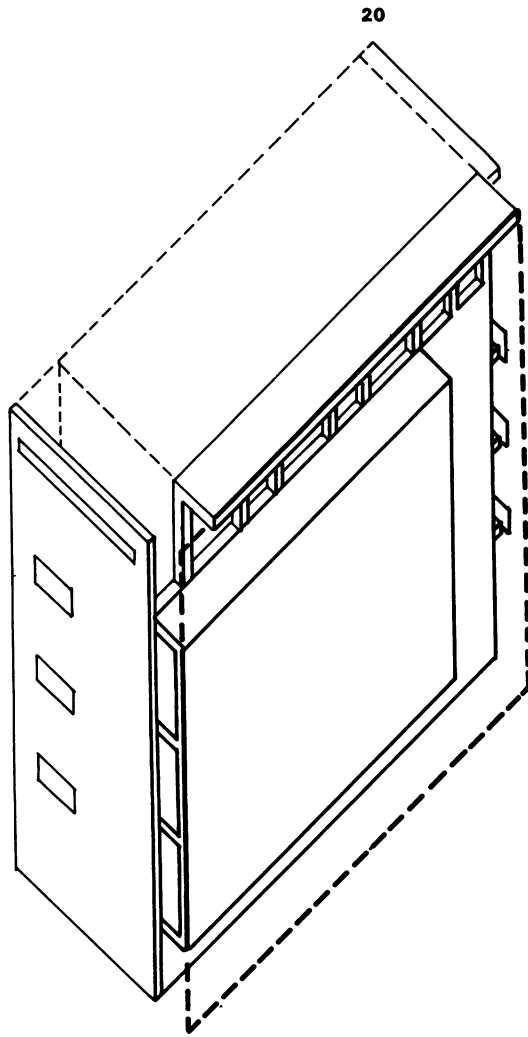


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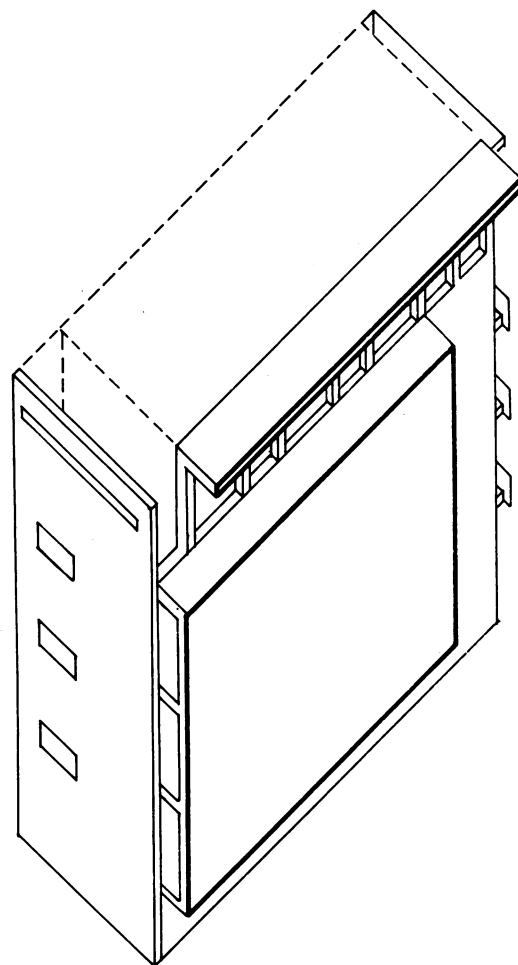


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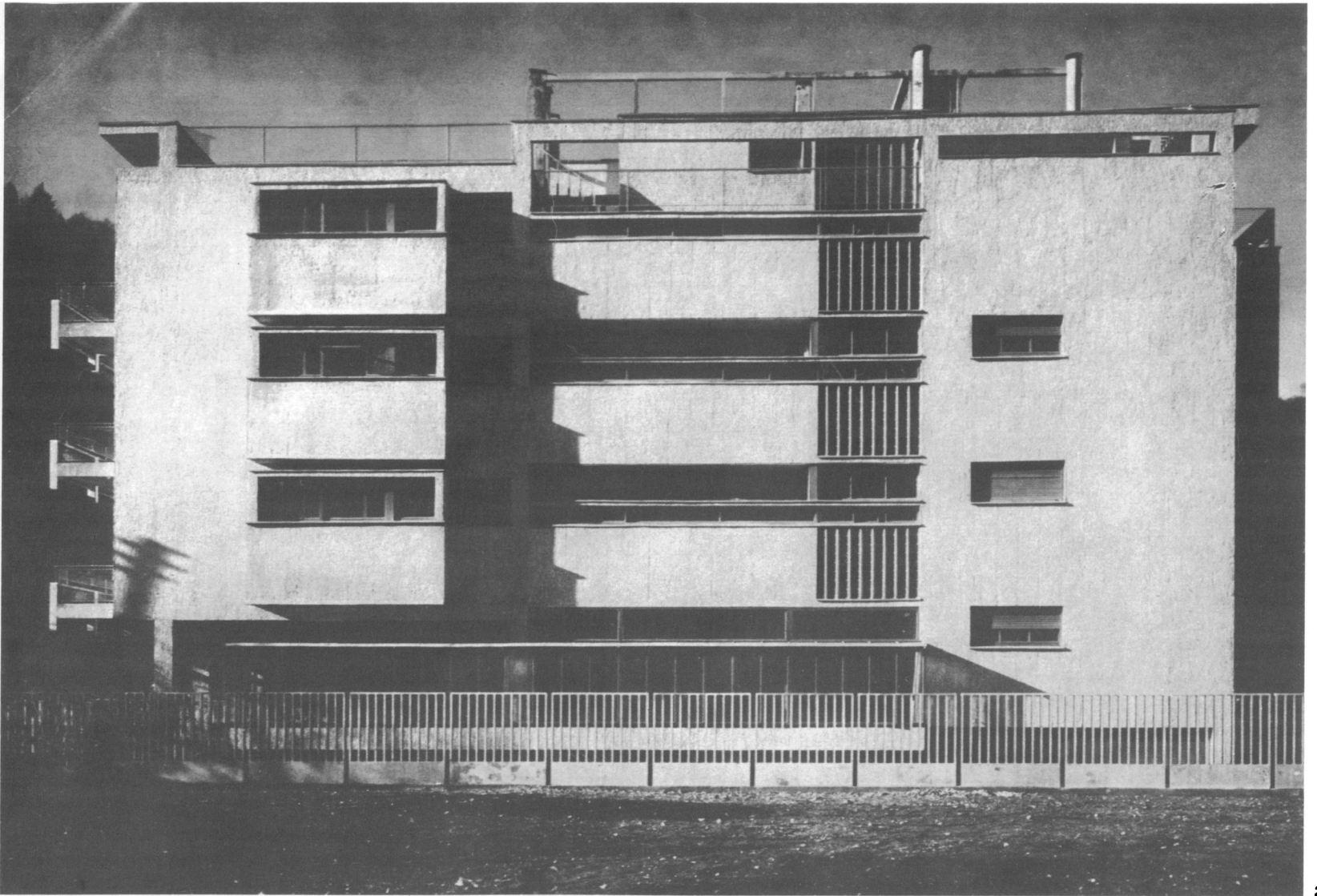
The particular articulation of this surface, the shearing condition, forces a second and corollary reading (that of a layering of planes) to assume an equal valence. The shearing condition is reinforced by the narrow slot windows (Fig. 20) which appear only in one bay and together with the residual horizontal slots along which the solid seems to be shifted to a position to the northeast (Fig. 21). Again, both readings are reinforced when the corners of the north facade are examined. The treatment of the northeast corner, in particular the placement of the windows with relation to the floor, causes the three-story solid to read as a plane pulled from the volume, adding another aspect to a planar interpretation (Fig. 22). It is worth noting the horizontal banding of windows (Fig. 23) on the north facade occurs midway between floor and ceiling, and thus does not define the horizontal planes. This acts to suppress any reticulated column-slab reading.



