

BEYOND THE TYPOLOGICAL DISCOURSE

The creation of the architectural language and the type as a project in the western modern city

Proefschrift

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Propositions

1. The notion of building type defines the rational basis of any process of western civilization. As such it is a project, whose collective intentionality is integrally political, social, economical and cultural.
2. The building type is a set of rules which establishes power relations and a corresponding system of obligations. Therefore, the definition of the type as an unconscious act is a contradiction in re ipsa.
3. To fully develop its potential, the building type needs to come into existence. Building practice is instrumental to this purpose. To obtain it, the building activity needs to share conventional values. An architectural language is therefore required.
4. If the building type remains implicit, or not performed by the architectural language, it cannot effectively contribute to the process of civilization. It remains as a simple image, or eidos, of its possibility.
5. There is a clear connection between the crisis of the typological discourse and the crisis of Institutions. The crisis occurs whenever there is not anymore consensus upon the building type and its implicit project.
6. During the type vacancy, the architectural struggle increases in order to reestablish a new order. The vacancy duration is unpredictable and it is instrumental to the achievement of a new stable configuration.
7. Within the western process of civilization, the stability of the type configuration is conventional and depends upon the dynamics internal to society. The typological change can occur within an existing configuration, by critically undermining its set of rules, or drastically proposing its integral substitution. The former approach is that of tradition, while the latter claims for radicalism.
8. Sometimes it occurs that, in order to hide power vacancy, the practice of the architectural language aims at artificially prolonging a Foretold Death. In addition, a minority practice can coexist within an highly shared one. Outside the practice, no other typological counteraction is possible.
9. Individual practice, eventually encouraging emulation, can perform as an architectural language premise, aspiring to contribute to the civilization process. This implies that the construction of the social reality does not necessarily correspond to a top down relation, but also a bottom up one is possible. In this case it is acceptable to say that the type concept arose from an unconscious process of trials and errors.
10. If typology is the discourse on the building type, developed through space and time, this is a first attempt to define the philosophy upon which typology is grounded. A new discipline is required. We call it Type Ontology.

Summary

This thesis considers the city and its architecture the extreme condition under which the endless discussion around the human being way of thinking takes place. More precisely, the research assumes the city as the place where the displacement of mindset principles, categories and catalogue of objects is materialized into Form, becoming inhabitable. This radical definition of Form is therefore the subject matter of Urban Morphology and Building Typology and justifies the seductive uniqueness of the city with respect to any other possibility of existence of the above mentioned discussion. At least since its original inception, the greek polis, to discuss about the architecture of the city therefore implies to discuss about the ground of the thinking which made the city possible.

The thesis identifies two main conditions under which the existence of the city is made possible. The former is the identification of the agents (i.e. the driving forces) who reciprocally recognize claiming a role in the city coming into being and therefore decide to engage within the related discussion. The latter is the existence of a language as the result of the discussion about what the city should be. The type definition encompasses both the aspects, becoming the specific embodiment of the city collective project.

Since the “conditions of possibility” of the discussion are neither neutral nor universal but historical, this thesis analyzes the city and its architecture as the place of an harsh conflict among different positions developed through space and time. The conflict not necessarily occurs within the existing city, putting into question its achieved certainties and implicit rationality. Sometimes it happens that the discussion leads to the crisis of the city itself and its architecture, demanding for a complete renewal of its principles, categories and related catalogues.

Assuming the perspective of the crisis as a challenging one, the thesis starts questioning the Enlightenment revolution discussion around the city as a symmetrical discussion on the principle of the Enlightenment itself, in order to get rid of the Ancien Régime and to abruptly enter into the realm of Modernity. Furthermore, the thesis analyzes the way the city reacted to that revolution, as a mean of better understanding the way the western society coped with the subject matter of the Modern way of thinking itself.

Through the transformation of the city, its principles, its categories and its catalogues, the thesis follows the transformation of the human being mindset as a reaction to the introduction of Modernity and its meaning. Towards that perspective, it recognizes an important threshold in the discussion occurred around the '70 of the XX century. In fact, a crises of a new kind appeared at that time. It was not anymore under discussion an historical specific form of the city, but the possibility itself of existence of the city as an embodied displacement of that discussion was radically put into question. This is what Post-Modernity was deeply prompting.

As an immediate consequence it was put into question the possibility of existence of the type itself. The thesis identifies in that aporia the main struggle put at stake nowadays, which is still unresolved and too often remains unquestioned. The thesis concludes that the crisis of the type identifies with the sunset of the western civilization, and that renouncing to the type definition as the subject matter of the discussion implies to renounce to those principles upon which the civilization process is grounded: to lead the discussion to a necessarily materialized conclusion, however provisional and partial it should be, of course to be discussed again and again. Moreover, the thesis concludes that to renounce to the type project means to renounce to the city, blurring its entity into a generic space of living.

Samenvatting

Dit proefschrift beschouwt de stad en haar architectuur als de extreme voorwaarde waaronder de eindeloze discussie rond de menselijke manier van denken plaatsvindt. Meer in detail gaat het onderzoek uit van de stad als de plaats waar de verschuiving van mindsetprincipes, -categorieën en -catalogi concreet Vorm krijgt en bewoonbaar wordt. Deze radicale definitie van Vorm is daarom het onderwerp van Stedelijke Morfologie en Gebouwtypologie en rechtvaardigt de verleidelijke uniciteit van de stad met betrekking tot enige andere bestaansmogelijkheid van de bovengenoemde discussie. Ten minste sinds het oorspronkelijke begin van de stad, het Griekse polis, impliceert een discussie over de architectuur van de stad daarom een discussie over de basis van het gedachtegoed dat de stad mogelijk maakte.

Het proefschrift onderscheidt twee belangrijke voorwaarden waaronder het bestaan van de stad mogelijk wordt gemaakt. De eerste is de identificatie van de handelende personen (i.e. de drijvende krachten) die van elkaar erkennen dat ze een rol in de stad in wording opeisen en daarom besluiten aan de discussie in kwestie deel te nemen. De tweede is het bestaan van een taal die voortvloeit uit de discussie over wat de stad moet zijn. De typedefinitie omvat beide aspecten en wordt de specifieke uitkomst van het stadsproject.

Aangezien de “mogelijkheidsvoorwaarden” van de discussie niet neutraal noch universeel maar historisch van aard zijn, analyseert dit proefschrift de stad en haar architectuur als de plaats waar een wreed conflict tussen verschillende in de tijd en de ruimte ontwikkelde posities zich afspeelt. Het conflict vindt niet noodzakelijkerwijs in de bestaande stad plaats door de verworven zekerheden en impliciete rationaliteit ervan in twijfel te trekken. Soms gebeurt het dat de discussie tot een crisis van de stad en haar architectuur zelf leidt, die vraagt om een complete vernieuwing van haar principes, categorieën en bijbehorende catalogi.

Het proefschrift vat het perspectief van de crisis op als een uitdaging en begint vragen te stellen bij de discussie van de Verlichtingsrevolutie rond de stad als een symmetrische discussie over het principe van de Verlichting zelf, om van het Ancien Régime af te komen en abrupt het tijdperk van de Moderniteit binnen te stappen. Voorts analyseert het proefschrift de wijze waarop de stad op die revolutie reageert, als een middel om de manier waarop de westerse maatschappij met het onderwerp van de moderne manier van denken zelf omging, beter te begrijpen.

Aan de hand van de transformatie van de stad, haar principes, categorieën en catalogi, volgt het proefschrift de transformatie van de mindset van de mens als een reactie op de invoering van de Moderniteit en de betekenis ervan. In de richting van dat perspectief erkent het een belangrijke drempel in de discussie die rond de jaren 1970 ontstond. In die tijd verscheen namelijk een nieuw soort crisis. De historisch specifieke vorm van de stad stond niet langer ter discussie, maar de bestaansmogelijkheid zelf van de stad als een belichaamde verschuiving van die discussie werd radicaal in twijfel getrokken. Dit is wat de Postmoderniteit diep bevorderde.

Als een rechtstreeks gevolg werd de bestaansmogelijkheid van het type zelf in twijfel getrokken. Het proefschrift ziet in die aporia de hoofdstrijd waar het vandaag de dag om gaat, en die nog steeds niet is opgelost en al te vaak onaangevochten blijft. Het proefschrift concludeert dat de crisis van het type samenvalt met de ondergang van de westerse beschaving en dat het afzien van de typedefinitie als het onderwerp van de discussie impliceert dat er wordt afgezien van de principes waarop het beschavingsproces is gebaseerd: om de discussie te leiden naar een noodzakelijkerwijs gematerialiseerde conclusie, die hoe provisorisch en gedeeltelijk ook, uiteraard telkens opnieuw ter discussie moet worden gesteld. Bovendien concludeert het proefschrift dat het afzien van het typeproject betekent dat er wordt afgezien van de stad en dat haar entiteit wordt vervaagd tot een algemene leefruimte.

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My Father, unfortunately, will not attend my PhD defence. He deserves some special words.

A mio Padre

La tua voce,
che è tutte le voci,
mi ha condotto qui.
Hai visto prima,
un giorno,
la tua destinazione, Oriente.
Non ti ho potuto dare,
un giorno,
ciò che ti consegno oggi, un dono.

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About the Author

1) FOREWORD

1.1) The research structure

1.1.1) Subject of the research

The typological discourse has long been influenced by four forms of prejudice, generating as many ambiguous interpretations, each clearly implying an “*order*” in the Foucauldian sense, which the thesis aims to deconstruct into its representative elements and related relationships in order to indicate the operating mechanisms and corresponding results, clarify the underlying ideology and explain the need to go further. These forms often occur in reciprocal interaction, and their corresponding unique determination is taken in this thesis as the principle of orientation of the reflection and not as a separate category with respect to experiences analysed individually.

The first form of prejudice leads to the assertion that the architectural type is the product of a supposed universal Rationality, whose task would be to promote the “*same*”, the “*always identical*”, according to a set theoretical and self-defining logic with a clear mathematical-combinatorial lineage. The thesis destabilises its foundation, showing how the very Rationalism of Enlightenment, which is the prototype and methodological premise for the construction of the modern city, as well as the incipit of this thesis, is entirely instrumental to going beyond a specific model of civil society that identifies with the Ancien Regime and its rules, or institutions, and therefore resorts to arguments of an eminently logical nature, on which it bases its own typological discourse, in order to successfully pursue the objectives expected from its revolutionary motives. This strategy is still operating in the contribution of the historic Avant-Garde and Neo-Avant-Garde movements to which they refer, for various reasons, in the post-Second World War period.

The second form of prejudice focuses on the belief that the typological discourse must be based on an assumption of pure functionality, as a result of which - given certain starting conditions, resources or means available, which respectively take on the characters of environmental organicism, technical materialism or naturalist positivism in the discussion and which find common methodological premises in the

modern assumption identifying the “*real*” with the “*fact*” - there would directly follow the inevitable end that the type should aim for. The thesis shows how this prejudice results from the removal, only apparently unconscious, of the “*middle third*”, or of that stabilising factor that is always constituted by civil society understood as the subject instituting its own role, refractory by its very essence of every form of determinism that limits the critical exercise of its decision-making freedom, in space and in time.

The third form argues that the architectural type, through the development of idealist and pseudo-historicist lineage arguments, must be defined as the product of a processuality understood as an agent of absolute transformation, because it is free of any form of conditioning, in fact subtracted from the control of its own promoters, whose role tends to be minimised if not completely silenced. This position is challenged by the structuring of the thesis in historical thresholds that are considered internally homogeneous in terms of the answers given, from which it can be seen how there are no elements of continuity such as to justify conditioning of what follows by what precedes it, on the basis of relations of a causal nature. If anything, it can be observed how, on the contrary, each stage represents an autonomous critical dimension which, by constantly asserting itself, reworks the contents of the previous stage in the light of its own value system, intentionally and consciously distorting the original meaning and the corresponding reasons.

The fourth form of prejudice follows from the widespread tendency to replace the experience of real phenomena, such as urban phenomena, with models that describe the behaviour and that reduce the first to a simple system of meaningful relationships between the parts and the whole. Borrowing its structuralist premises from the scientific method, according to which if the hypotheses are verified in the case study they are automatically recognised as implied by that method as laws that govern real behaviour, this attitude likens the city to a natural object, depriving the architectural type of its intrinsic social-historical value. The thesis undermines that proposition by demonstrating how it is substantially the result of a misunderstanding of the contribution of Ontology, or that which is as an expression of an immanent will, with that of Epistemology, or that which we know more or less what it is, regardless of the fallibility and intentionality that all forms of knowledge entail.

1.1.2) Purpose of the research

The thesis aims to demonstrate how each phase of social-historical development is characterised by the emergence and consolidation of new agents of change, through a progressive, albeit non-linear, acquisition of self-awareness, that claim ambition to a recognisable role and the right to represent it through transformation of territory into its constituent elements and their relationships, so that the resulting structure becomes the active expression of its will to act, at political,

economic, social and cultural level. These forces therefore intend to imprint an order on the existing context that reverberates through the participation of all those who identify themselves in the same order. This programme necessarily entails the creation of a language as an incorrigible prerequisite of a shared and participatory project in which the different actors of the transformation can freely recognise themselves, namely through an act of autonomous subscription. The thesis aims to demonstrate that the language of architecture is that cross-scale infrastructure that enables the development of the joint project, and that this project identifies itself with the type - territorial, urban, building and architectural - whose conventional nature is the first guarantee of its social-historical being.

1.1.3) Method of the research

Any form of order - where the Rationality, Functionalism, Processuality and Method evoked at the beginning are just some of the non-exhaustive expressions of the field of the possible - is the foundation, or system of non-negotiable values, on which agents of change create their own language, aiming gradually to systematise their related objects, tools, areas of articulation and induced behaviour. Language, in its eminently cross-scalar nature, therefore becomes the device necessary for the conception, construction, diffusion and interpretation of a shared project consistent with the expected results and resulting in a new social-historical type. This process has proved to be non-linear and complex in its spatial and temporal realisation, as far as it is recognisable in its essential lines of development. For these reasons, the thesis has sought to organise its narrative by placing in mutual relationship the diversity of contexts, texts, works and value judgements that maintain a certain degree of stability in defined temporal and spatial conditions. Each chapter of the narrative corresponds to a phase in which it is possible to find a common feeling, an expression of a sharing of intent among the forces in play, although not always of comparable consistency and authoritativeness of historical phases.

1.1.4.) Field of establishing the research

The thesis identifies in Enlightenment the moment when the individual and collective subjects that initiate the process of formation of the modern city reach maturity. These subjects do not exercise their claims on a tabula rasa, but are called to deal with a pre-existing and resistant social-historical reality of whose crises, induced by exogenous and endogenous factors, they themselves are a conscious expression. It follows that that will to pursue a shared project implies the dissolution of that which is still in place and which must be overcome in different fields of knowledge, starting from the notion of territory that includes all of them.

The notion of continuity is therefore a simple prerequisite, that is, an unchangeable condition of the substrate to be confronted for overcoming consolidated configurations and does not express, therefore, but implies a value judgment with respect to that which exists. In addition, the definition of type as a shared project turns out to be constantly subjected to endurance testing. On such definition depends the possibility of the forces of which it is an expression to continue to reverberate their transforming and reforming action. This also expresses the deeper meaning of “*criticism*” to which this thesis aims to offer an innovative contribution.

1.1.5) Outcomes of the research

The thesis aims to demonstrate how the crisis of the type – territorial, urban, building and architectural – is not due to a simple delegitimisation of a method of analysis and design in favour of a new approach, which is considered better suited for answering the willingness to adapt to a change under way in an existing reality in order to understand its meaning. This attitude appears once again as the product of a misunderstanding arising from confusing Ontology with Epistemology. On the contrary, the crisis of confidence in the type represents a necessary discontinuity in the civilising process, aimed at overcoming an order consciously imposed on an anthropized reality to replace it with one that is alternative to it. However, the thesis intends even more to demonstrate how, beyond a certain spatial and temporal threshold, the dissolution of the type in its social-historical uniqueness leads to a crisis tout court of the type itself understood as a collective project, all the more serious the more consciously it is pursued through the pervasive affirmation of “*negative thinking*”, which becomes an expression of the inability and unwillingness of the forces in play, or part of them, to seek persistent antagonism, to claim a role in the different sectors of civil experience. This is what clearly happened between the second half of the 1960s and the late 1970s, especially in Europe. It is this position which, in particular, the thesis aims to condemn strongly, given that it was this that led to an irreversible delegitimisation of the role of the type and of its profound original meaning. The awkward silence of the typological culture reduced to mere rhetoric of the image following this fracture was, paradoxically, only interrupted by the spread of globalisation and the reorganisation of territories into new configurations, which have had at least the merit of disrupting local equilibria that had become incapable of putting positive energies instrumental for a really participatory civil attitude back into circulation.

2) ORIGINS AND DEVELOPMENT OF BOURGEOIS CULTURE

2.1) The Enlightenment and the delegitimation of history

2.1.1) The cultural context

The culture of the Enlightenment is distinguished by a profound aspiration to renew society on the social, political, economic and cultural planes. Its principles sapped the foundations of the institutions of the *Ancien Régime*, creating the philosophical premises that shored up the French Revolution and the consequent rise to power of the bourgeois class.

The myth of refoundation

The eighteenth century thus became an ideal laboratory in which to develop new programs, through the elaboration of a substantial body of knowledge, both practical and theoretical. Underlying the new attitude of thought was a substantial continuity with the principles of Humanism and “*scientific and Cartesian rationalism*”, expressed through a constant appeal to reason understood as an instrument for investigating and understanding reality in all its possible concrete manifestations. Just as reason revealed its boundless potential through the systematic application of its methods to the phenomenal world in the field of the natural sciences, so it sought to verify its effectiveness also in the arena of human activities, to the point where it accredited them with the value of a new science, whose principles had to be understood. The postulate of a substantial analogy in behaviour between physical and social mechanisms produced the conviction that behaviour and human nature are subject to the same laws as physical nature and its functioning, meaning that the former is informed by the same mechanistic conceptions which Newton had shown underlay the behaviour of matter on the macroscopic level.

This explains the desire to refound knowledge on the basis of the achievements of the natural sciences. Reason, assumed as the essence of human nature, is universal because it is possessed by all individuals regardless of their specific histories. It is therefore present in everyone, in all peoples and at all times. This gave rise to an anti-traditionalist and cosmopolitan attitude that had immediate effects on all sectors of the organization of society, since it presupposed the unreliability of all distinctions based on historical or cultural criteria.

If physical and human nature share the same logical premises, it follows that the principles of rationality govern the functioning of both. Any manifestation of the spirit thus becomes a science, being based on principles of rationality universally recognized, and the sole distinction admitted between kinds of knowledge is the conventional one between human sciences and natural sciences. But nature is also the state in which man lives freed from every form of constraint and prejudice, attributable to the cultural tradition to which he belongs, first from necessity and then by choice. Nature opposes the cultural tradition with procedures that rest only on the use of reason. As Rousseau reminds us, the state of nature is that which precedes the creation of any form of culture, which he sees as a continuous accumulation of “*encrustations*” that restrict the degrees of freedom nature offers us. From this follows the recognition of the arbitrary and conventional character of all forms of sociality, in open polemic with the proponents of natural law; they are seen as arbitrary choices not based on a system of scientific and objectively verifiable knowledge.

While Giovan Battista Vico sought rationality in history through the definition of the “*phases*” of humanity, expressed as a linear process of transition from the dominion of the senses, passing through the power of myth and arriving at the triumph of reason, the Enlightenment contrasted history and tradition with nature and reason, denying that there could be any form of rationality in history and affirming that its course is marked solely by man’s choices. In this respect the historical process can acquire its own linearity, provided men always work in accordance with reason as a second nature.

The rejection of all forms of conventionality was translated into the rejection of history as a guide for human behaviour, of tradition as an integrated body of knowledge inherited from previous generations which, as such, can guide the course of future events in the most suitable direction for the progress of a new society. Natural religion and natural morality became synonymous with a universality of faith, based on reason, and universality of action, based on the same principle.

Enlightenment culture rejected the classical assumption, introduced by Vitruvius and followed by the Renaissance treatise-writers, that architecture was the art of building. This definition was replaced by that of architecture as the art of composing. In this way it substantially affirmed the independence of architecture from tectonics, namely from a close relation of dependence between form and the building tradition. Architecture was not only a science and therefore a body of knowledge concerning the use of materials and related techniques of assembly, but it was also an art, hence a body of knowledge whose validity was independent of the materials used and the building technologies used to assemble them coherently. The singularity of this state of affairs was observed by Alan Colquhoun: “*The idea that art contained certain principles independently of its craft or technical aspect was as strong at the end of the nineteenth century as it as it had been in the time of Etienne Louis Boullée.*”⁽¹⁾

This choice, which was at any rate courageous, entailed the refoundation

Nature and Culture

The autonomy of architecture

1. Alan Colquhoun, *Essays in Architectural Criticism*, Cambridge, The MIT Press, 1981, p. 21.

of architecture as a discipline based on new principles and rules. While this attitude was widely shared, responses to it were fundamentally different, as might logically be expected at the start of a new phase of experimentation. Etienne Louis Boullée discovered these principles and rules in the teachings of nature, which he investigated through the functioning of its phenomonic appearances; Marc-Antoine Laugier in archetypes, considered as spontaneous (hence natural) manifestations of the intellect, as yet unclouded by the “*encrustations*” and “*debris*” of history; J.N.L. Durand identified the principles and rules in architecture itself, understood as the language of forms and of the spaces derivable from them; Quatremère de Quincy, while denying a causal relationship between tectonics and architecture, rethought its metahistorical foundations, establishing, through the recovery of the concept of the type, a relationship between composition and local traditions, between architecture and the historical-geographic context.