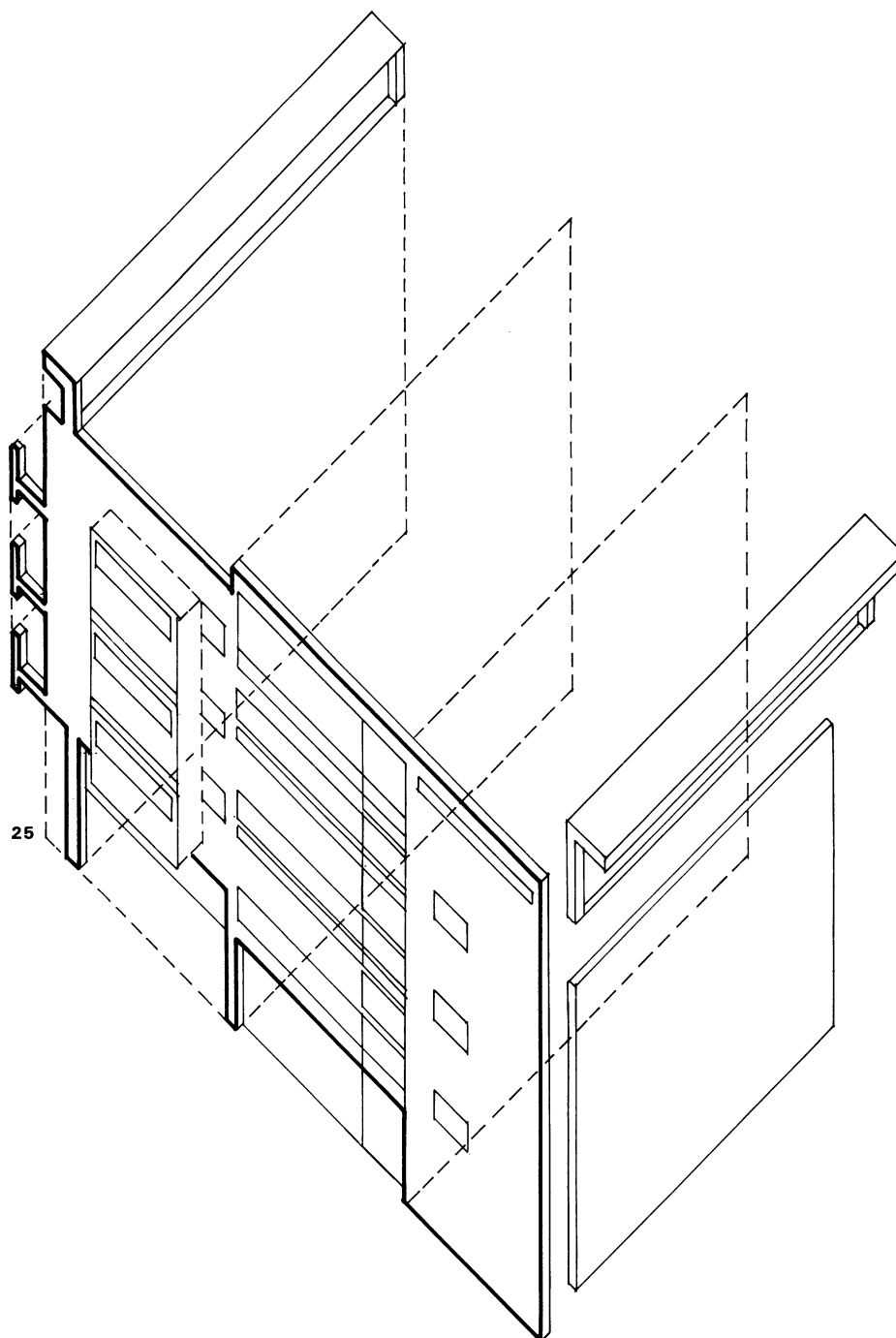
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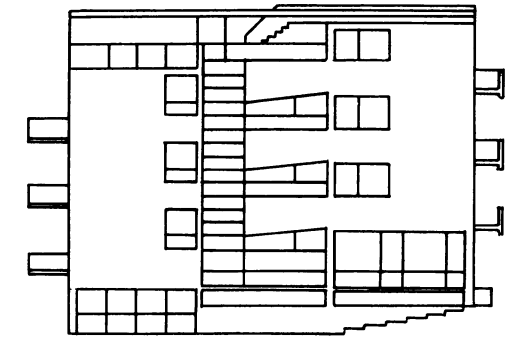


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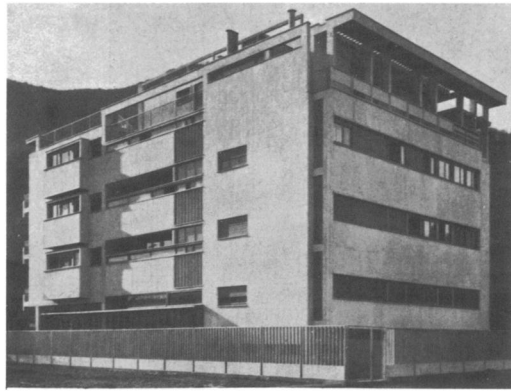


It is possible to interpret the east facade (Fig. 24) as a datum plane on which the lateral layering of the volume from south to north is marked (Fig. 25). This facade also acts as a referent for the original conceptual solid, and can be seen as the inverse of the west facade which is essentially reticulated and additive in nature. This datum, as compared with the datum of the entry plane of the Casa del Fascio, is not conceived of frontally. The dialectic is not revealed within the facade plane itself, (i.e. the solid-cut-away apposition with a reticulated structure, which occurs within each facade plane of the Casa del Fascio), but rather at the junction of two planes, at the corners. It is only on the oblique, where the corners are articulated as a meeting of planes rather than as an edge of a volumetric solid, that the second reading becomes apparent. Whereas in the Casa del Fascio the conceptual structure is articulated through the dialectic between eroded solid and reticulated grid, the dialectic in the Giuliani-Frigerio is between eroded solid and a sequence of planes, with a corresponding suppression of both reticulated and striated readings. Thus while the Casa del Fascio suppresses the oblique, and the corresponding diagonal structure for frontal relationships, the Giuliani-Frigerio demands the oblique.<sup>13</sup> It is interesting to note that in both buildings, while there is an emphasis on facade articulation as a notation for the specific syntax, in neither case does the articulation carry through the building to a complementary ordering of the internal spatial structure. For example, in the Casa del Fascio the layering developed from the front facade is partly terminated by the central space; the deep beams, which run in a single direction, are the only indication of the continuation of the planar layering through the central space. And while there is some marking of this internal space on the facades of the Casa del Fascio (in the tripartite ABA facade structure), there is very little reciprocity from inside to outside in the Giuliani-Frigerio. This can be attributed to several factors. First because of the nature of the program in the Giuliani-Frigerio — conceptually there are very few internal spaces; and second, because the specific syntax is concerned with corners and edges, with references to adjacent planes rather than with internal-external layering; or lastly, it is possible that Terragni could not manipulate with facility the layering of internal space (as opposed to his rather sophisticated layering in facade planes).