The rejection of history means the failure to recognize any principle accepted uncritically as a dogma which is not verifiable in the light of reason and fails to find support in nature, meaning in its functioning and in the laws governing it. Architecture acquires the value of an autonomous science to the degree that its principles are derived from the experience of nature and not from the experience of architecture as a received patrimony. This apparent paradox stems from the rejection of the conventional character of the art of building, hence the rejection of architecture as an artificial product not directly related to its referent and its own significance. This had far-reaching consequences of a theoretical and operative kind. As a consequence an objective basis was sought for aesthetic judgments. The referent of architecture was no longer society in its historical uniqueness, embedded in circumscribed conditions of space and time, though with implicitly fluctuating boundaries. Moreover architecture was no longer a representation of that society in built forms and organized spaces, hence a language in the purest sense of the term.

The referent of Enlightenment architecture became nature, seen in its general aspects, meaning its universal principles and not the multiplicity of its concrete manifestations. The light of reason was required to investigate the principles of this interpretation of nature. Not those of its functioning, which had already been identified by Newtonian mechanics, but those that govern our sense impressions, hence those involved in the phenomenology of light, forms and their contrasts. These same mechanisms should be embodied in architecture, so that its “*character*”, the ideas that we consider associable with a specific architectural subject, could be translated into corresponding sense impressions.

From this it followed that architecture was transformed into a system analogous to the system of nature: it derived its primary forms and principles of organization from nature and claimed that in this way it was possible to give a precise significance to every proposal coherent with this choice. Just as forms and principles, being derived from the sense experience of nature, took on a universal character, the meanings

“*Character*”, or “*speaking*”
architecture

derived from them retained the same value, the same validity.

But this amounted to questioning the arbitrary or conventional nature of language, in and outside itself. By this I mean that the arbitrariness of language derives from its lack of causal relations with both its referent and with the nature of its constituent elements. This is not to deny that language in itself responds to precise choices of coherence and inner logic. In this respect language can be defined as an open-ended and internally consistent system of lexical, grammatical, morphological and syntactic relationships between its constituent components, whose arbitrary nature derives from the lack of direct or necessary causal nexuses with its real referent and with the elements chosen for its organization.

The project of the city was inevitably traversed by utopian aspirations. If architecture was not the representation of a specific society, but a general and inevitably generic expression of the univocal and universal rational spirit freed from the burden of inherited responsibilities and the constructs of tradition, inevitably its products would tend to acquire the character of expressions lying outside time and place, hence objects fundamentally abstracted from their context. The city, as it was inherited from past generations, tended to become a neutral background, so individual projects were isolated from it. And when this was not the case, the setting tended to be given an instrumental value, so as to achieve the kind of effect sought by the project. Hence the context was like a frame, without depth, which brought out the significance of the project. In many cases, the context actually vanished, with the work being placed in a timeless natural landscape, in which it was out of the question to create ties to any precise spheres.

City and utopia

2.1.2) The ideas of authors: intentions and definitions

The Abbé Laugier epitomized all the essential qualities of Enlightenment culture in architecture and town planning. His work clearly exemplified the rejection of all forms of conventionality, though inherited from history, and the intention of reducing nature, understood as phenomenon, as processual reality, to its simple description, through the process of systematic conceptualization of its components. The first of these factors led him to seek for the principles of architecture and urban planning in a metahistorical dimension. The second led him to replace natural space with the space of logic. These two factors converged in the definition of architecture and town planning as a “*language*”, systematically reducing the multiplicity of their creations to unity through shared principles (present in nature) and rules (their conceptualization and codification) which were to be respected in every project. Hence he moved from the phenomenon to its conceptualization and derived universal principles and particular rules from it. Only after this did he return to verification in reality. In this way he sanctioned the rejection of the inductive method:

Essay on Architecture,
Marc-Antoine Laugier, 1753–55

architecture starts from principles and verifies them in individual cases. Laugier's position seems to involve a contradiction. In fact even language, according to many writers (see Blondel himself) is based on a convention, i.e. on the community's compliance with values translated into principles and rules that are to be respected. The more highly organized the community the more marked will the production of conventions be. To cope with this difficulty Laugier focused his research on the natural datum, by definition governed by laws that pre-exist mankind and remain unchanged in the course of time. "*Natural*" language and the language of "*architecture and town-planning*" thus came to be identified with each other in his interpretation.

The Abbé's method was deductive in nature. Responding to criticisms of his claim that it was illegitimate to use pillars instead of columns, he declared peremptorily: "*I feel intelligent readers will have recognized this procedure in my text on architecture, and that what is termed a beauty, abuse or defect always derives from a simple principle, clear and recognized by everyone. As long as he confines himself to appealing to customs, experience, and the ability of the practitioners, my Opponent cannot hope to refute my method.*"(2) His rejection of pillars is justified because they are not the conceptualizations of anything that exists in nature, while columns are the conceptualization of tree trunks. With his Enlightenment outlook, Laugier rejects the appeal to the principle of authority to justify the legitimacy of decisions made in the spheres of architecture and town planning. Judgment must be based solely on universal principles, shared by everyone. The foundations of judgment arise only out of a "*natural*" rationality.

To confirm his thesis he adds: "*Only architecture has hitherto been left to the whims of artists, who have given it precepts without any discernment, establishing the rules at random, based on the analysis of ancient buildings. Everything that could serve as an example has been declared legitimate by these servile imitators, who have confined their research to the analysis of the historical data.*"(3) He is unreserved in his criticism of commentators on the text of Vitruvius, who emphasize the value of practice without seeking recognition for general principles. The sole exception he recognizes is the work of Cordemoy. Laugier is convinced "*that in Architecture there are intrinsic aesthetic qualities, independent of the habits of the senses or human conventions.*"(4) By relying on the senses and their natural foundation, he traces causes by starting from the recognition of their effects, so providing a scientific basis for the work he is performing. Laugier recognizes the superiority of Greek architecture, while he regards Roman architecture as a mere imitation of it.

After the decadent phase of Gothic architecture there was a rebirth and then a new phase of decline, characterized by the presence of arbitrary and unjustified innovations. Laugier's judgment is based on a supposed axiom: "*The parts of an architectural order are the parts of the building itself.*"(5) Identifying the architectural phenomenon with its logical dimension, i.e. with its "*code*", means identifying reality with reason and maintaining that the former is governed by the latter. This justifies the rejection – shared subsequently by Durand – of the method per exempla and its replacement by the method per principia: "*Do not oppose my ideas by citing authoritative and respectable but far from*

2. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.32.

3. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.40.

4. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.40.

5. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.33.

infallible opinions: this means ruining everything by judging what should be on the basis of what is. Even the greatest men sometimes lose their way, and therefore to claim their example systematically as a rule is by no means a secure way to avoid error.”(6)

So what are the general principles of architecture? In this sense the words in which the Abbé Laugier evokes the origins of building among primitive peoples are enlightening. *“Just like what happens in every other art, the principles of architecture are based on pure nature, in whose processes we find its rules clearly imprinted. Consider the human being in his origin: his only resources, his only guide, lies in instinct and his natural desires. He requires a place in which to rest: he sees a meadow by the banks of a peaceful stream; the tender greenery pleases his eyes and the velvety turf is welcoming. Reaching the meadow, he reclines there softly and thinks only to enjoy the gifts of nature in peace. He lacks nothing, wants for nothing. Soon, however, the burning sun induces him to look for shelter and, seeing a forest which affords him its cool shadow, he hastens to shelter amid the thick vegetation. He is again happy, when dense vapours arise and condense into heavy clouds, sending torrents of rain drumming like a torrent onto the welcoming forest. Poorly protected by the foliage, our man does not know how to defend himself from the water that assails him on every side. He then spies a cave, slips inside it and, finding himself finally dry, is pleased with his discovery. However new inconveniences render his stay disagreeable, enfolded by darkness and breathing unhealthy air. He therefore goes into the open, resolved to use his intelligence to make up for the coarseness and carelessness of nature, and determined to build himself a home that will shelter him without burying him. Some branches torn from trees are the material best suited to his design and having chosen four of the strongest, he sets them upright, placing them at the corners of a square. On top of them he places four more laid horizontally, on which yet others, inclined and joined at the ends, are arranged so as to form a sort of roof, which is covered with foliage sufficiently thick so that neither rain nor sun can penetrate. Behold, finally, our man accommodated in his lodging. It is true that, in a house open on all sides, cold and heat will make their inconveniences felt. However, he need only close the space between the pillars to be completely sheltered. This is the course of pure nature; and it is precisely in the imitation of its procedures that art has its birth. The small primitive hut which I have just described is the model starting from which all architectural splendour was conceived; and only by approaching the simplicity of this first model in the practice of the art will it be possible to avoid the most radical deficiencies and attain authentic perfection.”*(7) Fig1

Hence the construction of the primitive hut is assimilated to a natural process, spontaneous, not cultural, and the architectural order is interpreted as the conceptualization of the primitive hut, hence of a process that is not intentional. In this way it makes a break with the principles of Vitruvian classicism. It also defines the superiority of the archetype of the hut over that of the cave and indirectly the tent, exemplified by the forest. It is therefore from the hut that are derived the necessary elements of architecture, common to all its manifestations: columns, entablature and pediment. All the rest is unjustified and gratuitous. If culture is taken as a metaphor of nature, this term should, however, be understood in the sense of a logical

6. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.45.

7. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, pp. 47-48



Fig. 1. Laugier's frontispiece, second edition, 1755. The allegory of architecture. The picture has a twofold level of ambiguity to discuss. The former consists in that which the definition of allegory implies. In fact its etymology (the Greek terms ἄλλος and ἀγορεύω) refers to a discussion into public about something which is other than being public, because it precedes the idea of the publicness. The latter refers to the iconographic and iconological perspective through which we look at what it is represented in, which implicitly questions the legitimacy of a rational interpretation of its meaning. Apparently the image describes a woman, Architecture, holding with her left hand a compasses and a square ruler. She is sitting on a landscape of ruins, deriving from the traces of the architectural order as a metaphor of its past conventional identity, pointing with the right hand at the primitive hut as the goal towards which should be focusing the Genius, as the metaphor of the Enlightenment claim for a new creativity. However, if we change our perspective, shifting from the rationale to the symbolic, we can thus discover that Architecture is asking to Eros, the "*daimon*", or the dynamic energy of any kind of regeneration process, to be guided towards the principle upon which Nature is grounded, expressed by the metaphor of a wood ambiguously resembling a primitive hut. Why not to consider the content of the representation a superb allegory of the Project, intended as the human aspiration to emancipate from the plurivocity of the sense to the univocity of the significance?

correspondence, that same correspondence which makes it possible to abstract from the multiplicity of architectural-natural phenomena and reduce them to the singleness of the first principles governing them. By conceptualizing nature Laugier succeeds in translating it into a "*rational*" language.

Natural space, which we experience through its phenomenic consistency, is reduced to a logical-conceptual dimension, hence one that is knowable, analysable. Likewise the architectural phenomenon is reduced to its logical-conceptual code. Laugier neglects to discuss the significance of language, though he understands that the use we make

of nature, appropriately conceptualized, defines a clear attribution of its significance and produces its values. Signification is a process closely bound up with the use that we make of nature, and the values derived from it are the result of its conceptualization. So nature, understood as spontaneous language, becomes the object of *mimesis* in the Abbé's architecture and town planning. The language of nature has that degree of universality, of unconventionality, that Laugier sought, and he attempted to transfer it into his treatise and apply it to artificial phenomena. This enhances the clarity of the evocation of the myth of the hut within the Abbé's theoretical ideas. The hut, a spontaneous product of primitive man and subordinate to respect for the laws of nature, is translated through an appropriate conceptualization into the architectural order – the grammar and universal vocabulary of architecture – which constitutes its code.

The characters and defects of the “*parts*” of every architecture are derived from respect for the recognized natural order: columns, entablature and pediment. Nature always provides a frame of reference for judgment. (“*The column should have a circular section, since nature makes nothing square.*”) In this respect, Laugier observes: “*Every invention that is against nature, or that is not rationally founded on what is approved by the greatest authors, will always be bad and is therefore to be banished.*”⁽⁸⁾ The superimposition of the orders is a license permitted, though it deviates from the model of the primitive hut, because it is entailed by the need to work on several levels. It is only allowed, however, on condition that the specific principles derived from nature are respected. The same is true of doors and windows: the requirements of inhabitability justify this further dispensation.

Laugier realizes the limitations his method imposes on artists. “*It is not by any means a question of servile compliance with custom or blindly following an established practice, rather of analysing my ideas and verifying whether they are just and rigorous in relation to the principles universally accepted, which I have faithfully expounded, seeking to deduce their rules as necessary consequences.*”⁽⁹⁾ He adds: “*Perhaps it will be objected that I reduce architecture almost to zero. The knowledgeable will realize that, far from shortening their work, I require them to study hard and be extremely precise. Besides, I offer the architect an immense potential: with the few concepts that I give him, if he possesses talent and a basic knowledge of geometry, he will discover the secret of varying his projects infinitely and regaining, through the multiplicity of forms, what was lost with the elimination of superfluous elements.*”⁽¹⁰⁾ By identifying the principles of architecture in the architectural order, which becomes its natural “*language*”, universally recognized, Laugier admits the combinatorial character of architecture, so that the endless articulations of its concrete manifestations are derived from the few elements present in the “*structure*” of the order itself.

In his observations on the types of order, Laugier recognizes only three: Doric, Ionic and Corinthian. He systematically analyses their parts and members and describes their grammar. Materials are given an important role in enriching the orders. Not all buildings, however, should admit the presence of the order, which is the formalization of the architectural code. He observes that “*the exactness of proportions,*

8. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p. 56.

9. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p. 67.

10. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p. 68.

elegance of forms and choice and arrangement of decoration"⁽¹¹⁾ will make up for its absence. On the question of proportions Laugier observes, *"The same proportion between breadth and height should exist in all buildings of the same character. This is defined by the type chosen and the use proposed ... Different uses correspond to more or less elevated ideas, since they require in each case simplicity, elegance, nobility, or an august, majestic, extraordinary or prodigious character. Once the true character corresponding to the function has been established, the architect should choose the type on the basis of the sentiment aroused in his spirit."*⁽¹²⁾ Architecture has, therefore, to represent "character", an abstract quality belonging to all peoples, suited to the function and type of building chosen to welcome it. The ritual use that is to be made of the building (based on its functions and social rank, the Abbé says) constitutes the significance that, suitably conceptualized, is translated into values.

While denying the historicity of the primitive hut, Laugier derives his universal principles, his natural code, from a spontaneous tectonic action. So when he turns to the art of building, the legacy of Vitruvian ideas immediately resurfaces. The order thus becomes the natural language of architecture, with its own grammar and vocabulary derived from a reduction of multiple manifestations (tectonics) to the unity of principles and laws underlying them. If architecture is unique, a conceptualization of multiple works built in accordance with nature, the order is its visualization and ordonnance its substance. Laugier speaks of solidity, functionality and decorum, qualities which correspond to the classical *firmitas*, *utilitas* and *venustas*. It is essential to ensure the building will be as durable as possible. Functionality depends on location, distribution and connections. It is interesting, however, to observe that Laugier, in dealing with the distribution of the building, assumes as his reference the Parisian hotel, with forecourt and rear garden, betraying an obvious concession to the local conventions: he rather awkwardly seeks to represent it as the most rational solution possible, because it affords space for carriages to manoeuvre on the site and ensures the air in the city is salubrious. On decorum, which he identifies clearly in the articulation of the volumes, interiors and exteriors (see his observation on the Places Royales of Paris) he states: *"Decorum demands that the splendour of a building should be neither more nor less than is appropriate to its function. In other words, its decoration should not be arbitrary, but suited to the rank and quality of those who live in it, as well as the purposes of the project."*⁽¹³⁾ In particular, in dealing with how to build churches, the author proposes a return to the code of Greek architecture and the Latin cross plan, without justifying this choice in rational terms.

Laugier does not limit himself to analysing architectural questions. He also examines the problems of the city. *"Our cities remain as they were: a mass of houses, jumbled together, without any method, without economical principles and without a design."*⁽¹⁴⁾ The factors that make a city beautiful are identified as gates, streets and buildings. He suggests broad avenues giving access to the city, with gates on the model of the Roman arches of triumph positioned at regular intervals along the walls, with one or three bays. Laugier offers some interesting observations on street layout: *"The city should be considered as a forest: the paths through the former are*

11. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.90.

12. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.90.

13. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.113.

14. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.139.

like the streets of the latter and should be traced in a similar way ... It takes a Le Nôtre to design the plan, and he should lavish taste and reflection on it, to ensure that it contains both order and irregularity, symmetry and variety; that here one will see a crossroad like a starburst, there one shaped like a goose foot; on one side streets laid out in herringbone pattern, on another in a fan shape and in yet another set parallel ... The greater the contrasts, the choices, the abundance and even the disorder of the composition, the greater will be the moving and delightful beauties of the park ... We should therefore put into practice this idea: that the design of our parks should serve as the plan for our cities.”(15) Laugier’s suggestion, mistakenly interpreted as an anticipation of the disurbanist theories of Le Corbusier, was put into practice about a century later by Baron Haussmann. Just as respect for the principles formalized by the architectural order makes it possible to reconcile rigour and variety, so the city should multiply its beauties by “*designing the plan of a city so that the splendour of the whole is subdivided into an infinity of particular beauties, all different.*”(16)

The buildings should be proportioned to the streets on which they stand and subject to special regulations. In the composition of the facades it will be necessary to follow criteria of regularity and variety in the whole. Particular attention should be devoted to the design of gardens. Laugier was extremely critical of Versailles: gloomy places, systematic regularity, an excessive degree of enclosure, lack of shade and vivacity in the greenery. It provided him with an opportunity to express a proposal based on principles of a general nature: “*It is essential to make an effort above all to provide greenery, to vary and arrange it without in the least worrying about following an excessively precise and symmetrical design. One should carefully control the vistas, skilfully arrange dense masses of vegetation and glades, distribute water in all the parts, making it flow and gush out, graduating its speed and abundance depending on the quantity supplied by the spring. It is finally essential for everything to be well organized so as to have vistas, shade and coolness. In this way we will create truly delightful gardens.*”(17)

In the different aspects of architectural practice and town planning, Laugier always emphasizes the absolute independence of the principles he proposes from historical conventions. This attitude inevitably procured him a number of criticisms, in particular a charge of arbitrariness in his concept of beauty, which he rebutted. To bear out his thesis, he maintained the existence of an “*essential beauty*”, independent of the caprices and limitations of fashion, which depend on our senses. The differences of taste in different countries simply express the different degrees present in them of the multiple components or kinds of beauty, of which essential beauty is a sort of ideal synthesis. This judgment, despite the absence of any scientific foundation, tends to argue for a sort of generation of local tastes from ideal taste, analogous to the existence of local languages that are derived from an ideal language common to all. Greek beauty, to which Laugier always appeals, constitutes in his judgment the one that more than any other synthesizes the greatest number of kinds of beauty, and is therefore the one that comes closest to essential beauty. This statement was to acquire an unexpected significance in the discussion of the codes which developed in the second half of the twentieth century.

15. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.145.

16. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.146.

17. Marc-Antoine Laugier, *Saggio sull'Architettura*, Palermo, Aesthetica, 1987, p.159.

"What is architecture? Shall I define it, with Vitruvius, as the art of building? Certainly not. In this definition there is a great error. Vitruvius takes the effect for the cause. The conception of the work precedes its execution. Our fathers in olden times built their huts after having formed an image of them."(18)

Essay on the Art of Architecture,
Etienne Louis Boullée, 1799

Symbolically Boullée begins his text by distancing himself from the classical interpretation of architecture as tectonics, denying the existence of causal connections between the nature of the materials, the techniques of their reciprocal connection and the architecturally finished form derived from their use. Building is only a matter of the scientific factors in architecture; it has nothing to do with what the author calls the Poetry of architecture, meaning its artistic function. Implicit in this criticism is an attack on professionalism, which distracts the finest intelligences from the tasks of art. (In this respect it is interesting to recall that the discovery of this text in the 1960s coincided with the controversy over professionalism, with charges that architects were too complicit with the market and speculative development, above all in Italy). So if architecture is not building, what are its tasks? Boullée indirectly replies by stating, with reference to the Louvre: *"I feel that this palace can be compared to a poem of which different poets have each written a canto."*(19) Architecture thus acquires the properties of a form of narrative in images. And yet the Enlightenment outlook required a more rigorous definition, and above all it called for the definition of principles and rules that could replace tectonics in the organization and control of space. In this respect Boullée affirmed that art is above all concerned with the imitation of nature, as a way of distancing himself from the affirmation by Perrault, who designed the peristyle of the Louvre, that architecture is an art of pure invention. In fact, claimed Boullée, to accept this conclusion it would be necessary to prove it is possible to produce images which have no relation to the objects of nature. *"But it is incontrovertible that there is no idea that does not come from nature ... I will add that we call beautiful the objects that have the closest analogy with our own structure."*(20) After postulating a correspondence between natural phenomena and the world of impressions, Boullée analyses the objects of nature. Having recognized the superiority of regular objects over irregular ones, because of the simplicity with which we can immediately grasp their form and functioning, he then defines their constituent qualities. They are regularity, symmetry and variety which, when combined, define proportion, the first principle in the organization of nature.

Having assumed these propositions as postulates, Boullée immediately takes the spherical body as the image of perfection, being the sublimation of the qualities of the regular bodies mentioned before. He then concludes hurriedly: *"It is therefore demonstrated that the proportion and harmony of bodies are established by nature and that, by the analogy they present with our organism, the properties that are derived from the essence of bodies have a power over our senses."*(21) The aesthetic process thus presupposes that subject and object share the same structure, meaning they are based on the same natural principles. So, if architecture is capable of embodying in forms the ideas derived from a knowledge of reality, those same ideas will be transmittable to the individual and will

18. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p.55.

19. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p.61.

20. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p.65.

21. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p.67.

be immediately comprehensible to him without any misunderstanding. This explains Boullée's wording of his introduction to the description of the Monument for the celebration of Corpus Domini: *"To awaken in us a profound veneration: this is the purpose of religious ceremonies. It is therefore necessary to adopt all the means calculated to arouse a character of grandeur and majesty."*(22) Fig 2

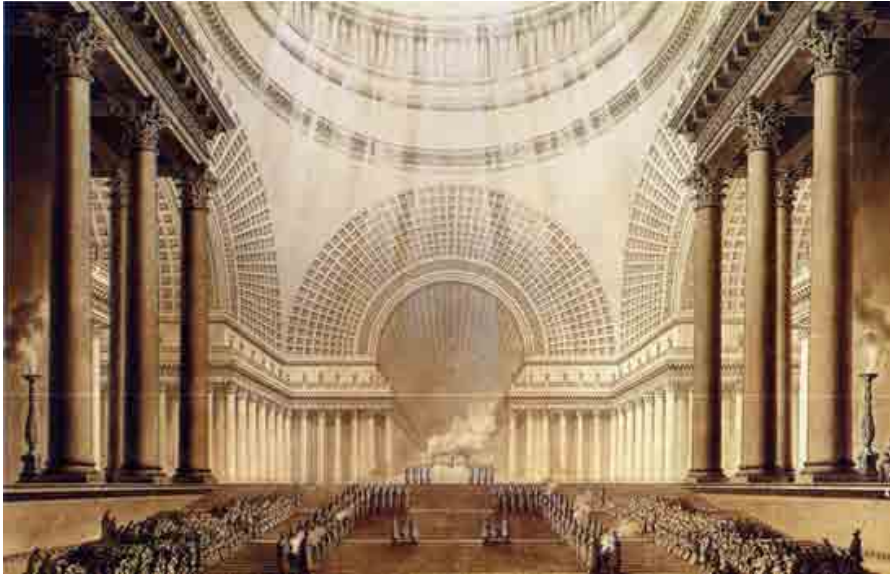


Fig 2. Boullée, Metropolitan church for the Corpus Christi day. The author has to face Enlightenment's aporias. In fact, once architecture has been deprived of both its conventional and tectonic foundations, and has identified its principle with those we can find in Nature, the issue of the architectural significance remains a problem to solve. The answer is the Character: architecture should express those quality which are implicit in the selected theme, in this case the church, as such. Who is responsible for attributing to the theme a specific quality remains unquestioned.

He expresses himself similarly of the Monument of Public Gratitude: *"For the location of the monument, one should, in my opinion, choose a place that, by offering all the beauties of nature, all that can be useful to the preservation of life, seems to say to all who come to visit it: behold the many resources with which the Nation wishes to preserve and embellish the lives of its benefactors."*(23)

In Boullée's metahistorical interpretation, every theme of architecture thus has a significance appropriate to it, which has to be communicated by the work to its observer/user through the construction of images organized on the basis of the same principles that can be deduced from the observation of nature. At the same time this significance is more extensively related to a more general and implicit judgment about nature itself, which shares the same principles and ideas as art. Of this Boullée observes: *"But if it is considered in its whole extent, it will appear that architecture is not only the art of forming images by the arrangement of bodies, but that it also consists of the ability to bring together all the scattered beauties of nature and embodying them in the work."*(24) The significance Boullée speaks of is identified with "character", a central concept in his interpretation of the tasks of architecture. Of this he says: *"Let us observe an object. The first sensation we feel derives clearly from the way the object impresses us. And what I term character is the effect produced by this object, which makes a certain type of impression on us. Giving a building character entails judiciously using all the most appropriate means in order to prevent us experiencing any sensations other than those characteristic of the subject itself. To understand more clearly what I mean by the character or effect of different objects, let us consider the great sights of nature, and*

22. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p.71.

23. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p. 72.

24. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p. 74.

observe how we are compelled to express ourselves in accordance with the way they affect our senses.”(25) Later he returns to this theme with these words: “What I call putting character in a work is the art of using in every work all the appropriate means related to its subject: so that the viewer feels no other sensations than those that the subject entails, which are essential and appropriate to it.”(26) Later he explains, “The art of giving character to any work derives from the effect of the masses.”(27) Having established that the task of architecture is to assign to every subject its corresponding character by the articulation of bodies, while respecting the qualities of symmetry, regularity and variety, how can we learn the rules by which to establish scientific control over this organization? The rules are to be deduced from the study of nature: “O nature! How true it is to affirm that you are the book of books, the universal science, and that we can do nothing without you! But though you begin the most instructive and most interesting course each year, how few people attend to your lessons and are capable of profiting from them!”(28) So nature is our teacher, through the images we receive from its varied manifestations in the course of the seasons and the corresponding impressions we draw from them, since we share the same structure, the same principles as those embodied in nature: “In imitation of nature, the art of creating great images in architecture consists of arranging the bodies that form the general whole in such a way that there is a free interplay between them, so that the masses have a noble, majestic motion, and are susceptible of the fullest possible development.” (29) In particular it is important to analyse how the changes in the seasons and circumstances appreciably affect relations between bodies, the ways light falls on them and their reciprocal arrangement. Changes in these parameters, and many others that could be considered, clearly affect our impressions of these bodies. By carefully studying these relations, which are stable because they are properties belonging both to natural bodies and the subjects who observe them, the architect can render the impression through artificial forms, with the certainty that the impressions received from the observation of natural bodies will be repeated by artificial bodies, having postulated an analogy of structure between natural reality and humanity, hence a causal relation between the structure of external objects and the human organism. Boullée implicitly excludes the possibility that there can be sensations and impressions that are due to psychological factors, therefore deriving from personal events and the history of each individual and social group, and not simply physiological factors.

The principal problem of architecture thus becomes to identify the character appropriate to each subject and render it in built forms by following principles and rules deducible from the study of nature. Theoretically the mechanism proposed is relatively simple. The first difficulties, however, arise from the fact that while there are subjects, such as death, for which it may be easy to define the corresponding character, in other cases it is far more difficult. Though Boullée does not admit it, these difficulties derive from his attempt to associate a single significance with each subject and so postulate its universality. If the choice is justified by the need to reject every form of conventionality in architectural practice, this objective inevitably clashes with the need for a degree of abstraction which inevitably declines into a lack

25. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p. 74.

26. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p. 142.

27. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p. 143.

28. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p. 76.

29. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p. 76.

of precision in the project. Of this Boullée observes: “*A subject is very difficult when its character is not clearly defined, or when it has never been dealt with. But if someone succeeds in rendering this subject characteristic and giving it all the power that the subject itself contains, then that person shows true talent.*”⁽³⁰⁾ From these observations we can deduce that the concept of “character” replaces “type” with a twofold connotation. Firstly as a conventional significance attributable to a given configuration and secondly as the articulation of the image associated with it which that same significance is intended to convey, so preventing it from being misunderstood by the viewer.

Hence the Temple, dedicated to the Supreme Being, is meant to express immensity, the theatre safety and distributive efficiency, the embodiment of genius and taste, the sovereign’s palace splendour and magnificence, the courthouse majesty and solemnity, the city hall pride and vigour, the library immensity, funerary monuments permanence and memory, and so forth. Light plays a fundamental part in achieving the desired effect. Boullée insists there are subjects whose corresponding character is more easily defined: “*But what a distance there is between the conception of a project and its execution. Often, without doubt, what is most difficult in any art is to fully succeed in embodying thought.*”⁽³¹⁾

Boullée constantly turns to the question of character, which has a decisive value in all Enlightenment culture. Even military architecture is not immune to it, though more than any other it would seem required simply to fulfil straightforward functional needs. But Boullée seems to want to say that it is not sufficient for architecture to fulfil a specific utilitarian purpose, like defence, but also has to express its purpose. In this case, defence should be built and represented by conveying its character. Architecture should arouse in us sensations which match the ideas appropriate to its subject. It is “character” that guarantees a correspondence between ideas and feelings. “*I hold, on principle, that it is only with the picture of reality that an author can expect success. What ensures it is, I believe, the art of making it manifest.*”⁽³²⁾ In confirmation he adds: “*I have conducted research into the essence of bodies. This has enabled me to understand their properties, and subsequently their harmonies and their analogies with our organism. Through these discoveries I have succeeded in showing that architecture comes from bodies, together with all its effects. From this, consequently, derives the fact that it follows nature.*”⁽³³⁾

Boullée’s objective, drawing on the teaching of the nature, thus became to secure an objective foundation for aesthetic judgment. Nature offers us principles and mechanisms – the instruments – which architecture translates into the language of its forms. This means it is possible to associate the subject of a building (a brief) with the character felt to be most suitable to it. Since man and nature share the same substance, through sense impressions we recognize the mechanisms and principles that reveal the “character” of the work. “*What I call putting character into a work is the art of using in any production all the means appropriate and relevant to the subject it deals with, so that the viewer experiences no other sensations than those that the subject entails, which are essential and appropriate to it.*”⁽³⁴⁾ More specifically he affirms: “*From the effect of the masses derives the art of giving character to any production.*”⁽³⁵⁾

To this is added the “*architecture of shadows*”, which Boullée claims to

30. Boullée Etienne Louis, *Architettura saggio sull’arte*, Padua, Marsilio Editori, 1967, p. 106.

31. Boullée Etienne Louis, *Architettura saggio sull’arte*, Padua, Marsilio Editori, 1967, p. 121.

32. Boullée Etienne Louis, *Architettura saggio sull’arte*, Padua, Marsilio Editori, 1967, p. 129.

33. Boullée Etienne Louis, *Architettura saggio sull’arte*, Padua, Marsilio Editori, 1967, p. 137.

34. Boullée Etienne Louis, *Architettura saggio sull’arte*, Padua, Marsilio Editori, 1967, p. 142.

35. Boullée Etienne Louis, *Architettura saggio sull’arte*, Padua, Marsilio Editori, 1967, p. 143.

have invented. This is the ability to reproduce the effects produced by nature on bodies. In conclusion Boullée denies that the “*language*” of architecture is based on principles different from those found in nature. It is only in this way, he claims, that it guarantees the principle of universality that the whole Enlightenment sought to promote.

Durand’s systematic approach to his subject is already plainly expressed in the organization of the contents. His *Lectures on Architecture* are divided into two volumes. In the first he introduces the elements of architecture and the related combinatorial rules for identifying the parts and subsequently the organization of architectural wholes. The second reviews the single programmatic requisites of the components of the city, subdivided by genera and species. Durand’s opening statement is peremptory in tone: “*Architecture is the art of composing and executing all public and private buildings.*”⁽³⁶⁾ This premise makes clear the critical distance between Durand’s ideas and the classical tradition, for which architecture is the art of building, namely “*tectonics*”.

From this assumption he derives the search for a grammar and a vocabulary with a constructional logic, with the purpose of defining it as a language, an approach we found before in the Abbé Laugier. Classical architecture, in order to find its own linguistic identity, sought a continuous return to its origins by evoking the myth of the hut, a primitive building seen as already embodying, though in elementary terms, those same tectonic principles that had informed far more complex buildings in the course of history. By conducting its research along these lines classical architecture found its legitimacy and justifications, expressed in a coherent and complete language, in a building constructed, historically ascertained and processually updated. Durand introduces the aims of his book, setting it clearly in the context of the rising bourgeois culture and the French campaigns guided by the revolutionary spirit. “*Nowadays engineers have more frequent occasions to construct buildings than architects. The latter are called on to build private dwellings while the former ... are summoned as engineers to build hospitals, prisons, barracks, arsenals, warehouses, ports, lighthouses, and a numerous buildings of primary importance. They therefore need to have a knowledge of architecture and a talent at least equal to that of professional architects.*”⁽³⁷⁾ The purposes of architecture are “*public and private utility, the preservation and happiness of individuals, families and society.*”⁽³⁸⁾ Architectural practice should be informed by the principles of suitability and economy. The first is attained by means of solidity, salubrity and comfort; the second by symmetry, regularity and simplicity. Having established the principles to which architectural composition should plainly be subordinated, we have to rid ourselves of the mistakes which still persist in the culture of the time, imbued with Vitruvianism, which maintains that architecture “*should take as its model the forms of the first huts that men built and the proportions of the human body.*”⁽³⁹⁾ In defining architecture as the art of composing, Durand rejects the predominance of construction. This explains the arguments he uses to refute the thesis of the Abbé Laugier, which involved taking the primitive hut and the proportions of the human

Lectures on Architecture /Graphic Part of the Course of Architecture, J.N.L. Durand, 1802–1805/1821

36. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 17.

37. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 18

38. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 18

39. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 19

body as models of architecture.

Durand opposes this tradition with his own thesis. *“For architecture to please by imitating, it is necessary that, like the other arts, it should imitate nature. Let us see if the first hut that man made is a natural object and if the human body is able to serve as a model for the orders; finally we shall see whether the orders are an imitation of the hut or the human body.”*⁽⁴⁰⁾ Durand quotes in full the relevant description of the origin of architecture and demonstrates, with arguments based on elementary logic, the groundlessness of the Abbé’s thesis. In particular he rejects the natural origin of the hut, on which Laugier’s whole argument turns: *“Surely it is evident that it is none other than the formless product of the first attempts at art?”*⁽⁴¹⁾ He replaces the concept of history as a guide to practice with that of a method based on the authority of reason. A logical, synthetic phase precedes the constructional, analytic phase, and this is made the foundation of architecture. The orders do not constitute the essence of architecture, since its beauty resides in arrangement. *“If a building is arranged in a way appropriate to the use to which it is assigned, will it not differ appreciably from another building intended for another use? Will it not naturally have a character and, what is more important, a character of its own? ... Therefore the architect should concern himself only with disposition.”*⁽⁴²⁾

The structure of the work in which Durand exhibits his method is identified with the logical structure of composition. Hence by following the former, we are capable of understanding the organization of the latter and therefore of defining it in appropriate terms. Durand recognizes two genera of buildings, public and private, and a considerable number of species, which correspond to different types of buildings. Each species undergoes a multiplicity of changes in relation to different customs, usages, climates, localities, materials and budgets. Hence the number of projects that the architect can produce is theoretically limitless. The method proposed rests on these premises: *“If in order to understand architecture it was necessary to study one after the other the different species of buildings, in all the circumstances that could affect them, a similar study, even supposing it possible, would certainly be of fearsome length.”*⁽⁴³⁾ This is the traditional method by models, per exempla, typical of all the classical treatises, which invoked the principle of authority embodied in the works of the masters, written and/or built, to validate their theses. Durand opposed this approach with a method intended to make it possible to design any building without prior experience. *“After all we have said, we can understand how the study of architecture, reduced to a small number of general and fertile ideas, to a limited number of elements, but sufficient for the composition of all buildings, to combinations that are simple and not numerous, but whose potential is as rich and varied as that derived from the combination of the elements of language – we can understand, I repeat, how a study of this kind can be both fruitful and succinct, how it is suitable to supply students with the ability to compose all buildings properly, even those they have never heard of, and at the same time to clear away the obstacles that lack of time seemed to place in their way.”*⁽⁴⁴⁾

The degree of generality which Durand seeks to offer his students to enable them to deal competently with every species of building can only be identified in the possession of a “language” of a universal character.

40. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 19

41. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 22

42. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 22

43. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 27

44. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, pp. 28-29

By performing a certain number of operations, they can use it to generate all the projects that may be required. Only “*language*” has the unifying power called for by Durand’s method. Language, moreover, is the sole instrument in man’s possession that is based on pure logical principles of selection and combination, like those required by Durand. The method then current in schools of architecture was based on subdivision into themes: decoration, distribution and construction, out of respect for the Vitruvian triad. Since the unity of these three themes had been lost in the vivifying concept of the type (the effect of the rise of bourgeois culture), this method no longer seemed to rest on its original justifications. Besides lacking a general unifying idea, it was bound up with the conception of architecture as tectonics, hence with its “*presence*”. But architecture cannot be reduced, according to Durand, to the simple art of building. In addition, the relative independence of the three factors led students to focus on one alone, the one that allowed them to follow their natural inclination.

Durand now begins to systematically expound the organization of his course in architectural design. The elements are the basic components of the “*language*” of architecture: “*They are to architecture what words are to speech or notes to music.*”⁽⁴⁵⁾ They consist of the foundations, walls, isolated supports, entablatures, apertures, floors, vaults, roofs etc. These are analysed in relation to the materials, forms and proportions they should be given in the architectural discourse. *Fig 3*

They can be articulated according to vertical and horizontal dispositions. Of the horizontal dispositions, which lead to the definition of the founding act of all architecture – the plan – Durand explains: “*After tracing equidistant parallel axes, intersected perpendicularly by other axes set equidistant between them like the first, on the basis of this framework are placed, in the most appropriate way, the walls on the axes, the columns and the pillars on the intersections; then the intercolumniations are divided into two parts; and on the new axes resulting from this division are placed the doors, windows, arches, etc.*”⁽⁴⁶⁾

Durand’s description suggests that the rules for combining the elements constitute the “*grammar*” of the architectural language he is putting forward.

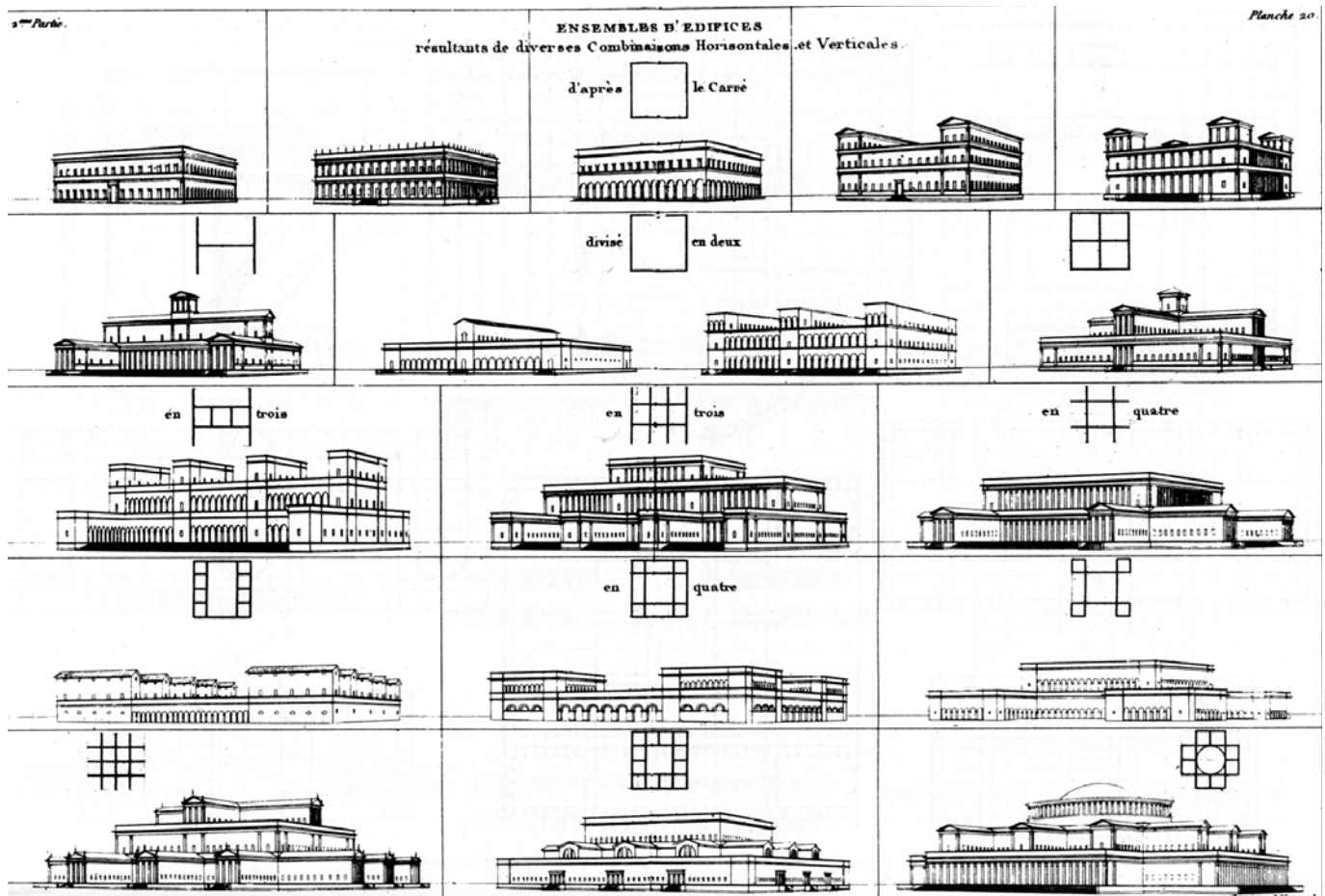
He then turns to the formation of the parts of buildings. The principal parts are the porticos, vestibules, staircases, all kinds of rooms and courtyards. The parts clearly define the morphology of the method, i.e. they define, in keeping with the linguistic metaphor adopted by Durand himself, the parts of speech, for which there exist the same rules as those defined for the components.

His final act is to lay down the principles necessary to define the composition of the whole. The rules are the same as those established for the elements. “*It follows naturally that rooms consisting of these walls and these columns, opened by these doors and these windows, are necessarily also placed on common axes. These new axes can be combined in a thousand different ways and give rise, in their combinations, to an endless number of general dispositions.*”⁽⁴⁷⁾ The different dispositions can be produced by working on different figures: “*If the division in two of the square produces by itself numerous simple dispositions, we can clearly see how many new dispositions will result from the division of the square into three, four, etc;*

45. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 28

46. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 62

47. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 67



from the division of the parallelogram and the circle; and finally from the combination of this last with the other two.”(48)

Underpinning the design process, there therefore exists a “syntax” which works directly on elementary “areas” and their modes of combination. The composition proceeds from the general to the particular, as a creative act of synthesis, and inversely as an instrument of analysis. “To combine the different elements, and then to pass to the different parts of buildings, and from these parts to the whole: this is the route we must follow when we wish to learn to compose. By contrast, when we compose, we must begin from the whole, then continue with the parts and end with the details.”(49) The method further presents a twofold level of articulation, in significant analogy with written and spoken language. The first consists of the whole series of units which are bearers of meaning (explicitly spatial, such as porticoes, atriums, vestibules, staircases, rooms, courtyards, grottoes and fountains) defined as “parts” (which correspond to what linguistics terms monemes); the second consists of units devoid of spatial significance, though capable of it if combined in sequence, defined as “elements” (such as foundations, walls, doors, windows, arches, pillars, columns, piers, attics, vaults, roofs and terraces), which correspond to what linguistics calls phonemes.