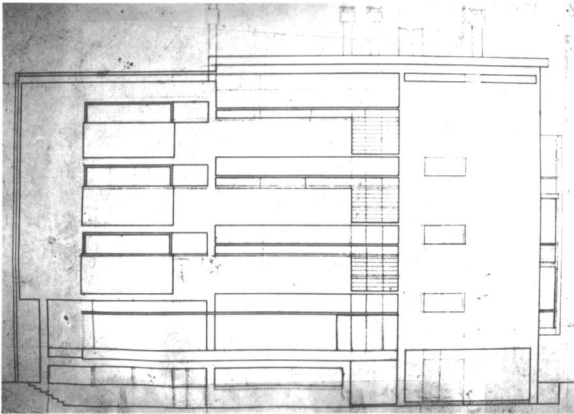




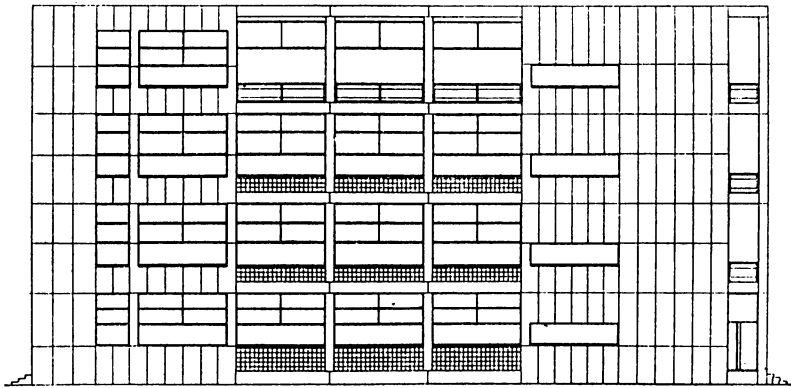
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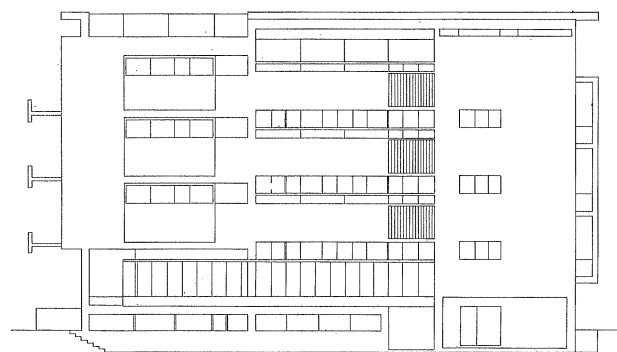
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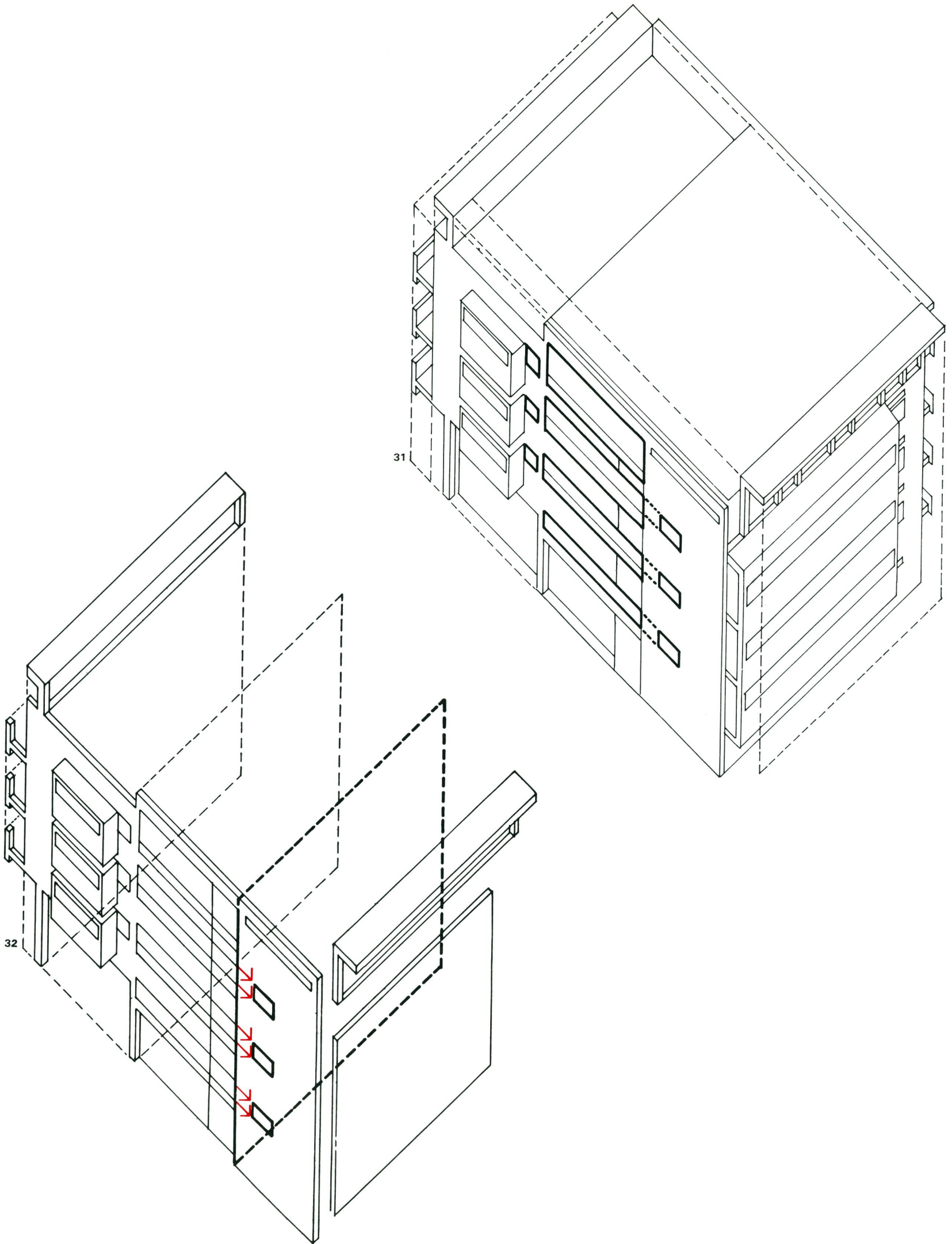
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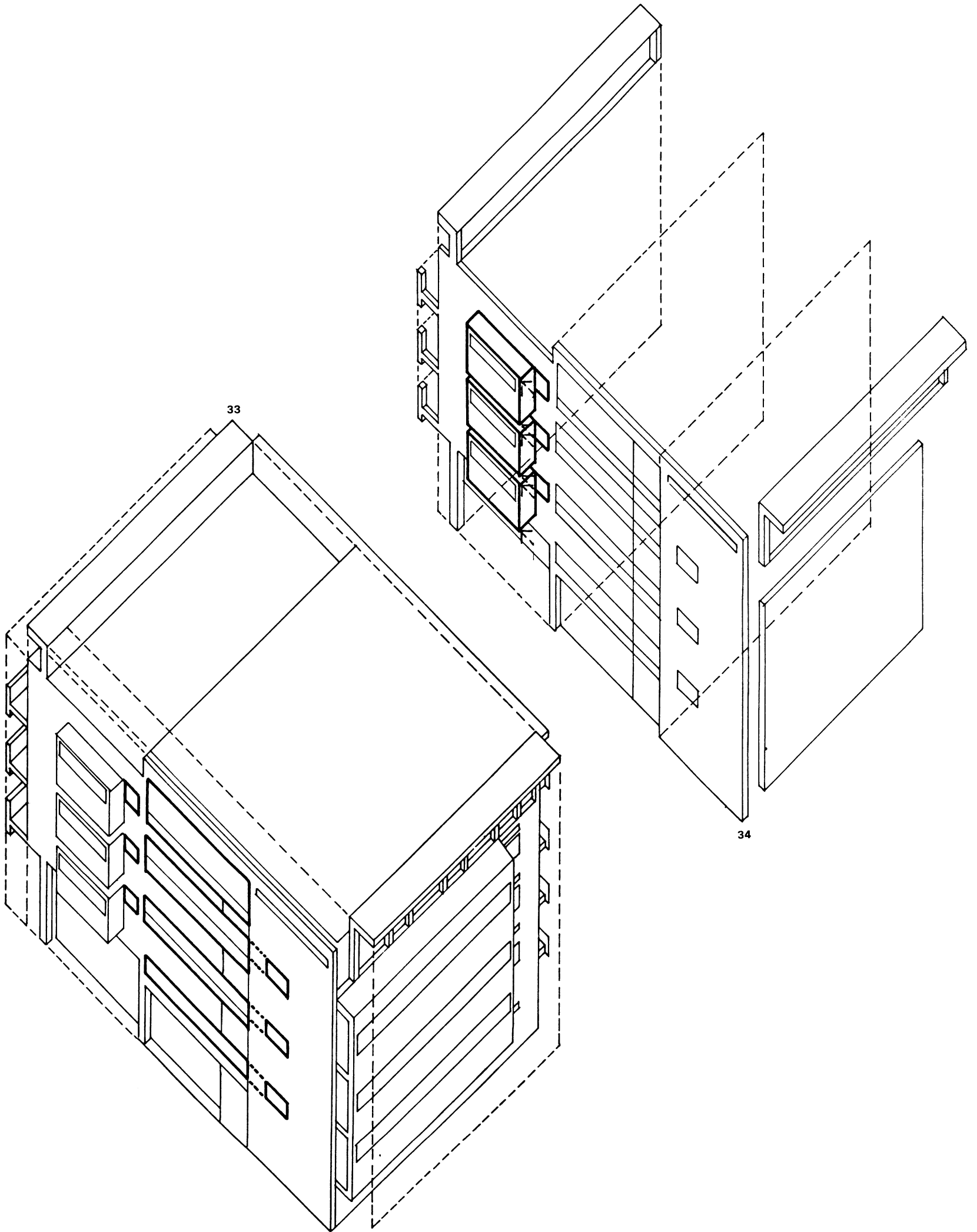


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The evolution of the east facade can best be seen in relation to the early studies. In Scheme A (Fig. 26) the "east" facade is actually on the west; with the reversal of the plan in Scheme B, it becomes the east facade. The particular size and disposition of the openings in this early study can be seen as similar in intention to that of the northwest facade of the Casa del Fascio (Fig. 27); i.e. a tripartite division and a positioning of windows in such a manner as to reveal a latent reticulated grid. The openings in the central bay of Scheme A quite literally indicate the stairway and the half-level change in the floor plane. Since the particular form of these openings can be read also as having been cut from a solid, a secondary interpretation is also implied.

In later schemes (Fig. 28), the reading of a tripartite reticulated grid is suppressed and the ambiguity is developed between readings of eroded solid and planar layering. There are only minor adjustments from Scheme C to Scheme D. In Scheme D (Fig. 29) the major openings are treated as continuous bands across the facade, giving an implied continuity to the plane (Fig. 30). Even when there are isolated openings, as in the right-hand bay, they continue the implied line of the banding. In this bay the windows are placed slightly away from an implied column line. (Fig. 31). This location relieves them of a possible interpretation as marking the column line on the surface, thus sustaining a suppression of a reticulated reading. Earlier in Scheme C, a volumetric projection is added in the left-hand bay. This projection, again because of the way it is articulated, further adds to the suppression of any reticulated reading of the east facade (Fig. 32). First, this projection is not brought through the facade as one volume but rather cut into three separate boxes.

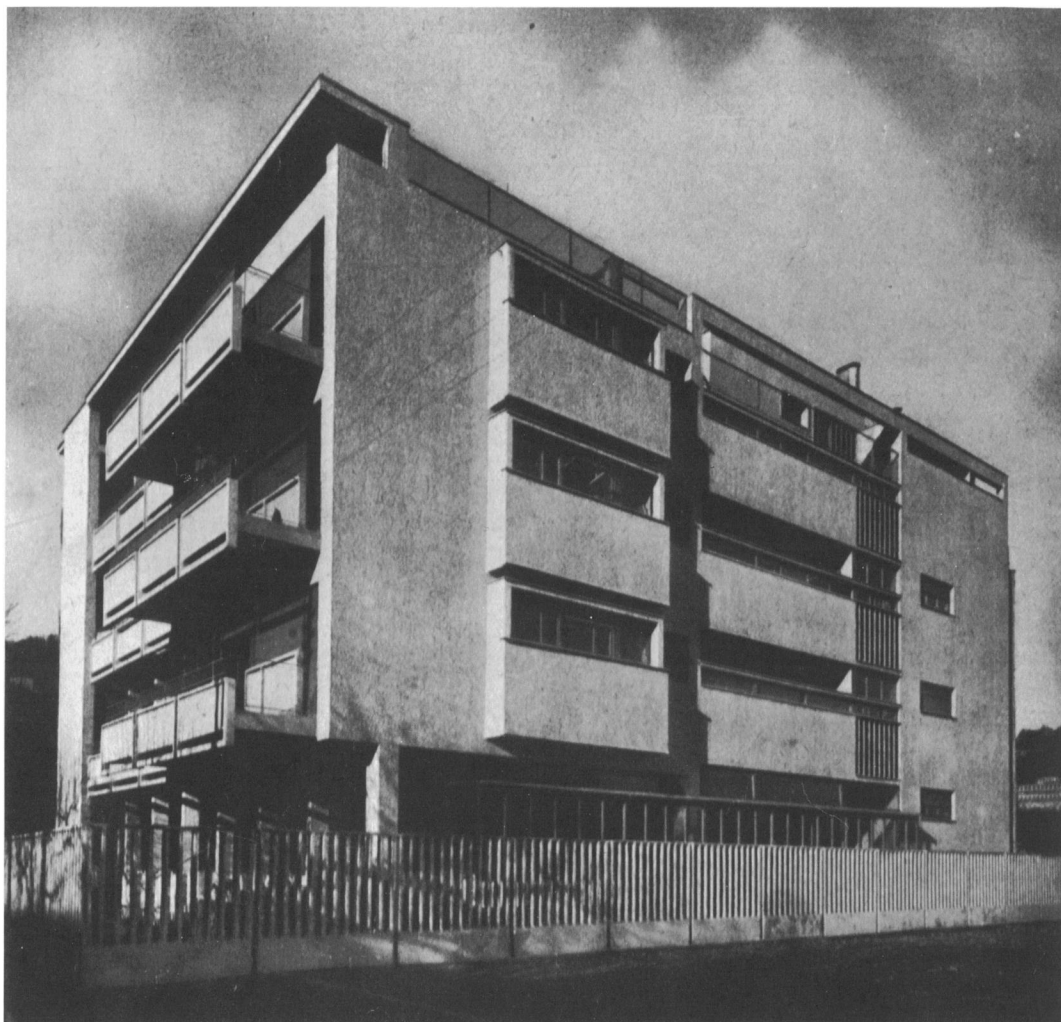




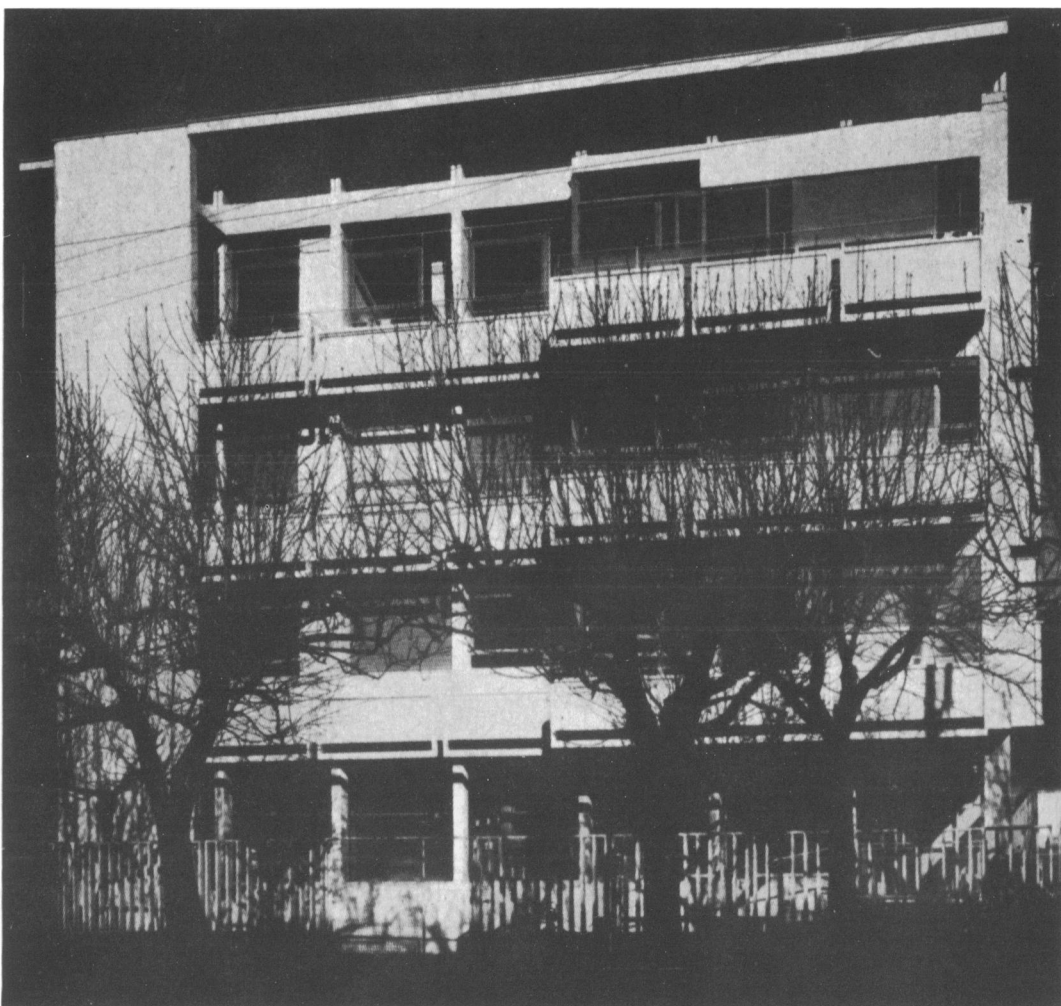
By virtue of this cutting, the projections thus have a primary solid as opposed to a planar reading, and a secondary dialectic of the two. Because these solids read as having been moved through a membrane, this gives the facade a planar quality. (Fig. 33). But these projections also provide the alternate reading for the facade by virtue of their placement in relation to the horizontal banding. These projections also appear to have been pulled along the facade leaving the horizontal openings as a residue of their movement. (Fig. 34). This particular formal device while similar to the type of shift described previously on the north facade, seems to have as a source Cattaneo's track-like cage in his building Cernobbio (Fig. 35). Here there is no cage, but merely the use of a shearing to indicate a possible solid-plane ambiguity. The ambiguity is further heightened by carrying the facade plane window banding across the solid projections.

Thus, when viewed frontally, the facade can be read as a flattened solid. Even the box-like projections appear ambiguous. In one sense they also seem to be flattened because of the particular window articulation which appears to continue the facade banding across the projections. It is only when one moves to the oblique, either the southeast or the northeast corners, does the second implied reading of a planar layering become apparent.

From the southeast, the solid vertical wall section extends as a plane past the vertical column line which can be read as a datum marking the corner of the internal volume. (Fig. 36). The balconies of the south side are placed in such a way to reveal this same plane; they are set back from the corner the depth of the plane when viewed frontally. From the south the planar nature of the east facade is further emphasized in the upper right hand corner the plane is articulated by a slight but nevertheless significant upstand which again breaks the "solid" corner (Fig. 37).

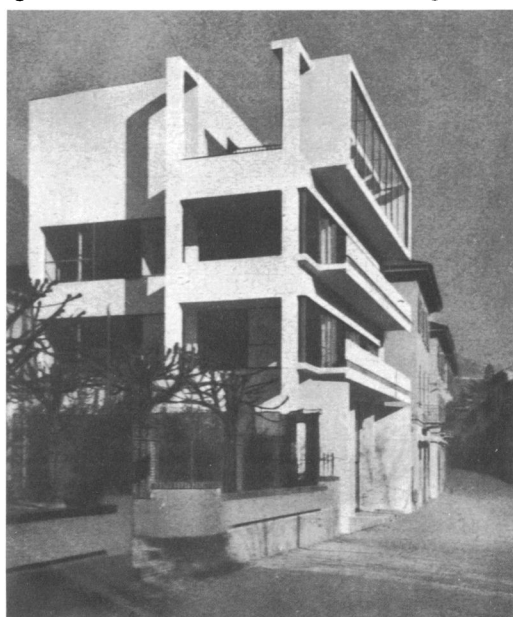


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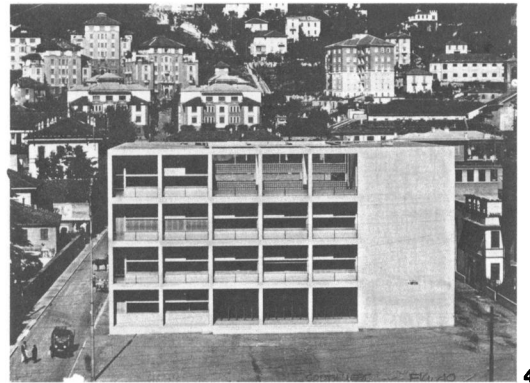
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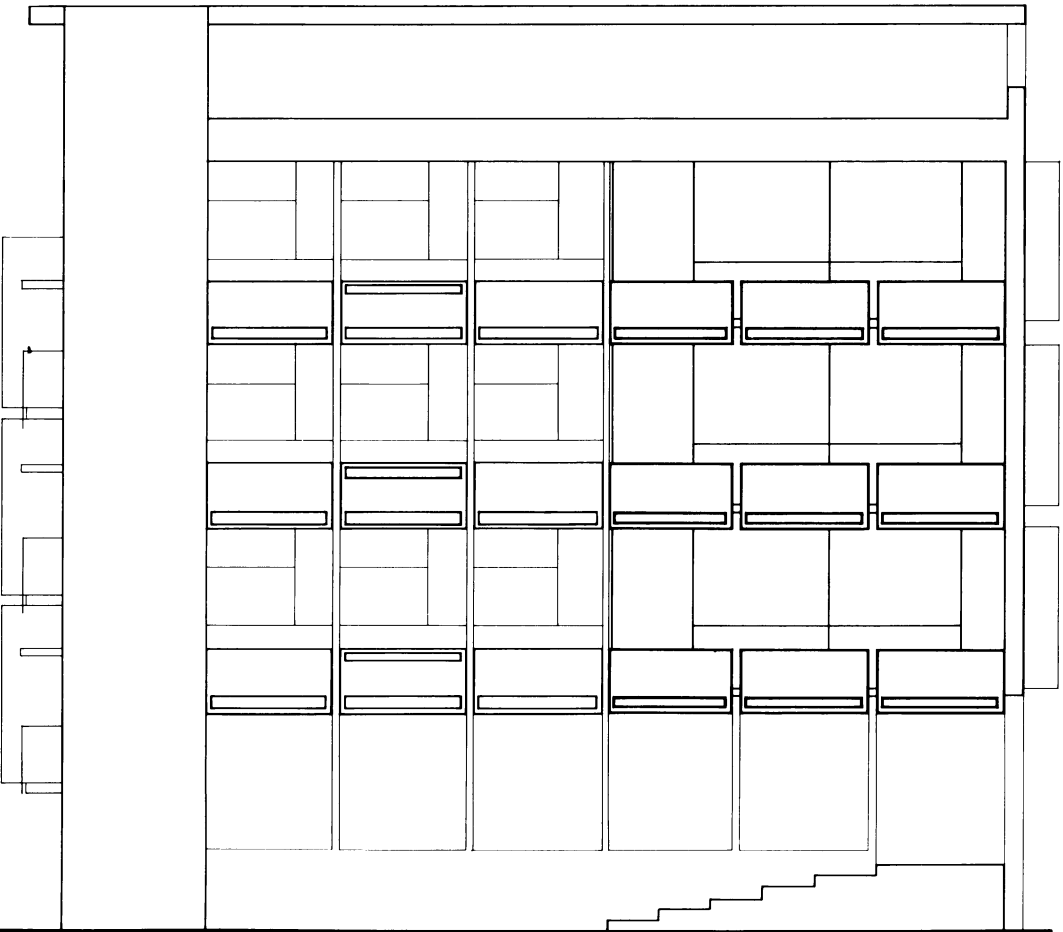