It follows, by analogy with linguistics, that the sequence of phoneme, moneme and sign corresponds in composition to that of element, part and whole. So the individual result of the composition, the project of a species of building, appears as the linguistic sign, through a rigorous systematization of the “speaking” architecture of the masters of the

Fig 3. Durand, *Elements des edifice*, Partie graphique, 1821. Architecture is ultimately reduced to a combinatory exercise among entities - Elements, Combinations, Assemblages, Totality - each of which represent a logical arrangement of notations. Each entity therefore repeats at a different scale, or level of complexity, the same system of relation among abstract symbols, or degree. In such a way the author succeeds to define an universal language based on an increasingly complex process of selection and combination acts.

48. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 67

49. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 68

Enlightenment, while on the top rung of complexity in the method proposed by Durand exists language as such, a unifying factor capable of generating all the genera and all the species of buildings.

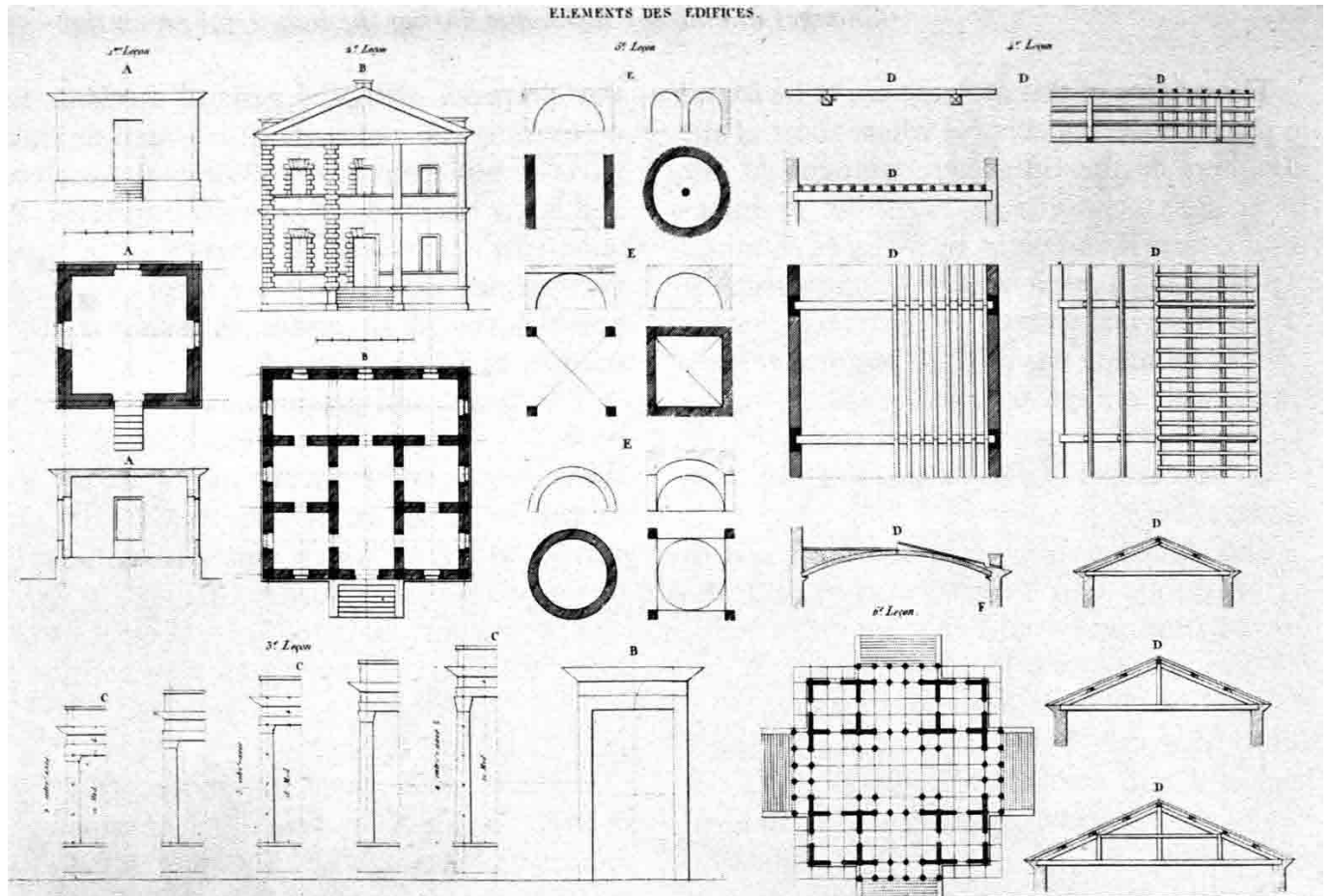
The definition of a twofold level of articulation is the interpretive key capable of explaining the richness of composition as a discipline, together with the criterion of selection and combination of the elements and parts. In fact, through an endless number of combinations between linguistic units of the first and second level, it is capable of producing a theoretically infinite number of linguistic signs (reduced in practice only by the application of building technologies). From these considerations stems the parsimony, in linguistic terms, of Durand's system and hence its effectiveness.

Having defined a vocabulary, Durand confines himself to identifying certain fundamental rules (alignments of walls, doors, windows and rooms, use of ordering axes and grid spaces based on the intercolumniation of the supports). They have to be respected in any combination, regardless of the subject chosen, but without defining a priori a morphosyntactic structure to which they are referred. Only study of the brief, and the recognition of the character derived from it for the project, can serve to define the components and the most appropriate relations between them. The structures, distribution and legibility of the volumes will consequently be given a unified interpretation through compliance with the system and the rules which it sets out. In fact it is necessary to establish the functional brief beforehand, so as to understand whether the parts should be united in a single volume or in a number of volumes and whether they should be treated in different ways within the composition as a whole. The initial ideas should be fixed through sketches of the whole. The axes identify the principal and secondary parts, which are then articulated by the walls before passing to the final details. In the last analysis, the plan is the first to be composed, then the section, and then the elevations are derived mechanically from it. Naturally the definition of the brief is not independent of the arrangement of the building in its setting, above all in relation to the street. This factor needs to be taken into account at the start of the design process. *"Before going into all the questions previously dealt with, it is therefore necessary to seek to understand clearly the nature of the building that we propose to erect: to examine, among the various qualities that pertain to buildings, those that this should possess in the highest degree: to ascertain whether it is salubriousness, as in hospitals, salubriousness and security together, as in prisons; cleanliness as in markets and abattoirs; commodiousness, as in private homes; peace and quiet, as in buildings intended for study; gaiety and pleasantness, as in those intended for pleasure etc. ... To seek, in brief, all that may contribute to satisfy the purpose of architecture in general and that of each building in particular."*(50) In this way the theory of character returns as the purpose of the architectural project.

In the second volume of his lectures, Durand confirms the impossibility of learning to be an architect by studying all buildings one after another. The risks involved in this method are due to the narrowness of the specific conventions embodied in every manifestation of design: *"for, after studying a number of projects, out of laziness or self-love one would*

50. J.N.L. Durand, *Lezioni di Architettura*, Milan, Città Studi, 1986, p. 70

inevitably get into the habit of making certain associations of ideas and reproducing them in all the following projects."(51) Therefore we should not focus on individual projects but the principles of art, because the mechanisms of composition enable us to deal competently with any type of project. Just as the elements are the basic components of all architecture, buildings are the elements that compose the city, together with squares, city gates, streets and bridges. Fig 4



Durand presents the general guidelines that need to be followed in designing the most significant categories of buildings required by the new bourgeois society: temples, palaces, public treasuries, courthouses, buildings for justices of the peace, town halls, colleges, buildings for assemblies of scientists, men of letters and artists, libraries, museums, observatories, lighthouses, corn exchanges and food markets, abattoirs, stock exchanges, customs houses, fairs, theatres, baths, hospitals, prisons and barracks. After analysing the public types, he then specifies the private buildings: urban housing, rental housing, rural housing and inns. Lectures on Architecture was followed by the Graphic Part of the Lectures on Architecture, which formed the practical part of the course. It began by presenting a summary of the contents already dealt with in the text.

In Durand we therefore find all the essential aspects of Enlightenment culture, presented systematically, framed within a unifying method which is proposed as a metahistorical "*language*", or metalanguage. From this deliberate limitation we deduce that in Durand's eyes composition

Fig 4. Durand, *Ensembles des edifice, Precis*, 1802-05. A building, intended as a Totality, is the ultimate arrangement of the combination of Elements (materials), Structure (Combinations of Elements), Spatial systems (Assemblage of Combinations) and the Type (Totality of Assemblages).

is defined as a system, whose force and validity are determined by the level of abstraction on which it rests and are confirmed by the extensiveness of the possible field of application.

Durand rejects the idea of composition as a language resting on historical foundations, as this would amount to a limitation of the combinatorial and semantic potential presupposed by the system itself. For the same reason, the author rejects the idea of the type, because it is a historical-geographic limitation of architecture and would entail, as further constraints, recurrent lexical and morpho-syntactic features. This explains why, according to Durand, a study that starts from the different species of buildings concretely erected, because of the severe limitations that they would express and the habit of making certain associations of ideas which they would inculcate, would never be capable of fully revealing the underlying principles of architecture.

From this we can deduce inversely that Durand identifies the type in architecture with “*style*”, and he sees this as extremely harmful because it is reducible to the ordering action of history and its constraints (caused, depending on circumstances, by factors deriving from specific persons, places, periods, etc).

Moreover, since Durand attributes to the single act of composition the significance of a linguistic sign, it seems that he attributes the status of language, coherent and complete in itself, only to the art of urban composition. The Enlightenment city is thus the “*place*” where the signs of architectural language coexist. Just as architectural language is the place of the possible, meaning it has no limits, the city is destined to become by analogy the place of “*multiplicity*”.

2.1.3) Projects and works

In the ideal city of Chaux, Ledoux designed a settlement for sixteen families in a forest, intended as an experiment in housing for communal living. This return to a state of nature had a precise symbolic function, drawing unmistakably on the recovery of original values, uncorrupted by the customs of the city. In this “*primitive*” setting, the families were meant to rediscover lost happiness by living out of doors in the fields, making their living by farming and herding.

The building has some singular features, in which it departs from the buildings of the day. The first innovation is the rejection of all kinds of multi-family buildings established by tradition in the urban setting. Ledoux does not adopt the form of the *hôtel particulier* in French culture or to the more general rental housing common across the whole of Europe, with national variations, consisting of a single staircase leading to apartments on the various floors. He also rejected the form of the building understood as a unified architectural object, with principal and service facades and sides, namely a building clearly defined by a precise hierarchical relationship with the system of infrastructure. The lack of an artificial context makes the building an isolated and isotropic element. This experiment with collective housing is conceived as the characterization of an elementary, generative formal system, that is a fragment of a grid which can theoretically be boundless in its development. The private spaces are ranged along the arms of the grid, in single or double buildings, depending on functional needs, while the collective spaces are housed on the inside of the grid. *Fig 5*

*Cenobié, Chaux,
C.N. Ledoux, 1768–1789*

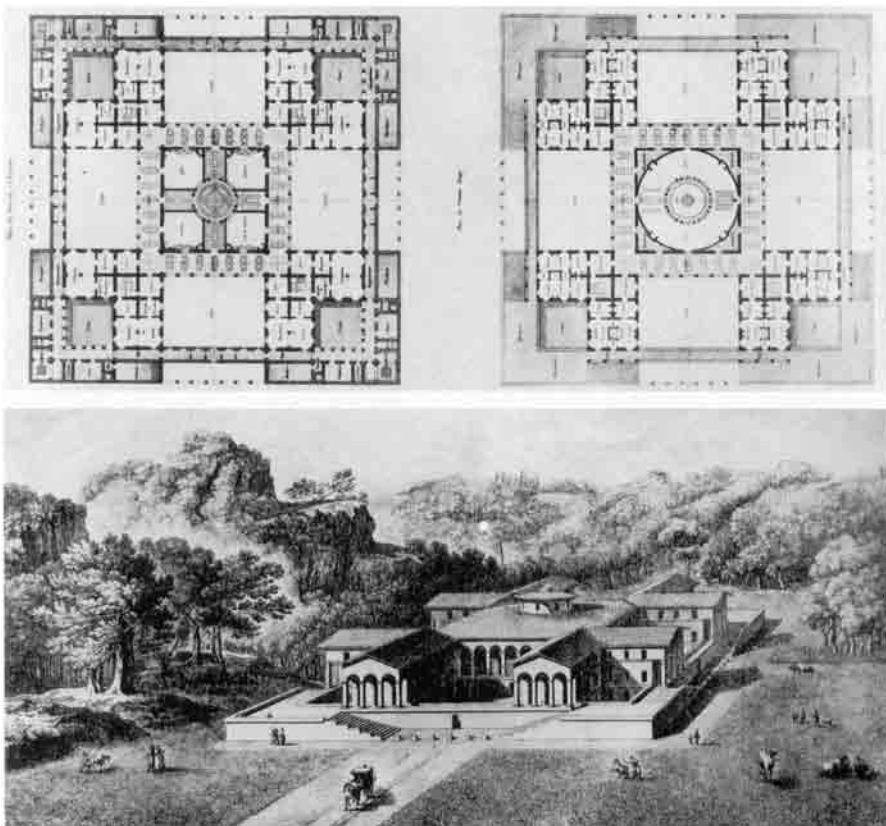


Fig 5. Ledoux, Cenobié at Chaux. The value of architecture is reduced to the geometrical order and its system of rules. In fact the clarity of the resulting composition derives from the territorial axes ending in the collective space, the private spaces branching out of it and the definition of the complex limit. This aspect is emphasized by the striking contrast with the idyllic landscape around it that disregards any relation with an historical context. The Nature is the new horizon into which the discipline fits.

By definition, the grid has no prevalent direction, it does not have a centre or a periphery, it has no principal front or service front but, above all, it has no limitations, since it can theoretically be extended to infinity. It also lends itself to complex historical interpretations, since it has been used, because of its flexibility, in various circumstances. It thus acquires that archetypal function to which Enlightenment culture aspired. The grid configuration is open-ended and it belongs to no specific time or place.

Ledoux's experiment was of exceptional value in its period, and all more so if we consider the economy of means by which it was carried out. It has the potential to constitute a formal experiment of universal value, completely devoid of historicist affectation. He limits the grid to the definition of nine squares, with the central one roofed to become the communal dining room. The squares contiguous with it are communal courtyards, while those arranged at the corners become the courtyards of the home units. The minimum level of hierarchy is attained by simply articulating the pattern of public spaces while respecting a unified scheme.

The single scheme, besides, is matched by different patterns in the articulation of the external spaces. Each is endowed with a different degree of permeability, from the maximum level of the walls bounding the housing to the intermediate level of the open galleries forming the perimeter of the communal house. This makes it possible to reach all the living quarters down to the minimum level of the hollow masonry screens which form the entrance to the courtyards. The open character of the general composition is guaranteed by the minimum level of internal hierarchies between the parts, since the buildings are arranged along the arms of the grid, which are absolutely identical in all directions.

The rules for the aggregation of the parts are extremely simple yet ensure great richness of articulation. Differentiation is achieved through variations in the thicknesses of the buildings and the kinds of roofing. The only reference to tectonics consists of the permanence of a plinth along whose perimeter are arranged the warehouses and communal cellars.

What is innovative in Ledoux's conception is its potential value, which is never fully expressed. The compositional principle not only makes it possible, through successive articulations/interpretations, to produce an infinite number of combinations – which is recurrent in all the archetypal configurations – but is an attempt to give form simultaneously to the institutive conditions of a language and lay its foundations through one of its epiphanies. Nothing allows us to establish an immediate correlation between the formal articulation and the function present. The value of the work is immediately expressed by its choice of forms, by the functions of the language adopted. This is a universal language capable of expressing that unlimited potential implicit in the adoption of the system of correlations of the checkerboard configuration. The spirit of geometry becomes the conceptual scheme which supports the compositional grid. No choice seems to refer to the materiality of the building or the technological solutions adopted, which are at any rate subordinated to the more strictly formal solutions. The unifying power

and function of geometry replace those of the traditional structure, which entails definite distributive and volumetric choices. Every choice of detail is reduced, through a system of successive abstractions, to a simple problem of geometrical composition. Architecture itself, defined as the art of composition, is the reduction of a built work to a problem of basic geometry and its possible articulations. Geometry, governed by the laws of number, restores that degree of universality that is the foundation of the research of the architects of the Revolution.

Having to sum up the constituent aspects of the architecture of the Enlightenment, it is customary to refer to three essential factors: the crisis in the relation of implicit derivation of the current solutions from formally accomplished historical antecedents, which began with the classical tradition and continued substantially intact down to the modern period; the definition of a thematic core, or “*subject*”, as the primary and constituent act of every architectural invention, its direct cause, not to be confused with a simple functional requirement; substantial indifference to the technological solutions adopted in relation to the specific architectural requirements, meaning the loss of unity between functional, structural and volumetric needs.

Though these factors can plainly be found in the different works, the commonest error in contemporary criticism consists in considering these factors as the causes of the transformation under way at the end of the eighteenth century in a developing bourgeois society, and not, more truly, as its implicit effects.

In particular, to fully understand the singularity of the development, we can say that until the Enlightenment no one had ever questioned the close correspondence between *civitas* and *urbs*, the historically founded and self-conscious relationship between economic, political, social and cultural values shared by a definite society and their representation through the medium of the built space.

This historical relativism, regardless of the nature of the individual circumstances and periods when it emerged, involved the acceptance of the principle that the value of every individual act of architectural design is justified in relation to the specific historical context that elicits it, as a conscious “*representation*” of its “*content*”, and tends to lose pregnancy outside it, though it may retain its deliberate formal objectivity as it is subjected to subsequent interpretations once it has been introduced into a new historical context.

This is also true in all those cases where the commemorative function of architecture is most explicit: they are always related to a homogeneous culture, however circumscribed geographically. Think of the role and strong degree of inner cohesion of the Venetian landed aristocracy, elitist and very restricted in its territorial extension, to the limits of provinciality, for the spread of the culture of the villa in the work of Andrea Palladio.

In opposition to this attitude, the Enlightenment no longer placed an emphasis on the subject, whether definable in the singular, as an individual, or in the plural, as a collective institution, and the values of which it was the bearer. On the contrary, the focus now rested on the

*Bibliothèque Nationale,
Etienne Louis Boullée, 1788*

object of architecture, the form of the built, and implicitly the universal significance which the built space was required to communicate in relation to the theme dealt with. In other words architecture, for the first time in an openly programmatic way, updated its inner articulation, its expressive “*language*”, to communicate values that were related to neither place nor time, which did not belong to any specific tradition, to any unequivocally defined society, but was supposed to be universally valid, common to all periods and all peoples. This superseded Vico’s interpretation of the philosophy of history as a cyclical process of emancipation of peoples through the transition from a primitive age of sense to that of reason, passing through the age of imagination.

This gives a precise significance to Aldo Rossi’s insight in defining architecture in the Enlightenment as a “*rational*” activity. It is rational in that it was based on principles common to all men, independently of any precise cultural choice, of any specific historical moment. There arose a demand for architecture to be a metahistorical system, in contrast with a historical “*convention*”.

Paradoxically, the Enlightenment, in a phase of social development characterized by the downfall of the *Ancien Règime* and the ascent of the new bourgeois values, chose to renounce the representation its own specific expectations, though it is undeniably true that certain functional requirements arose which were unprecedented in the history of architecture. This fact, essential to understanding the “*revolution*” and the experimental effort of the Enlightenment in the field of architecture, is perhaps the one least understood and most underestimated by critics. Emblematic in this respect are the words of Carlo Aymonino, who sought to credit the Enlightenment with the invention of “*functional*” architecture by claiming de facto an equivocal correspondence between form and function, seeing the former as unprecedented as related to new functions and postulating the persistence of that correspondence between urbs and civitas that had distinguished the previous periods. In this respect he declared: “*We can take the work of the French Enlightenment architects – Boullée, Lequeu, Ledoux – as the first contribution to the definition of prototypes (meaning by prototypes the first examples) which, above all in many of their unbuilt projects, suggested and often gave form to new and wholly original architectural structures. While certain activities (which in those structures found their most appropriate representation) already took place de facto either partially in existing rooms or buildings adapted or converted for the purpose, it was only through the work of those architects that they underwent a process of complete definition. This means they were the first examples of buildings which had not existed before. This process should naturally always be interpreted within the framework of the formation of bourgeois society, which did not develop in its complex articulations all at once, but became aware of itself and organized and fulfilled itself in the course of over four hundred years.*”⁽⁵²⁾

Though we can hardly deny the birth of institutions which were unprecedented under the *Ancien Règime*, we should not forget that the representational function of architecture, which Aymonino also recognizes as of overriding importance, is not so much related to the function as such, and even less to the values of which society

52. Carlo Aymonino, *Il significato delle città*, Bari, Laterza, 1975, p. 68.

is the bearer, but rather to the “*character*” which befits the subject or functional theme analyzed, held to be universally valid. This is the force of Emil Kaufmann’s insight when, he says of Boullée’s National Library: “*Boullée fills the room with people in various attitudes, looking for books or conversing. He seeks to exalt the building over human activities, the durable over the temporary. It hardly matters that the library has all sorts of practical drawbacks. The drawing is the direct expression of Boullée’s artistic urge. It is an end in itself. We should re-examine all the projects of the revolutionary architects from this point of view: their true significance is form as an end in itself.*”⁵³) Kaufmann implicitly grasps the historical limits of validity of a project that was created to satisfy requirements, or “*human activities*”, related to specific conditions of time and space, contrasting them with considerations of a general order.