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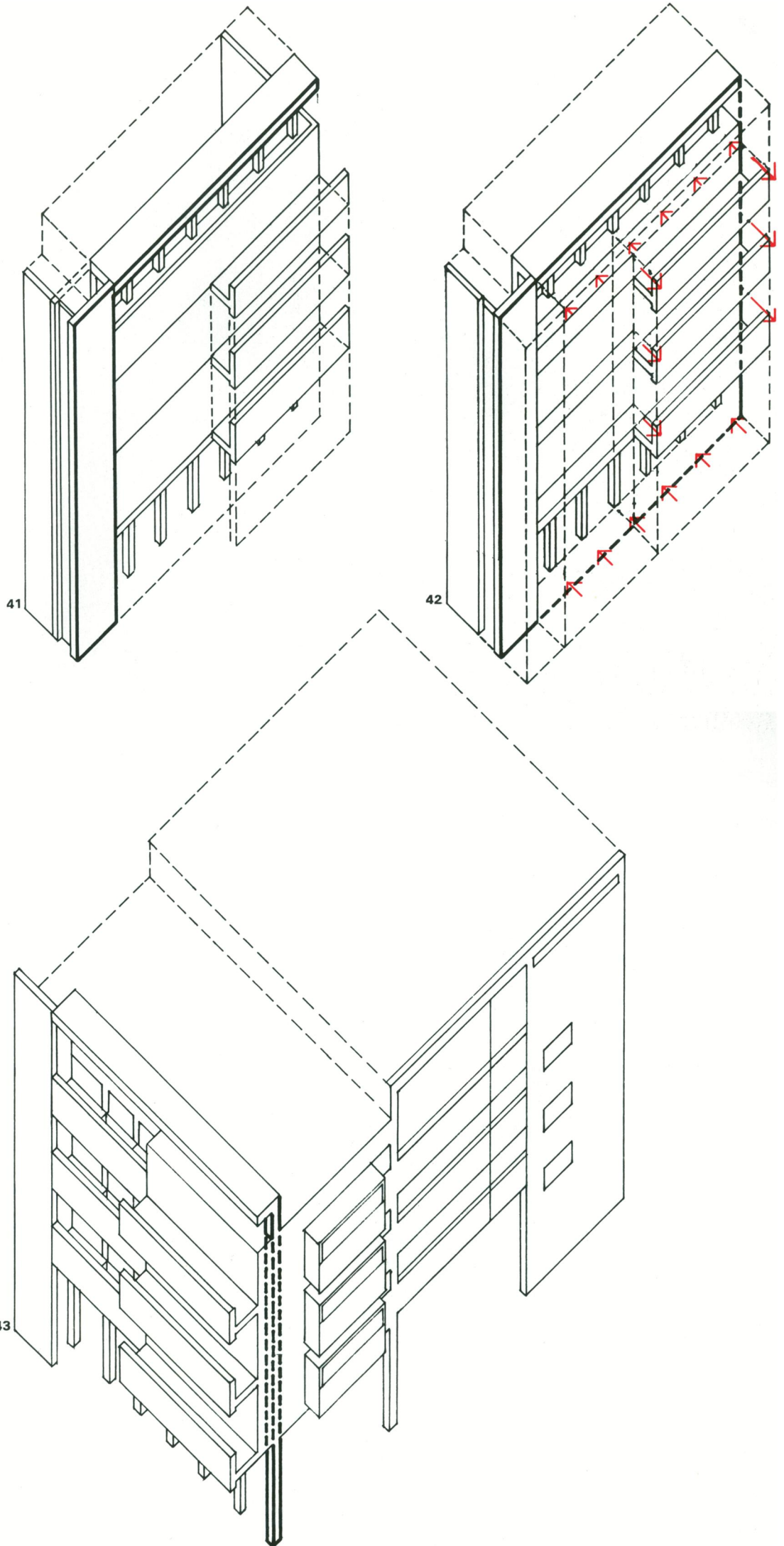
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To arrive at this level of ambiguity on the east facade, Terragni is forced to mask, through the manipulation of the facade, what is happening on the interior. In other words, to force a conceptual interpretation, certain markings are necessary which obscure direct internal-external readings. This break with the then established canon of the modern movement must be considered as intentional in light of the argument being presented.

The south and west facades are the most highly articulated; in a sense they can be considered the two "open" facades. To understand the south facades (Figs. 38 & 39), another comparison with the Casa del Fascio will be useful. The south facade has certain perceptual similarities to the southwest or entry facade of the Casa del Fascio (Fig. 40). There is a similar tripartite organization with the solid portion of the facade reversed (in the Casa del Fascio it is on the right, in the Giuliani-Frigerio it is on the left). However, in the Casa del Fascio the actual structure — the vertical and horizontal elements — are placed in the facade plane. This does two things: it establishes the reticulated grid as one aspect of the formal dialectic and it establishes the primacy of the facade plane as a datum, from which the layering of subsequent planes can be read. In the Giuliani-Frigerio there seems to be a conscious attempt to create, as it were, a shifting datum because of the different formal structure being used. The solid vertical element of the facade, instead of being 1:3 as in the ABA relationship of the Casa del Fascio facade, is reduced to the width of one bay; and this element rises above the glass line to form a frame with the edge of the horizontal roof plane. (Fig. 41).

In one interpretation this frame marks the edge of a solid which has been eroded away. In the other, the frame acts as a datum. Elements are projected forward and are recessed back from this datum to mark a series of vertical planes. (Fig. 42). Here the columns are set back to mark one layer, and the balconies project forward to mark another — in both cases the particular formal intention seems to be to suppress a reticulated reading similar to one which occurs in the Casa del Fascio.

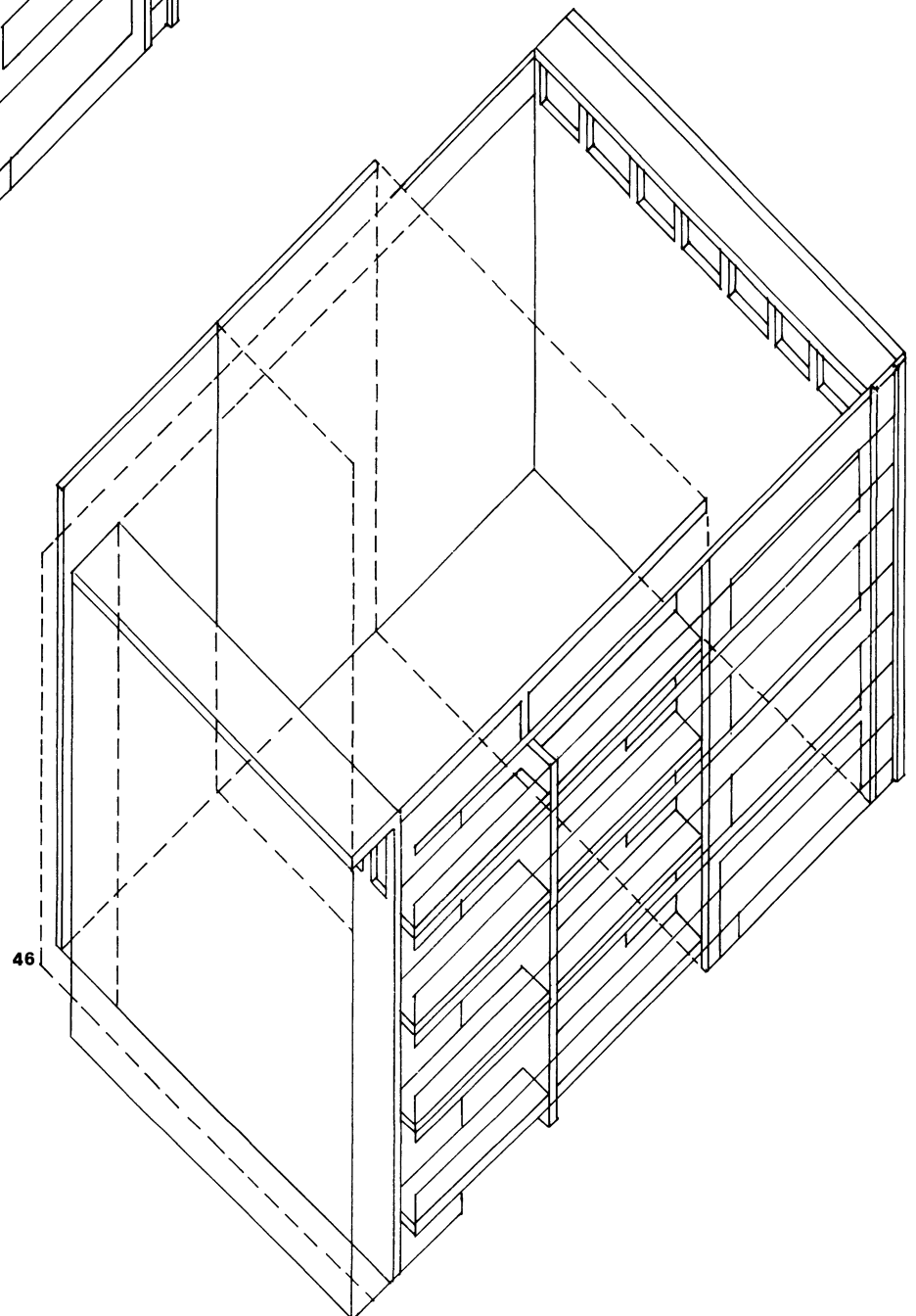
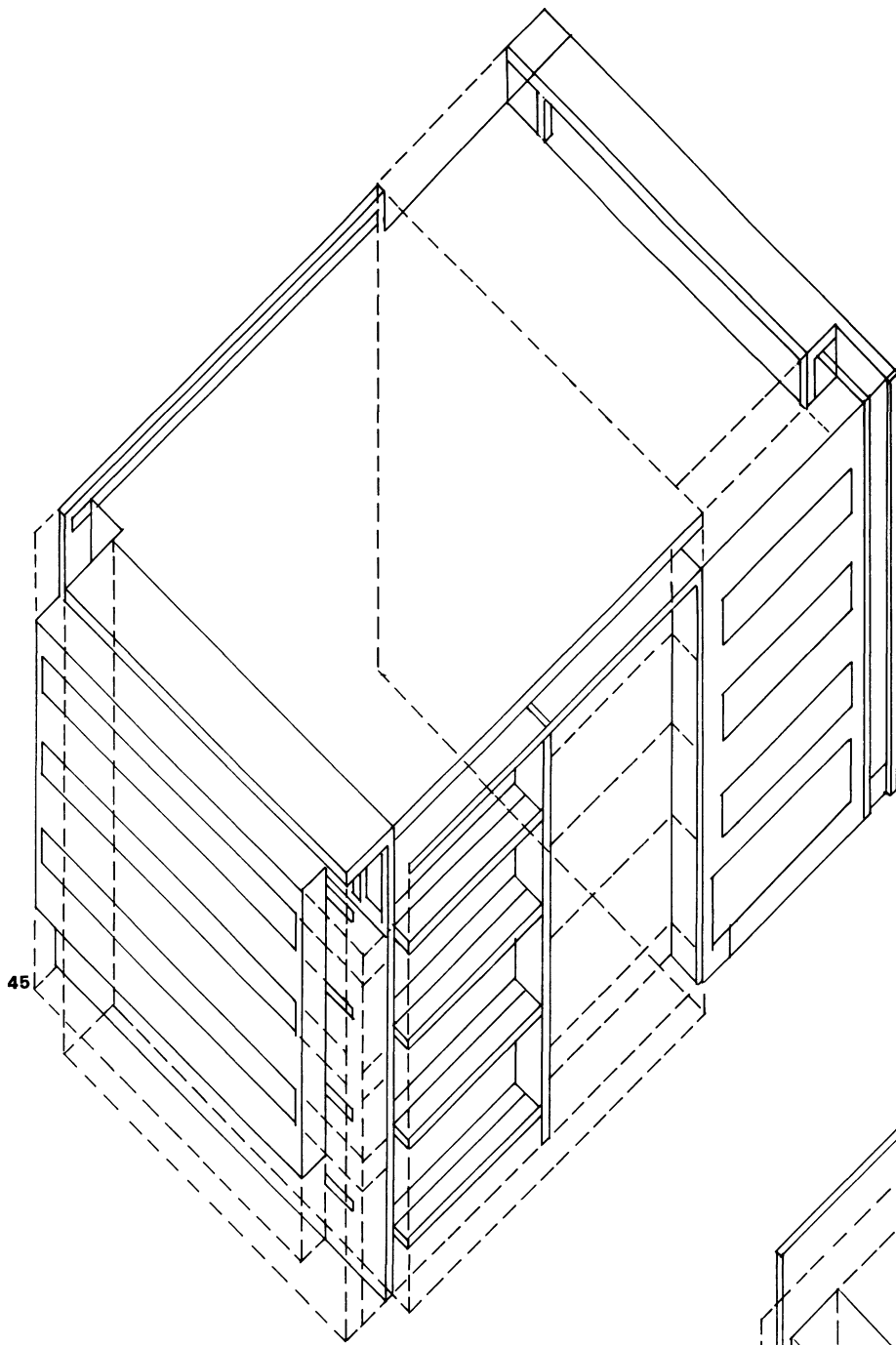
Again, when the viewpoint shifts from frontal to oblique, the readings are changed. For example, when viewed from the southeast it is not the line of the left-hand vertical plane and the horizontal roof which read as the datum, but rather it is the line of the columns, which (Fig. 43) from the oblique viewpoint, because it is the only uninterrupted vertical, becomes the primary reference.