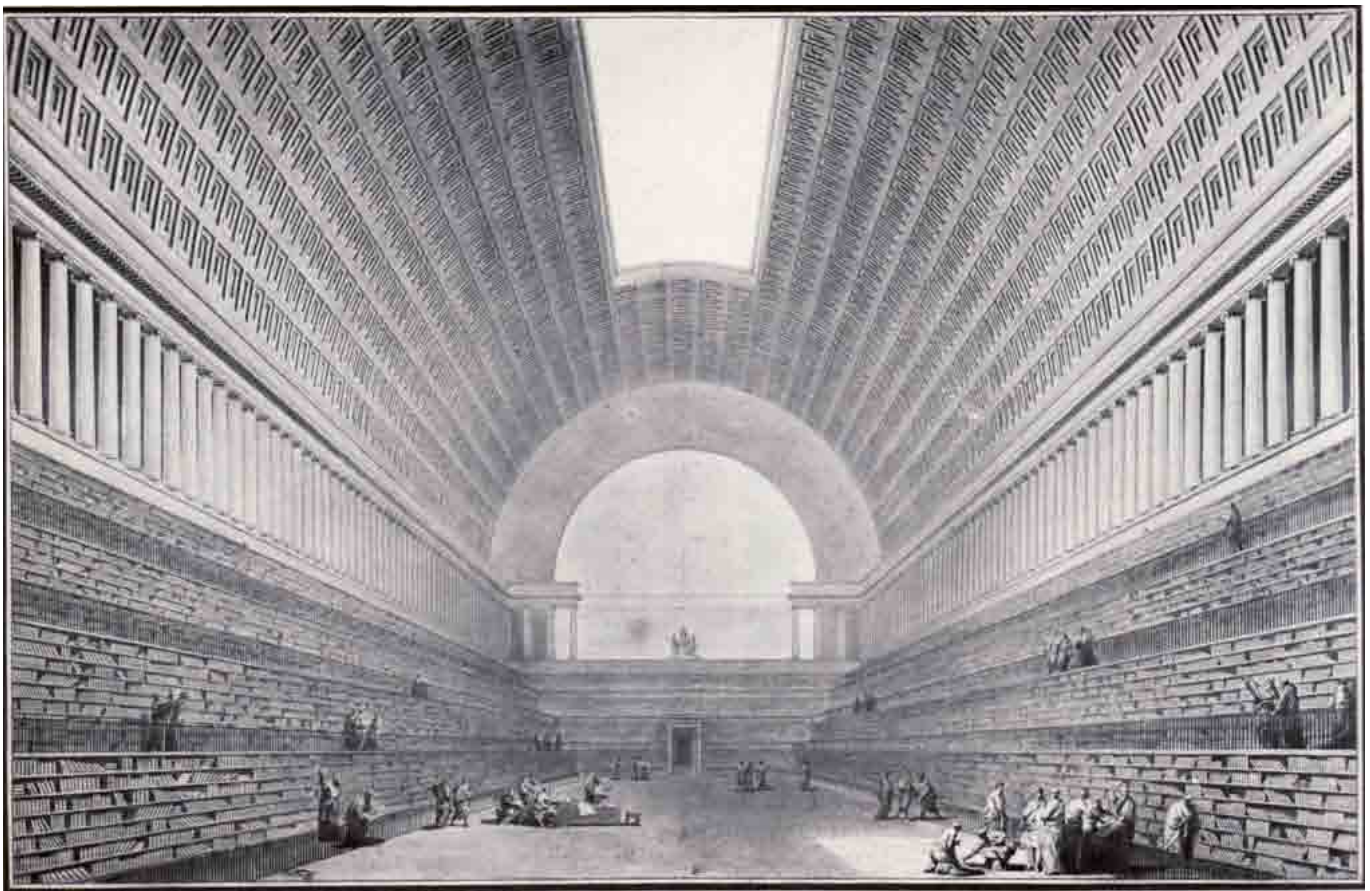
The abstractness of the contents of a purely semantic nature – the reason why it seems at the very least inappropriate to speak of “*functionalism*” – is matched by a coherent abstraction of forms. We also understand why architecture tends to be substantially a self-referential practice, as the art of composing, and not an act in history. The rejection of architecture as tectonics, meaning the art of building, is consistent with the need to “*represent*” values that are not peculiar to a specific society but belong to the whole of society. Architecture thus has to “*represent*” universal values, and its language has to express the new condition of the spirit. In this, and not so much in the birth of new functions, consists the Enlightenment revolution, the triumph of Reason. Architecture is a new practice to the degree that it manages to be an activity detached from the weight of tradition, from the cultural heritage. The culture of the individual is progressively replaced by the culture of the universal. On this paradox turns the whole output of the Enlightenment, and it opened a season of experimentation that not yet come to an end today. These observations give a precise significance to the factors with which I introduced the practice of architectural design in the period. The acceptance of historically inherited forms would have entailed the derivation of architecture from limited circumstances. Similarly, the affirmation of architecture as tectonics would have involved the subordination of choices to traditions and conventions of building which were conceptually developed and culturally disseminated in limited regions. The priority given to the determination of the theme or “*subject*”, in which the latter was an abstract quality, provided a coherent alternative to the previous trend towards specification and individuation.

Naturally the language of architecture changed in radical ways: architecture became depersonalized, with a conscious search for objective responses to universal requirements of a representative nature. Boullée’s National Library gave effective expression to this experimental state and some of the ambiguities that accompanied it.

Unlike the architecture built in the period, which deliberately sought ideal urban situations in which to express its full “*revolutionary*” potential, the Library was conceived for a definite place. This was the site occupied by the Hotel de Nevers, which in the period faced onto the present Rue Colbert, on the site where subsequently Henri Labrousse built the Bibliothèque Nationale. Boullée’s intention was

53. Emile Kaufmann, *Tre architetti rivoluzionari. Boullée, Ledoux, Lequeu*, Milan, Franco Angeli, 1989 [1952], p. 168.

to reuse the existing structures as storehouses and deposits for the books, so ensuring the maximum economy and feasibility of the whole operation: *"This project consists in transforming the courtyard, which is 300 feet long and 90 wide, into an immense basilica illuminated from above that will contain not only our literary riches but also those of the future ... The vault will spring from the summit of the existing walls I have therefore desired that our literary riches are presented in the finest possible setting. For this reason I have decided that nothing could be larger, nobler, more extraordinary and of more magnificent appearance than an immense amphitheatre of books ... This superb amphitheatre is crowned by an order of architecture conceived so that, far from distracting attention from the spectacle of the books, it will offer a decoration necessary to give this fine place even more splendour and nobility."* (54) Fig 6



Boullée's words confirm the image communicated by the drawings of the project: by covering the court of the existing building with barrel vaulting of spacious classical proportions, he renders the image of the library as a place for discussion and the exchange of ideas through the allusion to the type of the basilica, so keeping alive tradition and taking responsibility for its transmission. By modelling the shelves on the type of the theatre, he creates spectacle out of the presence of the books, transforming them into component parts of the architecture, while also ensuring it is easier to control consultation than with the traditional layout of libraries in the form of galleries. Through the project he emphasizes the civil and secular function of the transmission of knowledge and implicitly the fact that society should be responsible

Fig 6. Boullée, *Bibliothèque Nationale*, 1785. The library is intended to be a space for discussion based on the evidence of its volumetric articulation. To it refer the implicit references to the amphitheatre, the basilica and the hall. Beyond these quotations, the project aims at establishing an universal category, and a corresponding catalogue of forms, for the new public institution.

54. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p. 119.

for the conservation of history. The scheme of the theatre and the basilica are deprived of any possible and explicit reference to a historical model; they are not presented to the viewer as conventional “figures”. On the contrary, they are simply used for the formal values they are capable of communicating as presences endowed with an implicit spatial articulation. History, projected into the present, is deprived of its sedimented ideological encrustations and reduced to pure “lexis” as images, capable of communicating the character suited to the subject of the library as such. “*The most precious Monument for a nation is certainly that which preserves all existing knowledge.*” (55)

The theme of the library may be original in its complexity, as compared with illustrious precedents, so in this respect it lacks any models of reference. However we should not confuse the practical need to meet strictly functional purposes with the urge to relate the evocative function of works of architecture to the existence of a “natural” language, implicit in the formal laws of articulation underlying the work designed, as an alternative to the “conventional” language of figures, which draws on the sense of history and memory to “represent” its values. This project for the Bibliothèque Nationale, a synthetic act par excellence given the economy of the solutions adopted to produce a highly effective result, gives substance to the idea of architecture as a rational activity, an independent discipline capable of reflecting values on the basis of a vocabulary, a grammar, a morphology and an syntax of its own, and independent of inherited historical customs.

Recourse to the formal configurations of the theatre and basilica is therefore justified by the “character” gained from their proportions, geometries and masses, hence by the quality of the spaces they subtend. It does not stem from the symbolic significance attributed to them by the evocation of a precise historical context capable of legitimizing them, namely by the implicit evocation of a cultural referent, of a tectonic typology. These two spatial qualities, though integrated in the design of the library, remain formally distinct, to such a degree that while the barrel vault crowns the existing structures, the reading room in the guise of a theatre is arranged within it as an independent entity, and is formally completed by an entablature supported by an order of Ionic columns. So Kaufmann’s interpretation seems inappropriate: “*Boullée intended to divide the large interior of the Library into three zones: the base zone of the bookshelves set on three recessed tiers echoing the semi-cylindrical roof; the intermediate zone with the solemn row of Ionic columns, the zone above with the coffered barrel vault opening into an immense skylight. The three zones contrasted with one other by their dimensions and forms, as well as by their extent. The base zone was varied, characterized by the arrangement of the books. The middle zone was notable for the rigidity and coldness of the unfluted columns. The topmost zone with the coffering was charged with a tension that finds an outlet in the luminous cleft.*” (56)

This interpretation, respecting the tripartite morphological division into base, elevation and coping, which underlies classical tectonics, contradicts that impulse towards the independence of the architectural language from the limitations of technology which constitutes one of the distinctive elements of Enlightenment works. That the two configurations are autonomous is demonstrated indirectly by the

55. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p. 117.

56. Emile Kaufmann, *Tre architetti rivoluzionari. Boullée, Ledoux, Lequeu*, Milan, Franco Angeli, 1989 [1952], p. 168.

collocation of the skylight, which tends to restore an improbable centrality in the plan to the hall of the basilica, with its prevalent longitudinal development, in order to create a balance with the plan based on the amphitheatre (or circus). What strikes the imagination in viewing the project for the National Library is the incommensurability of the space compared to the finite dimension of the observer. This architectural choice can be justified by the urge to affirm that the content of the library is the space of the library as such, and not the function performed within it, of which the human presence is the essential and distinctive fact. This provides indirect confirmation of the autonomy of architecture as a pre-eminent theme of Enlightenment culture.

The funerary monument is a theme with a high symbolic content common to all periods, and is commonly referred to in order to comprehend the relationship between a society and its world. In the specific case, the cenotaph to Newton was a symbolic project in Enlightenment culture, as Newton was seen as the philosopher who had discovered the “*natural*” laws, the principles governing the behaviour of the universe on the macroscopic level. Hence these laws, by virtue of their character, were independent of specific conditions of space and time. The aspiration of all Enlightenment architects was to find similar universal laws in architecture whose validity would be independent of the limitations of history. *Fig 7*

The theme is presented by a sphere, hollow inside, as a metaphor for the celestial sphere within which the law of gravity regulates all relations between bodies. It rests on a massive dado-shaped plinth with a circular plan, tiered on two levels, in correspondence with which are arranged double rows of cypresses, alluding symbolically to the theme of death. While the terraces are reached by two imposing staircases cut into the mass of the plinth, access to the funerary monument is provided by an underground gallery that emerges inside the sphere directly beneath Newton’s burial vault. In this way it creates a field of tensions by the eccentric position of the burial vault in relation to the geometrical centre of the composition, illuminated by a lamp suspended from the zenithal summit of the sphere. Boullée again uses the expedient of the contrast between the finiteness of the individual, represented by the chapel, and the incommensurability of the space defined by the sphere. This contrast is heightened by a series of holes in the surface of the sphere which project natural light inside it, occupying in projection the same position as the stars in the heavenly vault. The cenotaph thus appears as a miniaturized version of the universe, hence as a “*figure*”, but its capacity to produce an unprecedented spatial quality is due less to its symbolic value than, once again, its relative proportions, its geometry, the use of light and shadow and the relations between the masses that compose it, all in relation to the dimensions and position of the viewer. *Fig 8* In this respect Emil Kaufmann observes acutely: “*The architectural form in itself does not seek to express any state of mind and is stripped of any superficial symbolism.*”⁽⁵⁷⁾ The properties of the form, in other words, belong to the form itself, and are not attributes

*Newton’s Cenotaph,
E. L. Boullée, 1784*

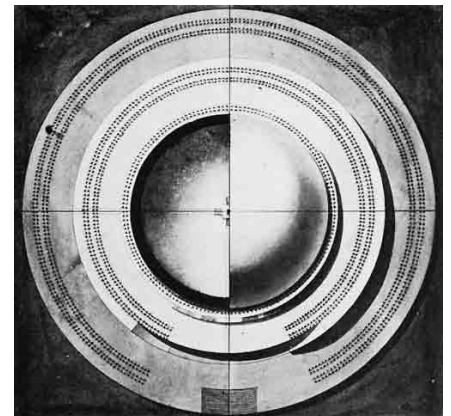


Fig 7, 8. Boullée, Newton’s Cenotaph, 1784. The symbolic quality of the project succeeds to combine the purity of the geometrical order, to which the rationality of the composition is subject to, and the laws of the Nature, to which the figurative quality of the proposal explicitly refers.

57. Emil Kaufmann, *Tre architetti rivoluzionari. Boullée, Ledoux, Lequeu*, Milan, Franco Angeli, 1989 [1952], p. 171.

of history and its ideological encrustations. Nature and not society is the referent of architecture, and its principles, not its forms, become a model for the art of composition. Individual themes become simple pretexts for confirming the relationship between nature and culture. Another factor that reaffirms the relation between compositional laws and natural laws is the desire to reproduce the conditions we can experience in nature. "*The light of this monument ... must be like that of a pure night ... To achieve the exact tone and the effects that this monument has in itself, it is essential to employ the magic of art, and painting with nature amounts to applying it.*"⁽⁵⁸⁾ Boullée regarded himself as the inventor of this technique of composing following the rules of nature itself. By producing the same effects as nature, without reproducing its forms, the Enlightenment architect sought to confirm the thesis that architecture is a universal or rational discipline, because endowed with rules common to all historical periods.

2.1.4) The phenomenon interpreted: analysis of the sources and spread of themes

The conflict with classicism turns synthetically on the idea of the primitive hut as the first principle from which stem all manifestations of architecture, past and future, regardless of their function. In the classical tradition this principle developed within the framework of a definition of architecture as the art of construction, hence tectonics. This made it an inseparable expression of unity of thought and action, meaning of architectural purpose and vocation in the use of the materials available in the relevant geographic area. In fact in the text of Vitruvius we find the hut flanked, as a primary principle of the articulation of space, by the tent and the cave, as related to the specific customs of the various primitive peoples who had developed the principle itself.

This unity is thus historically based on the experience of a people of builders, and only subsequently conceptualized through the renewed proposal of the order as the embodiment of the formal code implicit in the act of building. The architectural language thus stems, in the classical interpretation of architecture, from a series of abstractions of the products of material culture, "*reduced*" progressively to a code, meaning a logical system.

To paraphrase Ferdinand de Saussure, the whole set of the individual manifestations of construction, whether examples of simple primitive huts or more complex works derived from them, are to the architectural order as *parole* is to *langue*. Just as we cannot have the latter without the individual contribution of the former, so an architectural code cannot exist without architecture in its complex historical and regional inflections. In the same way, the theory of architecture cannot exist unless it is based on a practice established and legitimized by experience repeated in the course of time by a people through the shared work of its members.

Enlightenment "*rationalism*" introduced a revolutionary principle into

Classicism

58. Boullée Etienne Louis, *Architettura saggio sull'arte*, Padua, Marsilio Editori, 1967, p. 128.

the classical tradition, capable of destabilizing the system of certainties, by denying that architecture is the art of building, and in this way it distinguished the contribution of thought from that of praxis, of action. Likewise it separated theory from practice, the work of conceptualization from the pure execution of the work, attributing a clear autonomy to each of these spheres. The loss of the unity of classicism was thus closely related to the loss of the historical foundations of architecture, its independence from every form of conventionality or historically accepted material limitation.

Significantly, the Abbé Laugier's defence of the primitive hut as the foundation of architecture was not conducted on the plane of tectonics but of natural logic. We should remember that, in the philosophe's interpretation, the primitive hut was a metaphor for nature and not for the society that dwelt in it (and which therefore transformed it in conformity with principles that were not appropriate to it, since they were related to the universe of social conventions). The foundations of architecture were thus a set of principles which were universal because natural, belonging to all individuals. So Laugier was not concerned with the primitive state in the anthropological sense, involving limited and circumscribed research conducted in the field. Rather he took it as an ideal condition in which man worked in harmony with nature, guided by reason not yet contaminated by history and its conventions, in keeping with the ideas of Rousseau. While the classical tradition raised the question of the historical foundations of architecture, Enlightenment rationalism asked whether architecture itself cannot be the expression of a universal rationality. Once this primary distinction is established, it is easier to understand the specific orientations within Enlightenment culture itself. Laugier in fact was convinced that the hut, reduced to the architectural archetype, could express that universal rationality even amid the complexity of the world in his own day. Durand, the heir to the lesson of Boullée and Ledoux, in systemizing their thinking denied this prerogative of the hut, though sharing with Laugier the search for a method guided by rationality unrestricted historically and therefore universal. It is not a rationality necessarily shared with the forms of nature (though Boullée speaks unequivocally of nature as a model to be referred to in order to understand the principles of architectural composition), but as universal rationality, common to all men and archetypal.

The relationship between twentieth-century rationalism and that of the Enlightenment was just as troubled as that with the culture of classicism. The reasons are soon stated. Modernity rejected the Beaux Arts tradition because it legitimized, in strictly compositional terms, the nineteenth century's whole eclectic and revivalist output. But paradoxically it shared its spirit in the quest for a universal language, though one consistent with the socio-economic transformations of the twentieth century. It abandoned the archetype of the hut and replaced it with that of the Maison Domino, the expression of a new spatiality, which was represented at the same time as a complex metaphor for nature and modern society (reduced to a condition of nature, or rather

Rationalism

of the elementary).

This is made possible by the logic of specialization which, as interpreted by the “*pragmatism*” of the early twentieth century, is imprinted on both the processes of natural growth and those of industrial development. In other words it presupposes a form of Taylorism as the foundation not only of human society but also the realm of nature. Once again shared principles, and not ultimate forms, make it possible to associate analogically technological progress, whose values are seen as the foundation of contemporary society, with natural behaviour through the sharing of a universal rationality of a productivistic kind. This affirmation justifies the interpretation of the individual in truly biological (and not psychological) terms, and the corresponding answer that is given to his elementary needs. In relation to them, in fact, one can legitimately hypothesize a community of metahistorical principles. With the Enlightenment, contemporary rationalism also shares the distinction between thought and action, between theory and practice. Even artificial materials, as the products of thought that divides, that atomizes, are the self-evident proof of the power that categories of thought exert over matter, just as the idea of the independence of space from structure has been developed without any conception of architecture in tectonic terms.

2.1.5) The role of architectural “*language*”

Durand’s reform, the heir to the revolutionary tradition, was widely disseminated through the teaching of the Ecole des Beaux-Arts and became a fixed frame of reference for all compositional exercises all through the nineteenth century (at least until it was opposed by positivist utilitarianism and materialistic rationalism). It expresses an effective synthesis which superseded the baroque and late-baroque sense of space. More generally, it constituted the negation of the principles of Vitruvianism, since it replaced the definition of architecture as the art of building with that of the art of “*composition*”. In this way it destabilized a whole tradition that was based on practical skill and its subsequent systematization as a theoretical patrimony. “*Composition*” unmistakably introduced for the first time the concept of a “*code*” into architectural practice.

This transition, and its implications, are plainly expressed by Alan Colquhoun: “*The development of codes that come into play between conception and the execution can be better represented in the history of music. In ancient musical procedures (which still survive in the East) certain general rules are transferred from one generation to another. These rules are elaborated as the result of successive inventions by individual performers, and are incorporated into the tradition. The performers convert these rules directly into music through improvisation. But with the development of musical notes or of a code that represents musical rules, the production of music is divided. There are now two kinds of ‘performers’, one that composes at the desk and the instrumentalist who interprets the composition. This*

The code as a logical-conceptual space

division of labour entails a certain sacrifice, but makes possible a more complex musical structure.”(59)

The composition introduces the “code” for the first time as an instrument independent of execution and invention. The merit for this innovation is attributed to Durand. The process Colquhoun describes in the musical tradition has also been shown to have existed in the architectural, and it was constantly drawn on down to the second half of the eighteenth century. It was articulated on the basis of principles very clearly expounded, and it could be taken as a frame of reference also by the other revolutionary exponents cited in the text.

Composition follows the opposite procedure to that of the reading/interpretation of an existing architectural work. Just as an interpretation of it starts from the definition of the simplest components and so arrives at the identification of the most complex – in a logic that involves the recognition of elements, structures, systems and built organisms – the project proceeds through a synthetic operation, namely from the prior definition of everything to arrive, through a deeper articulation of its parts, at their identification and specification in relation to the brief. It should, by the way, be observed that this is not a brief in the functional sense: “*The Beaux-Arts program has, naturally, a precise social task, but has some of the same generality of a symphonic program and prefers subjects that can be assimilated to abstract ideas – monarchy, government, law, religion, exchange, etc.*”(60) This justifies the constant references to “character” to express the abstract meaning to be associated with the products of Beaux-Arts culture.

For all these reasons we can say that as a procedure composition is subtractive in nature. It follows that its syntax is hypotactic, namely based on a procedure that identifies the principal elements and from these derives all the others through a principle of subordination, and this procedure is repeated to scale in the different parts into which the building organism can be articulated. Nevertheless, it should be said that this hierarchization is only present on the syntactic level, that is in terms of the sequence of operations that have to be followed in the process of formal articulation, and it does not define a priority, in terms of value, between one part and another.

From a strictly morphological point of view, Beaux-Arts composition is characterized by a substantial equivalence of voids and solids, of public parts and private, of serving spaces and served spaces and a complete absence of residual areas, if not determined by contextual constraints. All of the available space is thus restored to measure. In this respect Alan Colquhoun observes: “*In the typical Beaux-Arts plan a regular and ‘ideal’ field defines both the site and the building. All the spaces within this field are formally controlled, and there are no residual spaces. So, if we express the field in terms of figure/ground, the spaces that are negative in the original diagram become ‘positive’ if this same diagram is inverted. In this sense the space circumscribed by the field can be defined as homologous.*”(61)

The importance of these conceptual passages is great. What is at stake is the recognition in official terms of architecture as a “language” independent of any other kind of consideration. So it is worth citing a further passage by Alan Colquhoun on the morphological features of the same code, in relation to some observations by Viollet-le-Duc in

59. Alan Colquhoun, *Essays in Architectural Criticism*, Cambridge, The MIT Press, 1981, p. 164.

60. Alan Colquhoun, *Essays in Architectural Criticism*, Cambridge, The MIT Press, 1981, p. 164.

61. Alan Colquhoun, *Essays in Architectural Criticism*, Cambridge, The MIT Press, 1981, p. 165.

his *Entretiens sur l'architecture*: “The typical plan of a seventeenth-century hôtel which Viollet-le-Duc illustrates, though it has little of the formal complexity of a Beaux-Arts plan, shares its quality of homology. The open spaces of the court of honour and the stables are treated like ‘rooms’, with the same simple boundary conditions as the interior spaces, so that the plan can be read like a Chinese box, with a large-scale order – defined by the relations between the principal blocks and the open spaces – repeated in the relations on a small scale of the rooms within the blocks. There is no residual space within the boundary of this regular space.”⁽⁶²⁾

Grammatically speaking the rules that govern composition are dictated by the strictest economy of signs, symmetry of the plans and matching alignments. The spaces are read by reciprocally perpendicular trajectories obtained through “controlled translations” of the spatial boundaries from the exterior towards the interior to define smaller fields of relationship. Diagonal perspectives tend to be excluded, because they might give the impression of a centrifugal, open space, one that develops from the interior outwards and would therefore contradict the syntactic process adopted.

From a lexical point of view the whole formal repertory of the period can be used indiscriminately, depending on the conveniences of local customs and there is no necessary stylistic relationship, given the rejection of history and the superseding of the concept of architecture as tectonics to enhance its substantial linguistic function. In this respect it should be said that the appeal to the classical forms is considered directly psychological in nature, meaning that the forms speak through the senses and do not depend on allegorical conventions. This is also true of the metaphors used by an author like Boullée. This establishes the basis for an empirical analysis and a possible classification. It should further be remembered, in this respect, that the idea of stable forms, presupposed by the idea of composition itself, is not new. It belonged to the ancient tradition and was inspired simultaneously by the craft tradition and the rhetorical tradition. In this respect Colquhoun observes: “What can be described as new in its interpretation at the end of the eighteenth century was the removal of these figures or metaphors from the foundations of traditional practice and their subjection to systematic classification.”⁽⁶³⁾ In this sense the individual architectural forms, deprived of any tectonic necessity, acquired the logical clarity of a “lexis”. Also in this sense we can recognize the innovativeness of the contribution of the Enlightenment architects, and only in relation to the definition of a “language”, though universal, can we finally understand the apparent distortions made to the legacy inherited from tradition.

62. Alan Colquhoun, *Essays in Architectural Criticism*, Cambridge, The MIT Press, 1981, p. 165.

63. Alan Colquhoun, *Essays in Architectural Criticism*, Cambridge, The MIT Press, 1981, p. 161.

2.1.6) The role of “type”

In seeking to interpret the role of typology in the nineteenth and twentieth centuries, I intend to take as a working hypothesis the different kinds of significance attributed to the term, in a continuous dialectic between innovation and tradition, and to extend my critical considerations to the various components (technological, regulatory, functional, sociological, etc.) that help define the semantic range of the two terms.

A general and necessarily preliminary overview of the question reveals that innovation (understood not in strictly architectural-urban terms) does not always translate logically into a new idea of “type”. On the contrary, one gets the feeling, to be verified more precisely through the analysis of individual cases, that time (and the nature of the project, which becomes an operative expression of it) often projects historically distant developments into contemporaneity, enabling them to coexist with the ferments of cultural change currently in being.

Enlightenment culture is a clear expression of this latent conflict. It has already been observed that the concept of building typology, in the current acceptation of the term, is related to the changes which in the eighteenth century progressively undermined the unified and organic image of an aristocratic and elitist society through the embryonic manifestations of capitalist-bourgeois society (see Carlo Aymonino, *Il significato delle città*, 1976, pp. 67-90). In particular, the emergence of new needs, translated ever more systematically into activities that were organized, hence socially necessary, entailed the progressive abandonment of the existing buildings converted to contain them and the construction of special buildings for the purpose which had never existed before and whose architectural value fully satisfied the strict functional needs and the role that these same activities possessed within the new social set-up.

A strong demand for “representativeness” and “recognizability”, diffused across the whole urban territory by virtue of the strong demand from a developing society therefore seems to have been the distinctive quality of civil architecture, in the sense given to the term by Francesco Milizia in his treatise (see Francesco Milizia, *Principii di architettura civile*, 1781). This demand could not be fully or satisfactorily met in the anonymity of the traditional city, which would constantly renew its buildings to embody the new social rituals, without this work of transformation entailing a limitation on the future changes of ownership, so guaranteeing the broadest possible range of developments that would become necessary in the course of time.

This condition was identified by Carlo Aymonino as a decisive factor in expressing a new way of understanding the building typology: “*The effort to define the activities conducted in a building which would embody them wholly as a ‘theme’ compelled architects to a procedure of abstraction, so as to fully bring out the substantial differences between the new designs and the earlier ones. Hence they avoided any contamination (or adaptation) with a real urban structure, which necessarily reflects prior activities and therefore imposes its own rules and very special relations. Projects were thus*

Specialization and “eradication” of the concept

located generally in natural settings with a 'classical' taste (open spaces, woods, avenues with orderly lines of trees, watercourses) and together formed an ideal "sample" of necessary innovations, with the possible structure of a different kind of city being found only in the comparison of one project with another. The development of prototypes tended to transform these into models, valid in themselves, by their perfect correspondence with this or that activity. In practical applications a single urban place – as we have seen in the case of Paris – was at different times proposed as the location for buildings with different functions: the model was, in fact, indifferent to location.”⁽⁶⁴⁾

To define itself, the new building typology needed to be isolated from the context of the earlier urban form. Direct comparison with the structure of the real city would entail a series of compromises capable of limiting the recognizability and potential of the new cultural programs. This judgment is confirmed by Franco Purini, who saw in the process of typological specialization established by the second half of the eighteenth century the factor by which the eradication of architecture from the context of tradition and the loss of unity of the urban picture gained in consistency. *“The division of labour, imposed by capitalism at the beginning of the industrial revolution, was matched symmetrically by the division of the city. The architecture of the Enlightenment, with its didactic volumetries composed of independent “pieces”, began to suggest a taste for the mechanicity which is almost a metaphor of the factory-city. The buildings produced by the urban organism showed they belonged to a series and were ‘parts’ in a system, like the gears in an engine. The city was divided into distinct, recognizable zones depending on their function and began to express, in contrast with the earlier constructional unity, a formal separation based on the identification of buildings, each of which corresponded to an urban ‘act’. The vertical, or ‘historical’ and ‘metaphysical’, dimension of the ancient city, expressed in a principle of hierarchical ‘gradation’, was opposed by the ‘horizontal’ significance of the city as a field of ‘secular’ acts that represented the new functionality proposed by the urban bourgeoisie. The instrument of this revelation was the typology, or rather typological specialization. The public buildings listed meticulously by Milizia (city gates, barracks, prisons, hospitals, universities, libraries, academies, colleges, fairs, warehouses, cemeteries, theatres, etc.) reveal the disruption of the urban unity and its irreversible fragmentation.”*⁽⁶⁵⁾

The problem of specialized building as a function of the recognizability of the activities they housed was doubtless the factor that more than any other transformed the image of the traditional city, independently of the features of the geographic regions in which it appeared. Jeremy Whitehand grasped precisely the role of the phenomenon in the processes of transformation of the English city: *“In the City of London, buildings designed specially for offices rose only after some specialized geographic areas, such as the financial district with the Bank of England as their principal landmark, had become a feature of leading importance. Edward l’Anson, an architect and surveyor, one of the leading figures in the reconstruction of the City in the mid-Victorian period, observed in 1872: ‘When I began to build along the approaches to new London Bridge, before 1840, no one ever thought of offices in the City as they are now. The houses were built for shops and homes, or as warehouses, and so it was too in Moorgate Street. It was common practice also in the years between 1840*

64. Carlo Aymonino, *Il significato delle città*, Electa, Bari, 1975, pp. 64–65.

65. Franco Purini, *L’architettura didattica*, Casa del libro Editrice, Reggio Calabria, 1980, p. 65.

and 1850, in the City, to erect buildings for offices or residences or both.' Even though insurance companies and banks had launched the fashion for specially built premises in about 1840, in many respects even these buildings were not very different from the existing residential building typologies. Nevertheless, in the first decade or little more of the Victorian period, the outer appearance of offices in the city centre underwent considerable changes. The Sun Insurance Office, built in London in 1849, expressed a corporate solidity that distinguished it clearly from buildings of a domestic type."(66)

The principle of differentiation introduced by Enlightenment culture and subsequently adopted by the political and economic consolidation of capitalist-bourgeois society thus became the factor that transformed the current concept of the building typology, which until then was closely related to the centrality of the "house". This new state of affairs is closely related the disruption of the unity of classical culture, hence the progressive loss of correspondence between constructional factors, spatial layouts and the volumetric-linguistic articulation of buildings. They were superseded by the autonomy given to the different components combined in the organization of the built space. As Luigi Gazzola observes, taking Boullée's National Library as an example, "*With the Enlightenment, for the first time the classical types were not connected and interrelated with the constructional requirements which gave rise to them. Moreover, the classical type was subjected to analysis on paper to verify its congruence with the spatial and distributional needs produced by a new type of function. It was these two facts that revealed a latent crisis in the traditional use of the type.*"(67)

If the architectural/urban culture of the eighteenth century became the interpreter of a new way of understanding typology, as the expression, not yet fully mature, of a bourgeois society in the embryonic state, as a cognitive instrument and a method of analysis of real phenomena, with the purpose of fully understanding its scope and implications in a more general cultural context, then it is particularly illuminating to examine the developments that may derive from a critical interpretation of the foundations of capitalist production. In analyzing the prerogatives and the modes of consumption of the work of art in an industrial society, Walter Benjamin points out that the new techniques of mechanical reproduction deprive the object of its ties to a definite time and place, irreversibly devaluing its *hic et nunc* (see Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction*, 1936).

What is called in question is the concept of authenticity, the work's value as a historical record, which it claims by virtue of its "*unique existence at the place where it happens to be*". (68) The object produced, once stripped of its "aura", defined as the "*unique phenomenon of a distance, however close it may be,*"(69) is removed from the context of tradition, hence its concrete conditions of production, distribution and consumption.

The unrepeatable value of the work of art, observes Benjamin, finds its legitimation in ritual, in the irreproducible circumstances within which it was first attributed a use. Once it has been stripped of its cultural value as an object - that significance which only the uniqueness of space, time and action can guarantee - nothing remains but the intrinsic consistency of the work of art, its "*structure*", to which the doctrine of

66. Jeremy W.R. Whitehand, "Processi di trasformazione morfologica. Il rinnovamento urbano in Gran Bretagna", in *Paesaggio Urbano*, n°1/98, Maggioli Editore, Rimini, p. 33.

67. Luigi Gazzola, *Architettura e tipologia*, Officina Edizioni, Rome, 1990, pp. 76-77.

68. Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction*, Seattle, CreateSpace, 2009, p. 3.

69. Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction*, Seattle, CreateSpace, 2009, p. 3.

“*art for art’s sake*” gave a definition with strong theological overtones. Serial production attributed to the work of art a different significance from what tradition saw in it and was already recognized as a distinctive feature in the study of new organized activities in the Enlightenment. It led to the definition of prototypes to be used in every context where the same economic, political, cultural and social conditions obtained. Historicity was the notion of belonging to a context that indissolubly relates the result of the artistic procedure to its development in unique and unrepeatable conditions of place, time and action, the role bestowed on the author as the artificer who claims supremacy over the product of his work (all factors broadly claimed by Romanticism, above all in its English and German versions, significantly the fullest expressions of these countries, which recognized the cultural implications of the new modes of production earlier than others). But all these things were replaced by the concept of the autonomy of art, already recognized by Emil Kaufmann as the essential and distinctive trait of the production of the revolutionary architects (see Emil Kaufmann, *Von Ledoux bis Le Corbusier: Ursprung und Entwicklung der Autonomen Architektur*, 1933). Though reproducibility is a feature of the industrial period, Benjamin was aware the Greeks already knew of two techniques for reproducing works of art, namely casting and stamping. In the same way he observed the role played by the invention of printing as a factor of social emancipation, which deprived writing of its uniqueness. It stripped calligraphy – and its freshness, attributable to the unfolding of a process – of a supremacy associated with the notion of authenticity, replacing it with the atemporal anonymity of archigraphy.

It is interesting to relate Benjamin’s observations on the loss of the uniqueness of the work of art to the definition which A. C. Quatremère de Quincy gives in the entry “*type*”, summing up the results of the artistic and cultural innovations at the end of the revolutionary period. He observes: “*It comes from the Greek word typos which expresses, in a general sense and therefore one applicable to numerous gradations or varieties of the same idea, model, matrix, imprint, form, figure in relief or bas-relief.*”⁽⁷⁰⁾ Further on he states: “*But in its compounds the term typos expresses certain varieties of works of sculpture. Therefore the word entypos must have expressed the idea of a work made in a hollow, being applied to figures, as in works cast in any kind of mould using bronze or plaster. Probably it was also used to indicate figures carved by hollowing out fine stones for subjects, etc. The word ectypos seems to indicate works produced by means of a hollow form, which took the shape of the object impressed on it.*”

(71)

Quatremère de Quincy’s etymological reflections not only prompt reflection on the significance of “*type*” as that which stands for something else, implicit in the notion of imprint and matrix; they also explain how the origins of the term establish a clear connection between the work of art and its reproducibility, evident in the use of the term to indicate the idea of a mould and, by metonymic corruption of the original use, the cast that derives from it, whether in bronze or plaster.

In other words, in a period when a culture with a bourgeois stamp was beginning to emerge, claiming a role that was alternative yet complementary to the one held previously by the aristocracy of

70. A.C. Quatremère de Quincy (a cura di Valeria Farinati e Georges Teyssot), *Dizionario storico di architettura*, Padua, Saggi Marsilio, 1992, pp. 273-74.

71. A.C. Quatremère de Quincy (a cura di Valeria Farinati e Georges Teyssot), *Dizionario storico di architettura*, Padua, Saggi Marsilio, 1992, pp. 273-74.

lineage, it retrieved from antiquity, through an operation of linguistic archaeology, a definition of “*type*” that would undermine that “*aura*” that the aesthetics of classicism still tended to recognize. As noted at the start of the chapter, the new was thus associated with the updating of traditional concepts, the web of the past was projected into the web of the present and “*illuminated*” with new meanings.

If we return to Benjamin’s words and bear in mind the Greek meaning of the term, the “*type*” is what deprives the object of its unrepeatable presence in certain definite conditions of time and place, that deprives the execution and the material result of its cultural value, its authenticity in terms of production, distribution and consumption, removes the work of art from the ritual through which it was used by contemporaries, and that preserves only its intrinsic, formal qualities.

In the case of architecture, the “*type*” also acquired an instrumental and residual role in relation to the completed work, because it was capable of rendering it transmittable beyond the concrete conditions of its occurrence, regardless of the nature of the conventional value, historically embedded, attributed to it at the time of its appearance and use. And it was in these terms that the Enlightenment revolution expressed the new procedures of work. Hence the condition of existence of the work of art was that of its continuous “*deferral*” in space and time, and its consequent loss of authenticity and “*authorship*”. Outside this distancing, which was consequently manifested in the terms of semantic drift, the work was condemned to the state of a ruin together with the traditional culture that generated it.

The most obvious results of this attitude are still not exhaustively clarified in its possible implications and consequences on the cultural plane. They allow for endless research into the meaning of the work, no longer through the retrospective evocation of its authenticity but rather by means of the sedimentation of the different interpretations given of the “*type*” in the different conditions of action, time and place. The type, deprived of its historicity and the significance of a deposit of the collective memory through the sedimentation of experiences in one definite place, becomes a simple instrument capable of measuring the irreducible distance existing with the work of architecture, experienced however in the uniqueness of the conditions that generated it, set within a place and signified through its insertion in a codified ritual by tradition working in the new context to which it belongs. If the interpretation distorts the original attribution, annuls the role of the “*aura*” and the cultural tradition, which by contrast is implicit in the creation of the work, it nevertheless extends its meaning by superseding the boundaries of the historical moment. The “*type*”, uprooted from the actual conditions of the event, acquires the kind of role in relation to architecture that writing has in relation to the word. Through writing the word loses its authenticity, it is deprived of the conditions of space, time and action that justify it and legitimize its authenticity, its value. Yet through writing the word is preserved and presented for interpretation, hence to the different values that other conditions will ascribe to it. Its semantic richness is thus paradoxically bound up with the implicit deformation of the endless attributions of use to which it will be subjected in time. This expansion of the semantic domain opens

up new and important prospects for interpretation and architectural production, which the emphasis placed on the uniqueness of the execution tends by contrast to limit sharply.

One is reminded of the words with which Manfredo Tafuri in 1976 introduced, after a lapse of eight years, the fourth edition of *Teorie e storia dell'architettura*: “Relations between an author and his work are always difficult. Once written, the text enters a circuit that inevitably completes and distorts it, and it eludes the person who wrote it. It no longer belongs to him. Or at least this is the annoying impression he gets. And it would not be worth speaking of, were it not that this annoyance gives rise to an urgent need to repossess the text, to violate it and dismantle it in his turn, to compel it to reveal what, in its original version, remained subtended.”⁽⁷²⁾ Having given the authenticity of the manuscript to the unlimited reproducibility of print, the work does not belong to its author, any more than the use that potential readers will make of it is essential to its existence. This use is not in the least verifiable, and even less is it comparable with the original intention. The significance of the work deprived of the unity of place, time and action loses unambiguousness and emerges only through the slow stratification of the use values that people attribute to it in time.

The results of the Enlightenment revolution on the plane of architecture and urban planning did not seem, in fact, to elude its interpreters. The type, stripped of that collective dimension of living to which it had borne active testimony and which only the experience of the context was capable of giving it, became an instrument subject to interpretation and equidistant from localisms. Nevertheless, once introduced concretely through the built work into a specific system of values, the “type” was capable of regaining authenticity through its actualization. The attempt to avoid this eventuality justified the isolation to which the Enlightenment architects condemned their prototypes, immersed in a timeless dimension, as noted above, and the strong symbolic attributions through which they sought to legitimize projects in existence.

With reference to the sense of impotence of the author deprived of the uniqueness of his work, Benjamin's observations on the differences between representation in the theatre and in films are instructive: “The artistic performance of a stage actor is definitely presented to the public by the actor in person; that of the screen actor, however, is presented by a camera, with a twofold consequence. The camera that presents the performance of the film actor to the public need not respect the performance as an integral whole ... The sequence of positional views which the editor composes from the material supplied him constitutes the completed film. ... Also, the film actor lacks the opportunity of the stage actor to adjust to the audience during his performance, since he does not present his performance to the audience in person.”⁽⁷³⁾

Seen in these terms, the technological innovation that promotes the technical reproducibility of the work of art is matched by an interpretation of the “type” which, contrary to Quatremère de Quincy's statement, is closely related to the model, to that which “has to be repeated as it is”, and is its necessary complement. The model cannot exist without the type; the one justifies the existence of the other.

72. Manfredo Tafuri, *Teoria e storia dell'architettura*, Bari, Laterza, 1988, p. VII

73. Walter Benjamin, *The Work of Art in the Age of Mechanical Reproduction*, Seattle, CreateSpace, 2009, p. 16.

Together they constitute the unity of architecture. The author of the Dictionary distinguishes the two terms, keeping his distance from revolutionary experiments and the Greek meaning of the term, claiming the originarity and originality of the type in a timeless past, an evident abstraction with respect to the completeness of the Vitruvian analysis to which it refers. In the entry “*type*” in his Dictionary, Quatremère de Quincy maintains that, “*The word type presents less the image of a thing to copy or imitate completely, than the idea of an element which must itself serve as a rule for the model ... The model, understood in terms of the practical execution of art, is an object that repeats what is. The type, by contrast, is an object by which anyone can conceive certain works that do not resemble each other in the least. Everything is exact and given in the model; everything it is more or less vague in the type.*”⁽⁷⁴⁾

Quatremère clearly reveals his dependence on the culture of Classicism, his respect for the theories of Winckelmann and the role played by archaeology in the late eighteenth and early nineteenth centuries. Later he defines the “*type*” as the original and elementary principle from which the art of building developed. Even though he does not cite it directly in this entry, the Vitruvian hut is the “*type*” from which all architectural genera are derived. In fact in the entry “*hut*”, Quatremère de Quincy observes that, “*The article hut can find a place in a Dictionary of Architecture only in an abstract and theoretical respect; that is to say in as much as the express meaning of this word presents a trial or an adumbration of construction in the origin of every society; hence it is possible to discern the seed whose sequence of ideas and efforts fostered later development.*”⁽⁷⁵⁾ Though he is aware that not all architectural genera in different countries have been derived by imitation from the type of the hut, he attributes to it that foundational potential that the Abbé Laugier, in strongly apodeictic tones, almost verging on fanaticism, had already largely ascribed to it in his work (see *Essay on Architecture*, 1753-55).