The west facade can be best traced by an analysis of the plans, because photographs of the actual facade are partially masked by a double row of low trees. (Fig. 44).

The important notation is again seen in the marking of the corners, where the intention to treat this as an 'open' facade is most apparent. The dialectic of solid volumes and planar layering is less important than the ambiguity developed by the marking of the vertical layering (Fig. 45). On the northwest the line of the balconies and the edge of the roof project beyond the solid corner of the north facade, thus again reducing any volumetric reading (Fig. 46). A similar condition also pertains on the southwest corner which because of the placement of outriggers, tends to give the entire facade an 'open' notation.



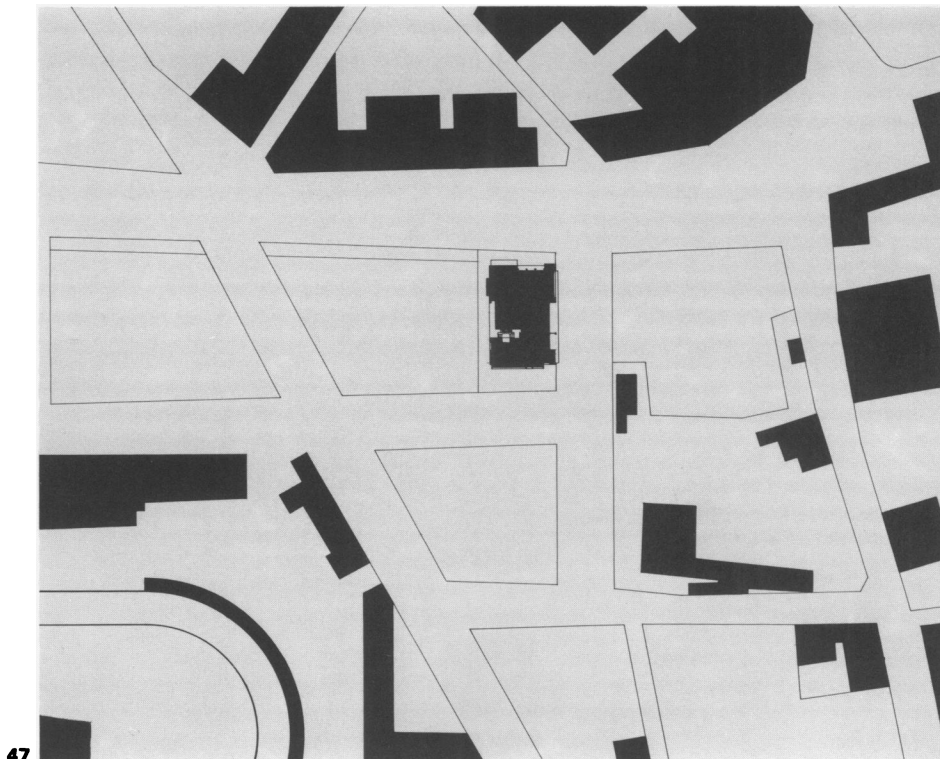
In conclusion, two comparisons with the Casa del Fascio are worthwhile. Both buildings are examples of the use of pictorial or conceptual ambiguity as a transformational method. In each case the particular use of form is different.

Both buildings can be considered as basically externalized, in that their specific marking works toward elaborating an external, context-oriented structure of space rather than to the marking of an internal structure. In fact, in the Giuliani-Frigerio it is possible not only to say there is little internal space, but also that the internal functional structure — the layout of rooms, etc. — seems to derive little of its order from the external facades—a fact which is substantiated by the innumerable room arrangements which exist for each of the four schemes. And, as has been said before, little of the internal structure is manifest on the projections and distortions of the facades. Another important difference is the conception of the relationship between the observer and the building. Whereas the Casa del Fascio is conceived to be understood primarily in a frontal context (suppressing oblique readings for frontal ones), the Giuliani-Frigerio demands both oblique and frontal orientation; and because of the importance of the corner articulations to the formal intention, the oblique references seem to be preferred. This leads to a second distinction between the two formal systems.

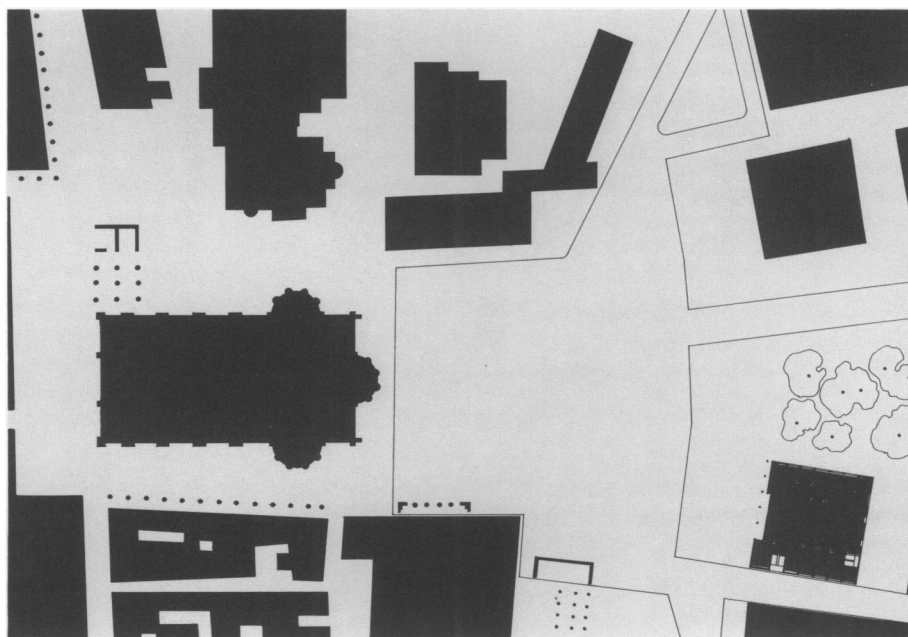
In the Casa del Fascio the frontal emphasis — the layering of space from a frontal datum — is considered mainly in relation to the specific context; in the relationship of the building to the adjacent piazza and to the cathedral (Fig. 47).

In the Giuliani-Frigerio the oblique emphasis is less clear and less well resolved in terms of the immediate context. For example, if the north and east facades are read as "solid" and the south and west facades are read as "void", there is a resultant diagonal established which could be said to respond to the existing site condition (Fig. 48). It is difficult to sustain this argument to any extent if one returns to the analysis of the particular marking of each facade. It is rather better to say that the oblique and diagonal readings result from the particular syntax of a planar and volumetric ambiguity, than to load this building with arguments that it should not have to bear.

Terragni's work, and in particular the Casa del Fascio and the Casa Giuliani-Frigerio, seems important to an initial consideration of the use of ambiguity as a transformational method, especially in its potential for relating different scales of physical environments. As has been said earlier, the definition of the particular deep level structure of the Casa Giuliani-Frigerio is not important in the context of this discussion. Equally, the elaboration of every marking is not central to the issue. In the particular case of the Giuliani-



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Frigerio, since such a method was not necessarily a conscious intention of the design, it is not to be expected that any fully realized relationship of specific syntax to deep level syntax would be present, and thus not capable of explanation.

The relevance of the above discussion can be seen in the following terms. First, if it is accepted that the problem of a search for new meaning from formal constructs is important, then a shift from an "object" to a "relationship" orientation is one possible way to conceive of the problem. Given such a change in focus, the establishment of both a surface and deep level syntax as well as the development of transformational methods, which relate the specific forms to a series of formal universals become necessary.

The formal analysis of the Giuliani-Frigerio has attempted to show one such method, involving the use of essentially pictorial means — the ambiguity of layered planar space and volumetric space. Within the limits of this one transformational device an infinite range of specific forms can be conceived which have the possibility for rational interpretation based on a limited series of formal universals. In a design process this type of formal analysis also remains limited, as the intuition still plans a dominant role. Chomsky has said that as long as a grammar remains at an intuitive or less than conscious level, many strategies remain unavailable to the user. Thus, an exploration of the realm of deep level syntax would be necessary to develop a finite structure of formational rules to which each specific syntactic structure could relate. Rather than limiting the intuition, such an objective understanding might lead to freeing and expanding of the role of the intuition in a rational design process.

It is thus possible to think of the existing oeuvre of the modern movement in an analytical rather than an historical context. In this sense, it is possible to see the work of Leger and Gris, Mondrian and Malevich, Le Corbusier and Terragni as having posited an intuitive framework. The elaboration of this framework is a task which remains ahead.

Mr. Eisenman is an architect. He is at present director of The Institute for Architecture and Urban Studies in New York.

Much of the research on the work of Giuseppe Terragni was done in 1967 on a fellowship from the Graham Foundation for Advanced Studies in the Fine Arts.

Previous to this fellowship, Mr. Eisenman had received two small research grants from Princeton University for summer work in Italy, on the same project. Most of the drawing of the plans, sections, and elevations were done by three of Mr. Eisenman's former students: Russell Swanson of Princeton; Daniel Liebeskind of Cooper Union; and Gregory A. Gale of The Institute for Architecture and Urban Studies.

Mr. Eisenman's article represents excerpts from two forthcoming books: *Syntactic Structures: The Logic of Form in Architecture and From Object to Relationship: Giuseppe Terragni*.

1 It is interesting to note in this context that this title is usually translated as *The Non-Objective World* which seems to change the intent of Malevich's original argument. In an announcement of Robert Motherwell's *Documents of Modern Art* series in 1945 the book is referred to by the more appropriate title *The Objectless World*.

2 "One might infer that at Garches, Le Corbusier had indeed succeeded in alienating architecture from its necessary three-dimensional existence . . ." See Colin Rowe and Robert Slutzky, *Transparency*, in *Perspecta*. The Journal of the School of Architecture, Yale University, No. 7, 1963, pg. 50.

3 Robert Slutzky, in a conversation, makes a clearer distinction in this context. He says a more precise comparison would be between Cezanne and Mondrian, or in the case of Leger and Gris, only their earliest work. In their later work, both Leger and more specifically Gris initiated their canvases with an a priori conception of geometric structures nearly devoid of associational references. Their concern with objects was only in the sense of object as type, as opposed to object with a specific meaning. Cezanne, on the other hand, begins with an object-oriented abstraction. Obviously, Mondrian stands in clear opposition to both approaches — painting completely non-referential structures in no way relying on associations of a given object context.

See Kahnweiler, D. H., *Juan Gris, His Life and Work*, (translated by Douglas Cooper), London, Lund Humphries, 1947, pp. 117-118.

4 Chomsky, Noam, *Syntactic Structures*. The Hague, Mouton & Co., 1965, pg. 17, footnote 4.

5 In their essay on *Purism*, Le Corbusier and Ozenfant make a similar distinction when they refer to the primary and secondary sensations of a work of art. "Primary sensations are constant for every individual. They are determined by a fixed sensation released by a primary form. Secondary sensations vary with the individual because they depend upon his cultural or hereditary capital." While their notion of primary sensations can be considered syntactic, their notion of secondary sensations is essentially semantic. They do not make a distinction within the syntactic dimension which seems to be an important difference.

See Herbert, Robert L., Ed., *Modern Artists on Art*, Englewood Cliffs, N.J., Prentice Hall, 1964, pp 58-73.

6 Chomsky, Noam, *Syntactic Structures*, op. cit., pg. 16.

7 Chomsky, Noam, *Cartesian Linguistics*. New York & London, Harper and Row, 1966.

8 See Rowe, Colin, "The Mathematics of the Ideal Villa", in *The Architectural Review*, March, 1947, pp 101-109.

9 In this context Le Corbusier and Ozenfant in their essay on "Purism" say that certain objects such as bottles, glasses, etc. are necessary to art because they carry a certain semantic concerned with maximum capacity, strength, and above all an economy of material and an economy of effort. They imply that because of this semantic, the particular object will also exhibit universal formal properties. They say that rather than distorting these properties and showing their "accidental aspects", an error made by some of the Cubist painters, their "invariable constituents" should be presented. However, they emphasize that these universal aspects cannot be used in isolation without the semantic reference of the object. It is in light of this argument that the difference in emphasis between the architecture of Le Corbusier and Terragni can be understood.

See Herbert, Robert L., Ed., *Modern Artists on Art*, pp. 58-73.

10 Empson, William, *Seven Types of Ambiguity*. New York, New Directions Press, n.d., pg. 234.

11 While much of my initial research was given a certain direction by the publication of the Rowe and Slutzky, "Transparency" article, it is necessary to the understanding of this article to make a careful distinction on two points. Rowe and Slutzky infer that the meanings accrue from the "contradiction of spatial dimensions", from the "dialectic between fact and implication", the resultant tension enforcing readings. Here the argument is that in any architecture, while meaning can be derived from the relationship of actual space to implied space, it is only through the control of this relationship; through the relation of surface (physical) phenomena, whether real or implied, to some structure of formal universals or deep syntax that readings can be given a possible interpretation.

The second distinction which is necessary to be made is that ambiguity may not necessarily reside in the actual spatial dimension — the physical object — but rather in the possible conceptual interpretations of relationships between objects. Again, these distinctions seem helpful in trying to isolate the differences in the use of syntax in the work of LeCorbusier and the work of Terragni.

12 For a more detailed discussion of the Casa del Fascio see my article "From Object to Relationship", *Casabella*, No. 344, January 1970.

13 Chomsky, Noam, *Aspects of the Theory of Syntax*. Cambridge, M.I.T. Press, 1965, pp 18-27 and pg. 94, *Syntactic Structures*, op. cit.

"It is also quite clear that the major goal of grammatical theory is to replace this obscure reliance on intuition by some rigorous and objective approach."

Certainly the Casa del Fascio can be considered one of the canonical buildings of the modern movement, and its architect, Giuseppe Terragni, one of the least understood of its proponents. LeCorbusier, speaking at the exhibition in 1949 commemorating the anniversary of his death said;

'The work of Terragni demonstrates precisely that he had not only that sense which leads, which inspires, but also the understanding of matters of proportion, plastic beauty and purity of line; there is in his work the presence of the soul of a plastic artist and also a mathematician who had made his stand in that perilous domain of mathematics where architecture would sink if it did not keep, its balance.'

Recently much previously unpublished material on Terragni, both his writings and buildings have been documented, which begins to amplify the rather minimal extant history concerning his work. Previous to Enrico Mantero's book, *Giuseppe Terragni et La Città del razionalismo italiano*; a book mainly devoted to his writings and letters, and the two special issues of *L'Architettura* (n. 153 July 1968, and n. 163 May 1969) which recorded most of his buildings and projects, there was only the little pamphlet by Mario Labo in the *Il Balcone* series 'Architetti del movimento moderno'. There is still no critical evaluation of his architecture in relation to the political and social events of the time, except for Giulia Veronesi's essay in her book *Difficoltà politiche dell'architettura in Italia 1920-1940*.

However, for the student of architecture, one of the most fascinating and perhaps critical insights into a building, or a particular period of history, can be extracted from the study of the record of plans, sections, and elevations which trace the development of a building. This is especially true of the Casa del Fascio. And while the building has been well documented, especially in the 1936 special issue of *Quadrante* (n. 35-36) which remains as a model for such documentation, the early studies which have been hitherto unpublished, reveal a rather interesting insight into both the architect and the building.

The drawings published in the following suite were made from prints of original drawings done by Terragni himself, probably around 1928. These prints were found in the attic of the Terragni studio in the summer of 1964, under layers of dust, and roles of drawings and tracings, virtually untouched since his death.