But the centrality accorded to the theme of the hut in practice evades recognition of the existence of a building culture strongly differentiated in relation to its context. Consequently it evades the relationship existing between the uniqueness of place, the specificity of the building rooted in it both concretely and metaphorically, and the instrumental function of the “*type*” in defining the rule on which the building is founded. This is, moreover, only possible because Quatremère de Quincy, after introducing the distinction between “*type*” and “*model*”, irremediably distinguished theory from practice, uprooting the latter from its context, and first principles from the objects that constitute its necessary complement, the legitimizing historical reason. In another way, while rejecting the revolutionary architects’ identification of the type with the model, Quatremère deprives the concept of “*type*” of that authenticity which Walter Benjamin speaks of with such great clarity. If we ignore this consideration, if the “*type*” has an authority of its own independently of the object understood in its material consistency, it has to seek an intimate reason for its existence in a heteronomous state. Enlightenment culture seems to have provided two possible interpretations of this, traceable respectively to the definition of architecture as a “*mimesis*” of nature and the concept of “*character*”.

74. A.C. Quatremère de Quincy (a cura di Valeria Farinati e Georges Teyssot), *Dizionario storico di architettura*, Padua, Saggi Marsilio, 1992, p. 274.

75. A.C. Quatremère de Quincy (a cura di Valeria Farinati e Georges Teyssot), *Dizionario storico di architettura*, Padua, Saggi Marsilio, 1992, p. 146.

The distinction introduced by Quatremère, as an interpretation in a modern sense of the “*type*”, is a clear example of the former, though it derives its legitimation in this sense from the well-known axioms of the Abbé Laugier.

Laugier’s work epitomizes all the necessary characteristics of Enlightenment culture in the field of architecture and urban planning, and testifies effectively to the difficulties implicit in the definitive separation between the typological conception and its object, through a theoretical anxiety which seeks to determine a new principle of legitimation for the concept of “*type*” deprived of a consolidated co-occurrence with its architecture and its places.

In 1754 Amédée François Frézier raised the following objection: “*In whatever concerns the arts, beauty is only an effect of national prejudice or education and there is nothing constant in it because it is founded only on fashion.*”⁽⁷⁶⁾ The Abbé observed in rebuttal: “*I conceive this primary beauty as a perfect synthesis, resulting from the composition of a multitude of particular qualities. In this way it is unique, and it is true that there are not two different ways of producing a perfectly beautiful work. However, the different qualities that compose it necessarily give rise to different kinds of beauty; and these, singly distributed in human works, give rise to different modes, each of which possesses its real merits. Among all the different modes, it is necessary to observe the one that combines the most excellent and numerous types of beauty. This is how to decide which to give our preference to. Chinese architecture certainly possesses its specific kinds of beauty and, though it is alien to our nation, we give it the credit due to it. Our appraisal, however, places Greek architecture in the highest place, because in it we find purer and higher beauties.*”⁽⁷⁷⁾

These words plainly bring out the rejection of all conventionality, even that inherited from history, and the desire to restore architecture to a state of nature, not understood as a phenomenon but reduced to a pure name, i.e. conceptualized. The first factor led him to seek the principles of architecture and town planning in a metahistorical dimension; the second to replace the dimension of place with the abstract space of logic.

Both factors contribute to the definition of architecture as language, a translation of the primitive type of the hut into the unifying dimension of the order, understood as a system of “*natural*” laws governing the functioning of architecture, through which the multiplicity of built works is systematically reduced to the unity of principles present in nature. As such it is the object of *mimesis* and rules, through their conceptualization and codification, which have to be constantly respected. “*Differentiation*”, a principle adopted by Enlightenment architects as the distinctive hallmark of the nascent bourgeois culture, is replaced by the “*articulation*” of unity, whose perpetuation in time is guaranteed by the genetic process itself, in which the subsequent propagation of buildings does not deprive the primitive house of the primacy due to it. Laugier’s position apparently raises a contradiction in terms. In fact language itself, according to many authors of the time, including Blondel and Rousseau, rests on a convention historically founded on the acceptance by the community of values translated into principles and rules which have to be respected.

76. Marc-Antoine Laugier, *Saggio sull’Architettura*, Palermo, Aesthetica, 1987, p.161

77. Marc-Antoine Laugier, *Saggio sull’Architettura*, Palermo, Aesthetica, 1987, p. 163.

The more highly articulated the community, the more marked will be the production of conventions. To resolve this contradiction, Laugier pushes his research towards the natural fact, by definition governed by laws that existed before humanity and have remained unchanged in time. Natural principles and architectural principles are identified in the archetype of the hut, and through this interpretation the definition of the type itself is legitimized regardless of the conditions of time and place.

In the Abbé's treatment the archetype of the hut is the product of a collective unconscious which, as such, is inherited as a product of nature. It thus precedes the experience of the world which individuals, in their broader social context, absorb progressively by the sedimentation of culturally shared acquisitions, which in a certain sense represent a "*corruption*" of the customs which prompted the first person to work.

Order is thus consigned to the future generations of all regions as a metahistorical "*writing*", sedimented in the course of time independently of cultural traditions, as the product of a collective unconscious which does not presuppose a deliberative act of acceptance by the community but subtends the presence of the corresponding materialized object. Even the description of the scene in which the hut takes shape could be happening anywhere. The Abbé's words make no reference to any particular place. Through the architectural writing of the order, the construction is deprived of its authenticity and uniqueness but guarantees its transmission. What the Abbé was unable to understand, but was confirmed by the strong objections to his absolutist positions, was that the writing itself, once deprived of the presence of the corresponding created object, namely the hut in its uniqueness (which Vitruvius already saw distinguished it from the existence of other and equally legitimating archetypal forms such as the cave and tent) and reduced to theory alone, would be the object of unpredictable interpretations. These would constantly question its role as the philosopher's stone by which to judge the correctness of the corresponding architectural outcomes. In other words writing, presented as the alienation of speech, entails the deferment in space, time and action of its authentic meaning.

If culture presents itself as a *mimesis* of nature it becomes a universal patrimony, and this is the objective that Laugier seems have pursued with such tenacity. The term should, however, be understood in the sense of a logical correspondence, the same correspondence that makes it possible abstract from the multiplicity of natural/architectural phenomena and reduce them to the oneness of the first principles governing them, the laws of mechanics. By conceptualizing nature, Laugier translates it into language. Natural space, which we experience through its phenomenal consistency, is reduced to logical-conceptual and abstract space, which is thus knowable, analysable and transmittable as such to all cultures.

Laugier neglected the question of the significance of language, though he understood that the use we make of nature, appropriately conceptualized, constitutes a clear attribution of significance to it and elicits its values. Significance is a process closely connected with the use we make of nature and values are the result of its conceptualization. In this way nature as language becomes the object of *mimesis* in the

Abbé's architecture and urban planning. The language of nature has the degree of universality, of unconventionality, that Laugier desires and which he seeks to transfer to his treatise and apply to artificial phenomena.

This clarifies the evocation of the myth of the hut in the Abbé's theoretical work. The hut, a product of primitive man who respects the laws of nature, is translated through an appropriate conceptualization into order, grammar and a universal vocabulary of architecture, which is its code.

The use (theoretical rather than constructive) made of this building (based on functions and social rank, as the Abbé says) is its significance which, appropriately conceptualized, is translated into values. The architectural order thus becomes the natural language of architecture, with its own grammar and vocabulary born from a reduction of its multiplicity of manifestations (tectonics) to the unity of the principles and of the laws underlying them. If architecture is unique, a conceptualization of the multiplicity of works built in keeping with nature, the order is its visualization and the ordonnance its substance.

The question of the "*differentiation*" of buildings on the basis of their function seems to have been of crucial importance in identifying the true original scope of the concept of typology in relation to the dialectic between innovation and tradition. Above all it served to clarify the effort to legitimize the notion of type once it was distinguished from the object and its concept of belonging. Closely bound up with this theme is the notion of "*character*", which represents a clear alternative with a revolutionary matrix compared to the concept of a "*mimesis*" of nature explored by the Abbé Laugier.

The work of J.N.L. Durand is emblematic of this new condition: it systemizes, and makes transmissible, the achievement of Boullée, Ledoux and Lequeu by negating the principle of the authority of history, reaffirmed by abandoning the idea of the archetype as the first principle which gives rise to all the manifestations of architecture as a coherent synthesis of firmitas, utilitas and venustas. This explains his dispute with the Abbé Laugier (see *Lessons on Architecture*, 1819) over the myth of the hut, the matrix of all architecture, and the organic *mimesis* between nature and culture. The loss of the unifying power of architecture and its progressive replacement with "*differentiation*" by genera and species was thus a clear signal of the loss of pregnancy in the concept of the type, understood as an element of organization capable of reconnecting the buildings of a city to a polymorphous yet unified dimension. Historically this loss can be related to the demand for utility in the rising bourgeois society, the desire for representation and a recognizable identity in the new public institutions, so diligently listed by Durand in his treatise.

Durand defines architecture as the art of composing and only secondly as building. His purpose is collective utility and the instruments to attain this are convenience and economy. This introduction makes it possible to measure the distance between the ideas of Durand and the classical tradition, in which architecture is the art of construction or tectonics. This assumption gives rise to the search for a grammar and a vocabulary within a constructional logic, with the purpose of defining

it as a language, an objective which he attained through the codification of the order and its complex inflections.

In order to attain a linguistic identity of its own and legitimacy through the code of the order, Classical architecture seeks continually to return to its origins by evoking the myth of the hut, a primitive building which already embodied, though in elementary forms, those same tectonic principles that, in the course of history, inform far more complex buildings, as observed by the Abbé Laugier. Through this quest, Classical architecture finds its legitimacy and its reasons, expressed through a coherent and complete language, within a constructed building, historically ascertained and progressively developed. Durand, in defining architecture as the art of composition, rejects the predominance of construction. This explains the arguments he adduces to show that there are no grounds for Abbé Laugier's thesis of the primitive hut and the proportions of the human body as providing a frame of reference for architecture.

The concept of history as a guide for action is replaced by method, based on the authority of reason. The logical synthetic phase anticipates the analytic constructional phase, and is taken as the universal foundation of architecture. The unity of the urban picture which it envisages is guaranteed by the systematic nature of the method itself and the whole set of rules which it imposes. The structure of the work in which Durand exhibits his method is identified with the logical structure of composition. So by following the former we are capable of understanding the organization of the latter and of defining it in appropriate terms.

Composition, identified as the new architectural language, proceeds from the general to the particular, as an act of creative synthesis, and inversely as an instrument of analysis. It is always presented with a twofold level of articulation, in significant analogy with language written and spoken. The first consists of the set of units which convey significance (explicitly spatial, such as porticos, atria, vestibules, stairs, rooms, courts, grottoes and fountains) defined as "*parts*" (which correspond to what linguistics call monemes). The second consists of units devoid of spatial significance, though capable of it if combined in sequence, defined as "*elements*" (such as foundations, walls, doors, windows, arches, pillars, columns, posts, attics, vaults, roofs and terraces, which correspond to what linguistics terms phonemes). The method identified by Durand thus presupposes the definition of a morphology, namely the classification of elements based on the role they have in architectural discourse. This choice means that the components have to be recognizable, clearly nameable, with the individuation of signifying categories that permit a discretization of the architectural continuum. From this it follows, by analogy with linguistics, that the sequence phoneme, moneme, and sign is matched in composition by the sequence of element, part and whole. Hence the individual product of composition, the design of a building species, presents itself as a linguistic (or conventional) sign through a rigorous systematization of the "*speaking*" architecture of the masters of the Enlightenment.

The definition of a twofold level of articulation is the interpretive key capable of explaining the richness of composition as a discipline.

Through a limitless number of combinations between linguistic units of the first and second level, it is capable of producing a theoretically endless number of linguistic signs (in practice limited only by the application of building technologies). From these considerations derives the “*economy*”, in linguistic terms, of Durand’s ideas, hence their force.

Having defined a morphology capable beforehand of ordering and limiting the architectural system of signifiers, Durand confines himself to identifying some fundamental rules (alignments of walls, doors, windows and rooms, recourse to ordering axes and grid spaces based on the intercolumniation of the supports) which must be respected in any combination, regardless of the subject chosen, without however defining a priori a syntactic structure to be referred to.

Only examination of the brief, and recognition of the “*character*” (in Quatremère de Quincy’s sense of the term) that derives from it for the project, can help define the most appropriate lexical components – from the morphological classes previously identified by the author – or their significance and the most suitable relations between them. The structure, distribution and volumetric legibility will consequently receive a unified interpretation in keeping with the system and the rules it imposes. From this omission we can deduce that for Durand composition is not defined as a language in the traditional sense of the term, but as a universal system of notations (based on the laws of geometry, not of nature as in the case of the Abbé Laugier), whose force and validity are determined by the level of abstraction on which it is founded and confirmed by the extensiveness of the field. These features decreed its success all through the nineteenth century.

Durand rejects the idea of composition as a circumstantial language, because the latter is in practice a limitation of the combinatorial and semantic potential presupposed by the system itself. For the same reason he rejects the idea of the type as an a priori concept, which would presuppose lexical and morpho-syntactic recurrences as additional constraints. To support this hypothesis Durand maintains that a study which starts from the different species of buildings actually constructed, because of the strong limitations they embody in practice and the habit of certain correspondences of ideas they would generate, would never be capable of fully revealing the principles on which architecture rests. From this we can deduce, as the negative of this proposition, that Durand identifies the type with style, and sees it as extremely harmful because traceable to the classifying action of history and its constraints (due, depending on circumstances, to personal, regional, and period factors, among others). In addition, since Durand attributes the significance of a linguistic sign only to the single act of composition, it seems that Durand accords the status of language, coherent and complete in itself, only to the art of urban composition.

The acceptance of the term “*character*” as used by Durand, in keeping with the ideas of the revolutionary architects, is expressed clearly in the third interpretation of it offered by Quatremère de Quincy. He holds it to be superior to the others because of its reproducibility, transmissibility and applicability to any circumstance of time, place and action. “*Now this property consists of the power which the work has*

of showing us its particular nature and its function.”(78) Later he adds: *“Character, understood as a synonym of the expressive property of what the building is or what it should seem to be, cannot be developed by the artist without the concurrence of two corresponding impressions. Through the effect of the first the artist must render a faithful and true account of the qualities or special ideas with which custom endows a monument; the effect of the second is to make known to the artist the external means that art could use to match the expression that should be manifested to the eyes.”*(79) “Character” is therefore that natural significance that makes it possible to relate a brief or functional theme to a universal formal language and its boundless potential. As an example we can take Durand’s remarks on the phase when an architect begins a project: *“Before going into all the questions previously dealt with, it is therefore necessary to seek to understand clearly the nature of the building we intend to erect: to examine, among the various qualities that pertain to buildings, those that this should possess in the highest degree: to ascertain whether it is salubriousness, as in hospitals, salubriousness and security together, as in prisons; cleanliness as in markets and abattoirs; commodiousness, as in private homes; peace and quiet, as in buildings intended for study; gaiety and pleasantness, as in those intended for pleasure, etc. To seek, in brief, all that may contribute to satisfy the purpose of architecture in general and that of each building in particular. By adopting the method which reason indicates, we will succeed in composing all buildings with equal facility and equal success.”*(80)

The consequences of the distinctions introduced by Quatremère de Quincy and J.N.L. Durand are fundamental to understanding the state of architecture and modern urbanism. A single principal matrix, exemplified by the foundational function of the concept of the house, strongly rooted in the concept of place, which even permeated the properties ascribed to institutional buildings and left its mark on the culture of the pre-industrial city, was progressively replaced by the idea of a number of generative approaches, independent of each other, which the treatise writers of the period disseminated widely. This gave rise to the idea of architecture as a serial product. The principle of individuation, pursued through the articulation of the volumes of the building, progressively replaced the idea of a socio-typological differentiation resolved in the detail and a distinction of genera manifested principally in appreciable variations in ratios of scale. “*Differentiation*” and the consequent objective of communicating the “*character*” of every individual building through architectural form and its articulation, was the principle on which the “*type*”, in the traditional meaning of the term, was deliberately replaced by the “*symbol*”. The symbol became the means by which Enlightenment architects expressed the idea of an architectural form capable of directly communicating values held to be objective, namely the “*character*” of a work. The signifying form, in linguistic terms, alluded immediately to its signified, without any conventional mediation, without the presence of man and above all with all forms of ambiguity considered as irrelevant.

Ledoux’s “*speaking*” architecture is a coherent response to the problem, but Boullée’s work is not immune from clear forms of symbolism and Durand’s even less so. In the attempt to systemize the production of buildings, Durand distinguished the genera of buildings into public

78. A.C. Quatremère de Quincy (a cura di Valeria Farinati e Georges Teyssot), *Dizionario storico di architettura*, Padua, Saggi Marsilio, 1992, p. 153.

79. A.C. Quatremère de Quincy (a cura di Valeria Farinati e Georges Teyssot), *Dizionario storico di architettura*, Padua, Saggi Marsilio, 1992, p. 156.

80. J.N.L. Durand, *Lezioni di Architettura*, Milan, Clup, 1987, p. 70.

and private and reviewed the different species, identifying for each the corresponding form best suited to it on the basis of the principle of convenience (suitability). Even though Durand's compositional doctrine seems to tend towards the individuation of a recognizable system, transmissible and unified, of elements and principles which are to be followed in the organization of space, in accordance with a combinatorial logic of a linguistic kind, when he defines the different types of buildings it is clear that the acceptation in which the term is used is already plainly beyond the sense attributed to it in the tradition by virtue of the concept of "*character*".

Superseding tradition and the symbolic charge of architecture were thus factors closely related in the culture of the Enlightenment. As such they were bound up with the theme of the "*differentiation*" of the building by virtue of the function and the role it was meant to have in the rising bourgeois city. The dimension of contemplation and the marked predominance of the eye became operative aspects of the new culture.

It is, however, important to emphasize that in Enlightenment architecture there were no direct ties between the "*evocative*" power of the architectural object and its functionality in the strict sense, the one we now attribute to the latter term. The merit for this observation goes indirectly to G.W.F. Hegel, who held that the symbolic dimension, by its very nature, was claiming the independence of architecture, or its autonomy (see G.W.F. Hegel, *Aesthetics*, 1836-38). By its symbolic dimension, Hegel meant its capacity to express significances that do not exist outside it, hence as material and spiritual needs that are given complete form through the rituals to whose purposes men conform their space, but that are a constituent part of architecture as such and determine its substantial self-referentiality. The purpose of the symbolic work of architecture survives only within it and can only be represented by it. For this reason symbolic architecture can only express universal values, which tend towards a high level of abstraction and can therefore be adequately represented only through a similar level of abstraction, traceable in the bareness of the building material, which lacks any autonomous spirituality. If Hegel's judgment on symbolic architecture was strongly critical, because it is not the expression of a spirit already existing in itself – since what it represents is its true vocation – it still helps us rediscover a precise description of the intentions underlying the work of the architects of the revolutionary period.

The autonomous existence of symbolic architecture and its semantic pregnancy recognized independently by the presence of man (and by the fulfilment of his material and spiritual needs) in practice endows the work and its constituent laws with that value which in classical culture was claimed by the forms of the spirit that exist before the work itself, whether collective rituals or individual acts. In the symbolic dimension, the subject is replaced by the object, or rather is identified totally with it through representation.

The extraneousness of architecture to the urban question in the second half of the eighteenth century is the most obvious confirmation of the rupture that had by this time occurred, in the wake of the distinction between "*type*" and "*model*", between building culture and firm

attachment to the logic of the context, which was only later legitimized by the scholarly work of Quatremère de Quincy. The existing city, a place of contradictions, by tradition and nature resistant to over-arching transformation projects unified in their aims and instruments, seems to have no longer provided a frame of reference by which to justify choices made on the architectural scale. This was in contrast with what had plainly happened in the Baroque and late-Baroque period. Many of the distortions and compromises evident in the buildings and open spaces most symbolic of that “*golden century*”, apart from the mannered logic from which no historical period is exempt, plainly reveal the effects, sometimes artfully contrived and not just legitimized by operative conjunctures, of a complexity of circumstance and superimpositions of interest which rarely pursued the same objectives. Yet they still managed to cope with the resistances of the real city, definitively rejecting the allurements of the ideal city with its Renaissance matrix.

The experience of the 1749 competition for the Place Louis XV in Paris, emblematically epitomized by Pierre Patte in his imaginative reconstruction of an imaginary city, and the incident of the Plan des Artistes, commissioned by the National Assembly at the height of revolutionary fervour in 1792 to embody the new ideals of freedom, justice and fraternity, project the outlines of a development within which utopia was given substance in a project. Ledoux and Boullée are the most obvious examples of this.

Recent studies have confirmed that the layout of the squares to a plan, as architecture on an urban scale, followed paths that were anything but straightforward. The work was actually characterized by a continuous intertwining of strongly differentiated strategies, in which patrimonial, cultural, family, social and historical considerations fortuitously converged, creating the conditions that enabled the architectural event to be given a built form. These built works were not, therefore, the result of a rational and linear process of choices and decisions coherently orientated, but rather the effect of a persistently contentious negotiation between a multiplicity of subjects who in various ways claimed the right to existence and legitimation in the organization of urban space, while pursuing divergent strategies, at odds in their objectives and the instruments they adopted (see Carlo Olmo, *Le Nuvole di Patte*, 1995). The inertia to change represented by the nature of the real city and its forms proved paradoxically resistant even when the patrimonial conditions seemed favourable. This happened in revolutionary Paris following the appropriation of the property of the Church with its favoured location on the left bank of the Seine. The opportunity to proceed to the development of an urban project of great scope, the coherent expression of the new values of the rising bourgeois society, was sacrificed by selling the building lots to private buyers, who subdivided them by following the same speculative logic as had characterized the *Ancien Régime* (see Baczko Bronislaw, *Utopian Lights*, 1983). These episodes of urban history confirm, in different periods and historical situations which are not directly comparable, the compromises that urban design and architectural projects had to cope with because of the multiplicity of vested interests and the complexity of relations involved in the city.