The original drawings can be attributed to Terragni because of the characteristic scale figures and trees which exist in a rather awkward fashion on each side of many elevation and perspective studies. These same figures and trees also appear on similar drawings for the Novocomum flats (Fig. 1). The similarity of the following drawings and the Novocomum drawings, (Fig. 2) both in the style of drawing and the style of the buildings themselves provide two interesting clues to the history of these studies. First, since the Novocomum studies which are similar to the following drawings date from late 1927 or early 1928 (they were approved by the building commission in 1928)<sup>(1)</sup> it is reasonable to assume that these Casa del Fascio studies are also from 1928 when Terragni was first retained by the Federazione Fascista to study the project.<sup>(2)</sup>

Second is the question of the rather 'retardataire' nature of both the early Novocomum and Casa del Fascio studies. This question is all the more interesting, particularly because there are drawings by Terragni dated 1927 for Novocomum, which are much more advanced than the approved set. (Fig. 3). Equally, there are two projects — the Fonderia di Tubi, and the Officina per la Produzione del Gas, exhibited in the Monza biennale in 1927, which show that by 1927 Terragni was both aware of and influenced by certain tendencies of the mainstream modern movement. (Fig. 4)

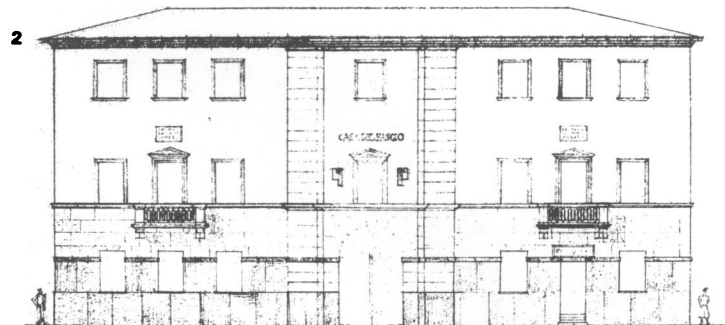
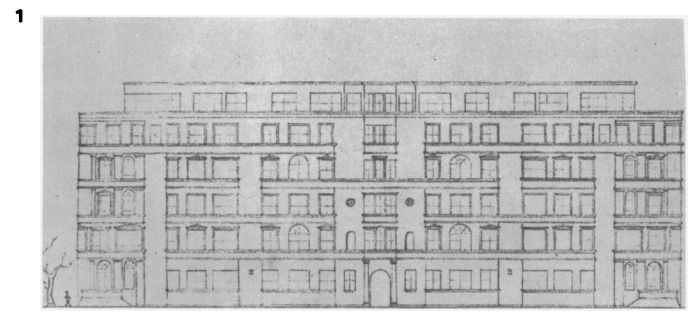
Therefore, it is possible to speculate that both the Novocomum studies, and the following Casa del Fascio studies were done merely to receive approval from the building commission, since both projects were later substantially changed, at least on the exterior. In the case of the Novocomum flats, this argument is more obvious, since there are the pre-existent drawings for the final building in 1927. In the case of the Casa del Fascio, since the building was not finally approved until 1932, there might have been other circumstances, which produced, considering the final building, what can only be termed an extraordinary set of drawings.

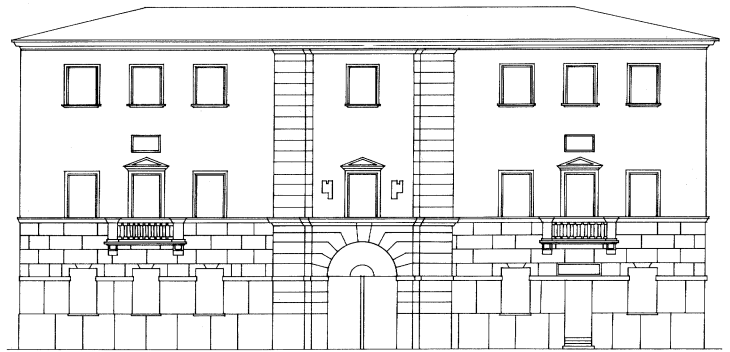
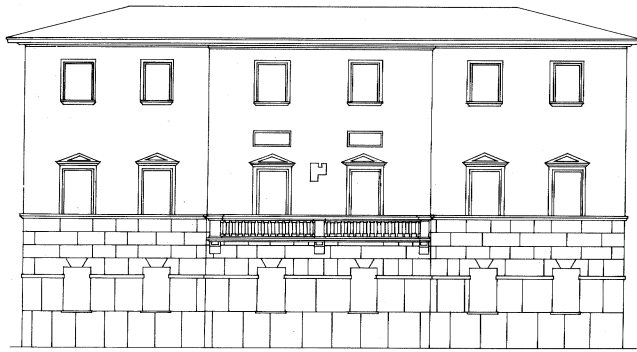
And while the following drawings, are interesting in this historical context, a more complete set showing the detailed development of plans and elevations, provide an analytic documentation of a more fundamental nature. It is through such an analysis that the import of this building to the development of an architecture can be understood.<sup>(3)</sup>

1 Pg. 154 *L'Architettura* N. 153 July 1968 Rome. According to Zuccoli when he started to work for Terragni in November 1927, there were already studies for the Novocomum Project. See Pg. 149 op. cit.

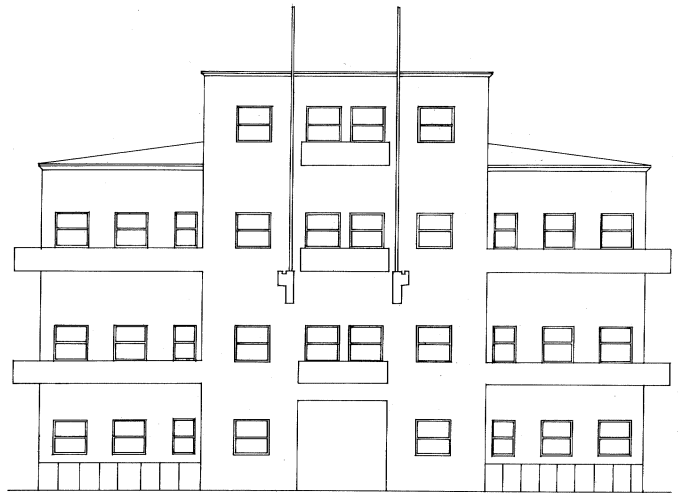
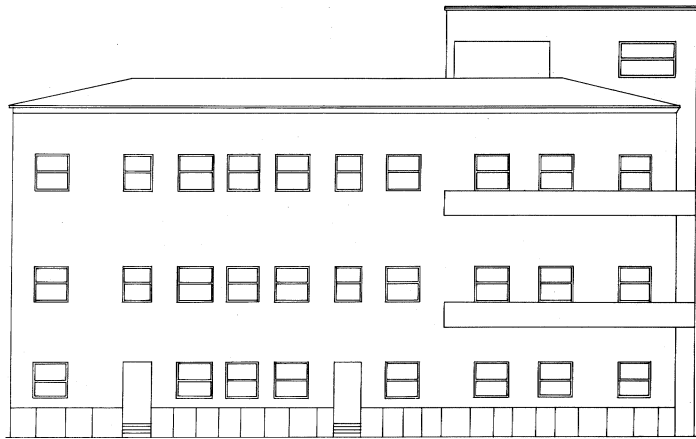
2 See Pg. 182 op. cit.

3 See my article 'From Object to Relationship' *Casabella* No. 344 January 1970





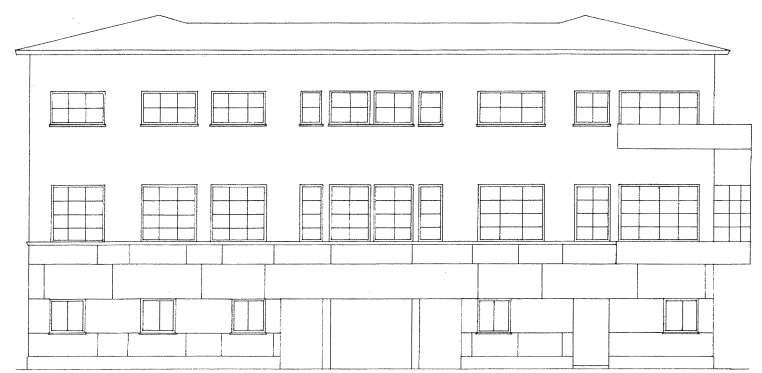
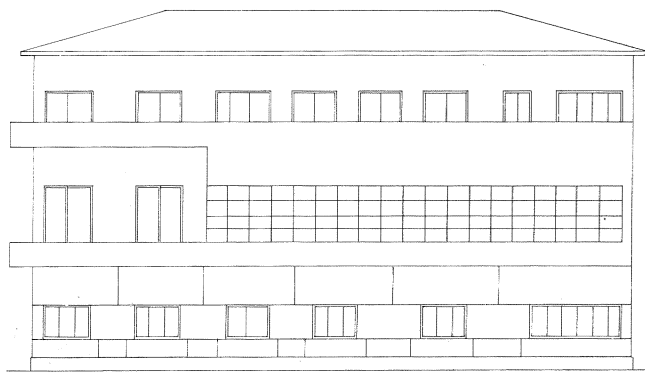
Scheme A



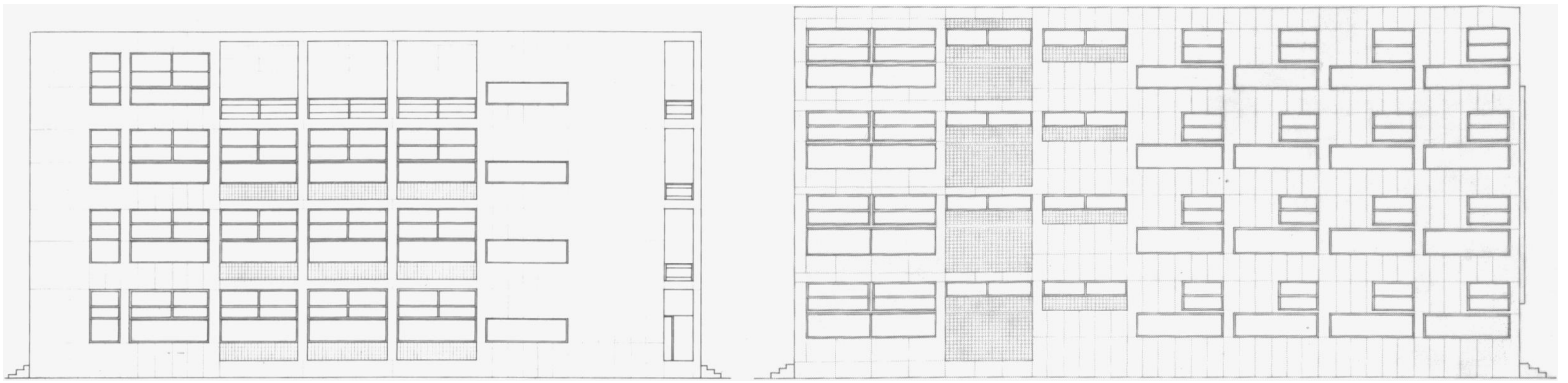
Scheme B



Scheme C



Scheme D



Final Scheme