If the need for compromise and bargaining was always a constraint on the imposition of an over-arching, unified design on the urban scene, in the course of the seventeenth and eighteenth centuries this procedure became the operative expression of a new way of building the city. It became necessary as a way of coping with the articulation of society, the complex network of its rituals and vested interests. If this situation was inherent in the post-Renaissance idea of the city, in a cultural climate when such an approach was not suspect, it reached its climax with the rise of the early phenomena of bourgeois "*liberalism*". This was the cultural climate within which the architects of the Revolution and their descendants were trained, and their work can only be fully understood in relation to this context. The spurious, interstitial and comprising nature of the real city failed to meet the demand for recognizability foreshadowed by bourgeois culture in its initial search for legitimation.

It has already been observed that there was no concrete idea of the city in the intentions of these authors, and we should speak more properly of urban imagery as a way to justify their proposals to give expression to the institutions of a different society, without its being in any way defined in political, economic or social terms. A utopia of forms, detached from any concrete feasible context to justify their architectural choices, it seems plainly to embody a search for harmony and unity, at least on the level of the objectives, opportunities and instruments adopted to pursue them. Read in this way, the architects of the revolution lacked any concrete political program and refused to come to grips with any existing city. (Chaux was a new foundation, not rooted in a context, given the lack of solid reasons for its existence.) They enclosed themselves in an abstract dimension that could not be corrupted by the compromises of the real city where they lived and in whose complex vicissitudes they were involved. This is confirmed in their projects, where Boullée and Ledoux often deprive their respective architectural proposals of an urban context. With a few stimulating exceptions, the rejection of the real city amidst the pre-revolutionary and revolutionary upheavals, effectively expressed the rejection of the compromissory and necessarily conventional character of the city and its architecture and a desire to reroute architecture into the channels of rational procedures, logical organization, linearly conceivable plani-volumetric articulations derivable within a distortion-proof correspondence between briefs and results, resources and objectives, values and the spaces assigned to their coherent embodiment. Architecture without a context, devoid of any urban dimension which was not purely imaginary or vaguely foreshadowed with ideal overtones, was translated into an autonomous procedure. Within it, every form of conventionality and the resultant historicity of compositional choices were banished as manifestations of a potential plurality of solutions, adventitious urban occurrences and unpredictable situations and conditions.

The real city (if we ignore the myths surrounding the pre-industrial town) is a locus of unresolved conflicts and endless trade-offs, yielding to compromise before the entity and nature of the vested interests at work; it is the place of the fragment, as all its developments are the changeable and uncertain results of projectual, critical, economic

and cultural forces which traverse and involve a single place, simultaneously involving it in discordant strategies. By contrast, the isolation of architecture in the timeless dimension of indescribable and incommensurable space, whether in the abstract landscapes of a Ledoux or the crepuscular, desert-like atmospheres created by a Boullée, are precise cultural choices which confer limpid clarity on the poetic and choice of language adopted in each case by the different authors. Architecture devoid of urban constraints therefore claims for the articulation of its forms - in its archetypal inflections and symbolic attributions - that power of signification which in the real city arises solely out of a system of relationships regularly renewed between dynamically interacting architectural elements and open spaces. It is translated into a message without any underlying ambiguity, devoid of that semantic "*noise*" derived from its compromissory coexistence with similar objects in the urban continuum. Architecture intended to have a didactic function, as capable of conveying the moral values of a society freed from contradictions, thus becomes functional only as an instrument for the education of the peoples. Once again we are compelled to remember that the social entity to which Ledoux and Boullée allude never attained, for the architects of the Revolution, that clarity of outline which might have made it a utopia with a content or reference to a concrete case. It was an abstract aspiration conveying a desire for harmony, the shedding of conflicts and rejection of the contradictions in which we find the fullest manifestations of the urban dimension.

Architecture sought the reasons for its existence in itself and its value in its intrinsic powers of communication. Critical reflection on language, freed from the constraints of conventional choices, as we have seen, had to seek a new legitimacy in universals. If the object isolated and set against a neutral backdrop becomes the metaphor for a message stripped of ambiguities, defined univocally and unitarily while being insulated from all sources of disturbance, it is destined to have an autonomous existence, deprived symmetrically of authorial aura and interpretive subjectivity by the user. By contrast, architecture set within a built context loses its capacity for self-determination and is subject to continuous and endless rewriting in relation to the different itineraries, mental and material, within which it is embedded in the course of time, and these, through the stratification of experiences, will guarantee a multiplication of its meanings. This will determine a posteriori its fragmentary nature, and the architects who worked in the century of the Enlightenment seem to have been clearly aware of this factor.

The nature of built architecture is fragmentary because it becomes part of a system of relations that eludes any possible predetermination. Built architecture becomes part of an interpretive circuit that enriches it with a practically unlimited number of possible attributions. Reality seems to elude all forms of regulation, controlled sequences of operations, the linearity of a clearly rational procedure. The real city is the place of co-occurrence of endless syntagmatic chains, the effect of mutable dynamic balances, irreducible to a unified process because constantly subject to trade-offs between the different subjects active in

it, who claim its insertion within their respective itineraries of criticism and consensus, within the ambit of their social rituals. Architecture designed, the emblem of the Enlightenment century, can thus be translated into a coherent choice, instrumental to the rejection of a compromise with reality, the expression of a purpose that eludes the richness of the unforeseen.

In terms of urban planning in the strict sense, the Enlightenment replaced the urban image, which was as unified in its structure as it was multiple in its articulations, with a clearly polycentric logic, fragmented by the different cultural models adopted. This can easily be verified in Berlin, Paris, Barcelona, London, Edinburgh, etc. In this respect, the development in a multiple perspective of a single urban fabric, typical of a traditional way of producing the city, which had its frame of reference and recognizability in the rooted attributions of the concept of the house, was replaced by the modern instrumentalization of the principle of “*differentiation*”.

It is this loss of unity that was inherited by the city in the nineteenth century, with the multiplication of responses to the problem of the recognizability of the new public institutions. All the same, we should remember that this process was carried out by betraying the interpretation which Enlightenment culture had given to the concept of “*character*”. The neo-Greek, neo-Gothic, neo-Romanesque and neo-Renaissance revivals, by the way they spread without geographic boundaries, plainly applied as a function of the various building genera, confirmed the urge to identify the type, a unifying but not binding concept of tradition, with the symbol, a “*differentiating*” concept of modernity. In the perspective of this analysis, purely to exemplify the question and without any claim to have exhausted the problem, we can say that the Italian Renaissance (preferably Roman) palace was the solution favoured for corporate architecture, neo-Gothic was seen as particularly suitable for places of worship, while the Greek and Roman styles were seen as appropriate to cultural functions.

If we except the contribution of the Abbé Laugier, we can say the Enlightenment tradition precipitated a crisis in the “*materialistic*” interpretation of space fostered by Classicism, which is implicit in the definition of architecture as the art of building or “*tectonics*”. As an immediate consequence, it questioned the traditional principles which implicitly affirmed the function of the type within the project of the traditional pre-industrial city. In fact the axiomatic interpretation of architecture as “*tectonics*” produced a series of postulates on which building culture rested at least down to the second half of the eighteenth century. The most important of them was the “*presence*” of architecture as value, which was essential to justify the very existence of the type. It also gave rise to the interpretation of the type as a system, integrated and correlated a priori, of structural, distributive and volumetric factors. Also of primary importance were the factors of “*authenticity*”, “*uniqueness*” and “*originality*” of the work of architecture, from which it followed that the type was a clearly historicized concept, directed at intervention in a definite context in an equally circumscribed

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spatio-temporal setting, namely in conditions of unity of space, time and action; that the type was unrepeatable but a concept that could be continually updated and that this updating occurred through a process of progressive budding from elementary matrixes to complex ramifications.

In denying the tectonic origin of architecture, implicit in the nostalgic evocation of the myth of the hut, and above all rejecting the naturalness of this origin, replacing it with a conventional interpretation of its essence (uncertain in the results produced, as Durand recalls, because of the incompetence of the first men), the type was reduced to the solution of a prior symbolic-evocative question of values universally recognized - "*character*" - obtained a posteriori by respecting the principles of architectural composition, hence a simple linguistic "*sign*". Also rejected, clearly, were all the postulates noted above and the immediate consequences of their application, of which the works analysed, written and built are an obvious demonstration. In addition, the type, in its prevalent interpretation as the house, attributable to the recognition of the origin of architecture in the primitive hut, lost its centrality as the unifying theme of urban composition, as a principle from which it was possible to derive all the possible expressions of architecture that shaped the city. It was reduced to the epiphenomenon of a language, the art of architectural composition, capable of supplying satisfactory answers to every functional and/or symbolic need of society, potentially already present in the method given systematic form by Durand.

The anomaly of the process under way in the culture of the Enlightenment in any case consisted substantially in claiming the need to "*represent*", through the architectural forms, values unrelated to time and space, out of respect for the principle of the bourgeois individual as a "*citizen of the world*", a member of an urban society without any apparent confines and which reflected its liberalizing function across the whole territory. Values of this type could only be matched, according to the Enlightenment interpretation, by a language which was "*unprecedented*" yet not new, whose effectiveness was all the greater the less it was possible to recognize conventional solutions already accepted in its vocabulary, grammar, morphology and syntax. The rejection of the conventionality of its values was matched by an equally clear rejection of the conventionality of the architectural language and consequently of the history which produced it.

The emphasis placed on the "*naturalness*" and "*spontaneity*" of language (found in all the philosophers and treatise-writers of the time with the sole exception of Rousseau), on its belonging to a cosmopolitan society that no longer recognized barriers (the demolition of the customs barriers during the French Revolution acquired a very precise symbolic significance in this respect), was matched by the "*physiocratic*" imperative in economics, namely by laws that could be assimilated to those which laid the foundations of the Newtonian interpretation of the natural world. To restore culture, in its presupposed factiousness, which fosters inequalities between peoples, to a Rousseauian state of nature, also became an imperative in architecture. In the Enlightenment outlook, processuality is seen as a dynamic phenomenon, which nevertheless responds to a circularity similar to that of the forms of the natural

world. This justified the work of systemization conducted on “*archetypal*” configurations which, as such, were given a universal formal value because they were independent, by definition, from the specific choices made by peoples and were understood as a patrimony “*naturally*” and “*spontaneously*” shared by all. It also justified the obsessive search for principles and rules of control of architectural language which could be assimilated to the principles and rules which govern the functioning of nature.

So if the cause that triggered the linguistic revolution of the Enlightenment was bound up with the rejection of every form of conventionality, viewed as an undue limitation of the expressive potential of the individual and the community, its immediate results in the architectural field led to experiments embodied in the search for a universal language. This in some ways anticipated (as in the rigorous treatment by J. N. L. Durand) research into generative-transformational systems. In the supposed correspondence between form and significance (not between form and function, as all too often claimed) (81) we find indirect confirmation of the aspiration to supersede all forms of conventionality. To achieve this result the only lever used was that semantic capacity implicit in the formal language adopted, while ignoring the language which inevitably derives from the historical context and relations with existing structures.

If we wish to sum up the new role acquired by the type in the process of urban organization we can therefore say that the Enlightenment defined a series of strategies whose common objective was the delegitimation of the historicity and conventionality classically understood of the type, interpreted as a definite answer to a complete and circumscribed architectural and urban problem. The type, deprived of its *hic et nunc* of classical derivation, was reduced to an “*objective*” solution of a system - legitimized by a language assimilated to the laws of nature (see the Abbé Laugier) or of geometry (see J. N. L. Durand) - of which it is one of the possible manifestations, namely a need universally felt and expressed by “*character*”. This gives a precise significance to the term “*speaking architecture*” frequently applied to the architecture of this period, meaning architecture that expresses and “*represents*” the values of society through a language complete in itself. This gave rise to a debate which still vainly awaits a solution. Anticipating certain issues which we will deal with in the following chapters, the requirement of generality expressed by Enlightenment culture has been significantly absorbed by the culture of globalization. Nevertheless, in this guise it no longer constitutes a totalizing factor, as it coexists with the inertia to change implicit in the resistance offered by mechanisms of local individuation to a complete transformation.

81. See in this respect the observations in Carlo Aymonino, *Il significato delle città*, Bari, Laterza, 1975, and in Luigi Gazzola, *Architettura e tipologia*, Rome, Officina Edizioni, 1990, on the culture of the Enlightenment, clearly bringing out the correspondence between form and function, in the attempt to ascribe the anticipation of salient aspects of the Modern Movement to the experiences of the revolutionary architects.

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2.2) The Architecture of Engineers

2.2.1) The cultural context

As always a new society in search of legitimation at first adapts the existing legacy to its own rituals, pursuing solutions that inevitably represent compromises between the material constraints of the existing structures and the pragmatic constraints imposed by its new functional programs. This is necessarily followed by a phase when, having clearly defined a standard considered optimal in terms of practical objectives, it undertakes a progressive development of prototypes that will provide the best response to the same qualitative standard.

The new materials and industry

A similar process took place in the development of bourgeois culture, though with a fundamental difference compared with the past: the role of the new materials. By this I do not wish to present a deterministic and materialistic vision of architecture, whose evolution is closely bound up with the progress of technology and the mechanical qualities of materials. Concretely, bourgeois culture was able to develop within the structures of the traditional city. This does not, however, mean that the traditional city was translated into an operative and complete “*representation*” of the culture that nurtured it. The implicit deformations in the phenomenon of industrial urbanization, as denounced by Pugin, Dickens and Engels among others, show this plainly.

Iron, cast iron, and glass were clearly the materials in which bourgeois culture succeeded in expressing its collective dimension as a value through architectural expression. Not only by virtue of the nature of the technologies they experimented with and the materials they produced, but above all by the sense of transparency and freedom that these materials afforded within an interpretation of space capable of embodying the complexity of the urban dimension in architecture.

It would never have been possible to unite the sense of permeability, lightness, articulation, freedom and large dimensions without recourse to the new technologies. For this reason I feel that the architecture of the engineers represents the values of bourgeois culture better than any of its other expressions.

Technical manuals and the repertory of standard solutions essentially replaced the theoretical output of classical treatises, while the manuals produced by the Enlightenment tradition persisted all through the nineteenth century as models of composition. This gave rise to a paradoxical situation, already implicit in J.N.L. Durand's *Lectures on Architecture*, in which the research into materials was conducted independently of that into the articulation of spaces. The distinction between the *Ecole des Beaux Arts* and the *Ecole Polytechnique* confirmed the significance of this choice. Moreover the foundation of the *Ecole Polytechnique*, decided in 1794 by the Convention and actuated the following year by Carnot, fulfilled the project for a school capable of fostering a revival of the institutions which was intended to constantly relate research, teaching and results useful to society in a virtuous circuit of a primitive "industrial" kind.

In practice this dichotomy led to the development of very different spatial possibilities, and was the operative reason for this variety. Once again I should emphasize I do not wish to endorse a materialistic kind of interpretation of architecture. Convinced that materials are simply the "expressive" component of architecture in its urban manifestations, I intend to credit them with a value and a role similar to that of the semantic and pragmatic elements and of syntax, whose purpose is to define a language in keeping with its time.

The distinction between technical questions and architectural needs was already legitimized by Durand's definition of Architecture as the "art of composing". Construction thus lost its character as the "reason" for architecture, its decisive motivation, and acquired the character of an instrumental factor, a way of achieving certain coherent linguistic results. About this aspect I feel there still exist numerous misunderstandings which mean it is not possible to shed full light on the contribution of the architecture of engineers to advancing the practice of the urban project.

Practice and manuals

J.N.L. Durand, in the introduction to his *Lectures on Architecture*, justified his work by addressing all those, mainly engineers, who found themselves working in contexts in which technicians were uncommon: "Architects are not alone in being required to erect buildings; so, frequently, are engineers both civil and military. It might even be said that nowadays engineers have more opportunities to carry out large undertakings than do architects proper. The latter may well build nothing but private houses all their lives, but the former, aside from being frequently called upon to do the same in those remote provinces where architects are rare, find themselves professionally required to construct hospitals, prisons, barracks, arsenals, magazines, bridges, lighthouses: a host of buildings of the first importance;

The new public buildings

and so knowledge and talent in architecture are at least as necessary for them as they are for architects.” (1)

The Napoleonic campaigns raised the need for an effective method of design, easily used even by those who had never erected a building before, so as to meet all the requirements of providing new infrastructure in any country, not just France. The pressure to “*internationalize*” architectural practice was associated with stringent pragmatic constraints, due the nature of the themes involved and the contexts in which the engineers worked, both justified by military needs.

The causes had changed rapidly by the second half of the century, while retaining that general applicability which Durand insisted on. In fact what was at stake was a process of widespread and systematic dissemination which was analogous in its intensity, though now driven by purely economic causes. What was now in question was no longer the dissemination of the principles of Liberty, Equality and Fraternity fostered by Enlightenment culture as factors of universal cohesion, though soon distorted by the drift of Napoleonic imperialism. They were the far more concrete values of industrial bourgeois society, which rapidly consolidated its role in the process of economic growth, though acting in the shadows, in the technologically most advanced countries. The need to disseminate the new emblems of democratic institutions, invoked by Durand himself, was replaced by the spread of the new market principles. These took the form largely of factories, warehouses for storing produce and merchandise, covered markets of all kinds, shopping arcades, large vaulted pavilions for universal exhibitions of products, department stores, halls, railway stations, office buildings, etc. These are mostly architectural themes which had no consolidated typological tradition behind them. They frequently reused buildings originally intended for other functions, without requiring explicit recognition in architectural terms. The state of urban anonymity in which many of these activities flourished for long periods rather hindered the quest for recognizability and individuality which the bourgeois class demanded. While eclectic culture registered the inconveniences and difficulties which the bourgeoisie encountered in trying to represent its role through institutional architecture, in which there is an evident sense of inferiority and the tribute still paid to History, it was in utilitarian architecture that bourgeois culture seems to have found a credibility of its own. In fact, however paradoxical it may seem, we can say that bourgeois culture as such was built through the development of prototypes related to the production, distribution and exchange of products.

In dealing with this achievement, circumscribed in time and lacking a theoretical tradition, (except that embodied in manuals of an essentially technical nature), scholars have mainly stressed its contribution to the discovery of new materials and new technologies. This interpretation is correct, above all given the attention paid to the architecture of engineers at the start of the twentieth century as an effective instrument for advancing beyond the shoals of the eclectic tradition. Besides the many references to engineering projects by Le Corbusier in *Vers une architecture*, an example capable of bringing out the paradoxically “*traditional*” potential of iron-and-glass architecture is the recognition

1. J. N. L. Durand, *Précis of the Lectures on Architecture*, Los Angeles, Getty Research Institute, 1986, p. 73.

that Hilberseimer bestowed on the subject of the hall (see *Hallenbauten*, 1931), which he emphasized as the new operative archetypal structure of modernity. The construction of hangars, storehouses, covered markets, arcades, exhibition spaces, railway stations etc. effectively express the future prospects for their application on a large scale.

I would say it is reductive to limit the interpretation of architecture by engineers to technical factors. There exist qualities of a spatial and “*representative*” nature which are no less significant. I am thinking here particularly of the role that the presence of people was beginning to acquire in architecture, their essential contribution in determining the spectacular quality of the spaces created. The new interpretation of the collective dimension of architecture passed through the spectacularization of its interiors, which took on the vitality and complexity of veritable roofed urban spaces. This was a new aspect of the culture of the city, and was only later intuited, though not clearly expressed in its full potential, by Camillo Sitte, whose real objective was to restore a sense of urbanity where this had always been traditionally present, namely in streets and squares.

The collective dimension of architectural space found the ideal place for its expression in the rituals of labour and commerce. The new materials did not, therefore, constitute the premise for this development so much as a necessary instrument.

The question of networks became a fundamental aspect of the new bourgeois society. A good endowment of infrastructure was in fact a necessary, though not sufficient, condition to ensure the orderly functioning of a complex machine like that which the new forces of production were seeking to develop. Paris itself under Baron Haussmann developed a model destined to be widely influential across Europe. The new premises built to house bourgeois institutions become the focal points of a polycentric structure organized piecemeal with an accentuated functional specialization. The infrastructures created the conditions that enabled relations between these different poles to be efficient without hampering the logic of the market. With a similar attitude the articulation of the city was developed into areas with strongly diversified real-estate values, due to rents of position, rent differentials derived from the vicinity to desirable activities and the functional attributions associated with the stock of real estate.

But the concept of the infrastructure city was not limited to a reorganization of the urban organism in its inner relations. The demolition of city walls and customs barriers reminds us that the logic of the market was destined to enlarge the known confines of the social community. The new city gates were no longer those inherited from tradition, but railway stations and port facilities, which guaranteed the transport of goods and people to distant destinations. The crisis of the walled city was thus accelerated by the need to multiply occasions which would foster industrial culture.

So the idea of the infrastructure city was amplified and spread through the development of places for culture and leisure, to whose construction engineers made a decisive contribution. Think in this respect of the

The infrastructure city

very fine architecture on an urban scale created by greenhouses – the ones at Kew Gardens by Decimus Burton are really insuperable – and the piers built in the seaside city of Brighton.

2.2.2) Projects and works

The value of Joseph Paxton's work cannot be understood without reference to the significance acquired by the World Fairs or expositions of the products of industry in the nineteenth century. In this respect we can distinguish two phases which testify in clearly different ways to relations between the production, distribution and consumption of products and correspond with equal precision to the two halves of the century.

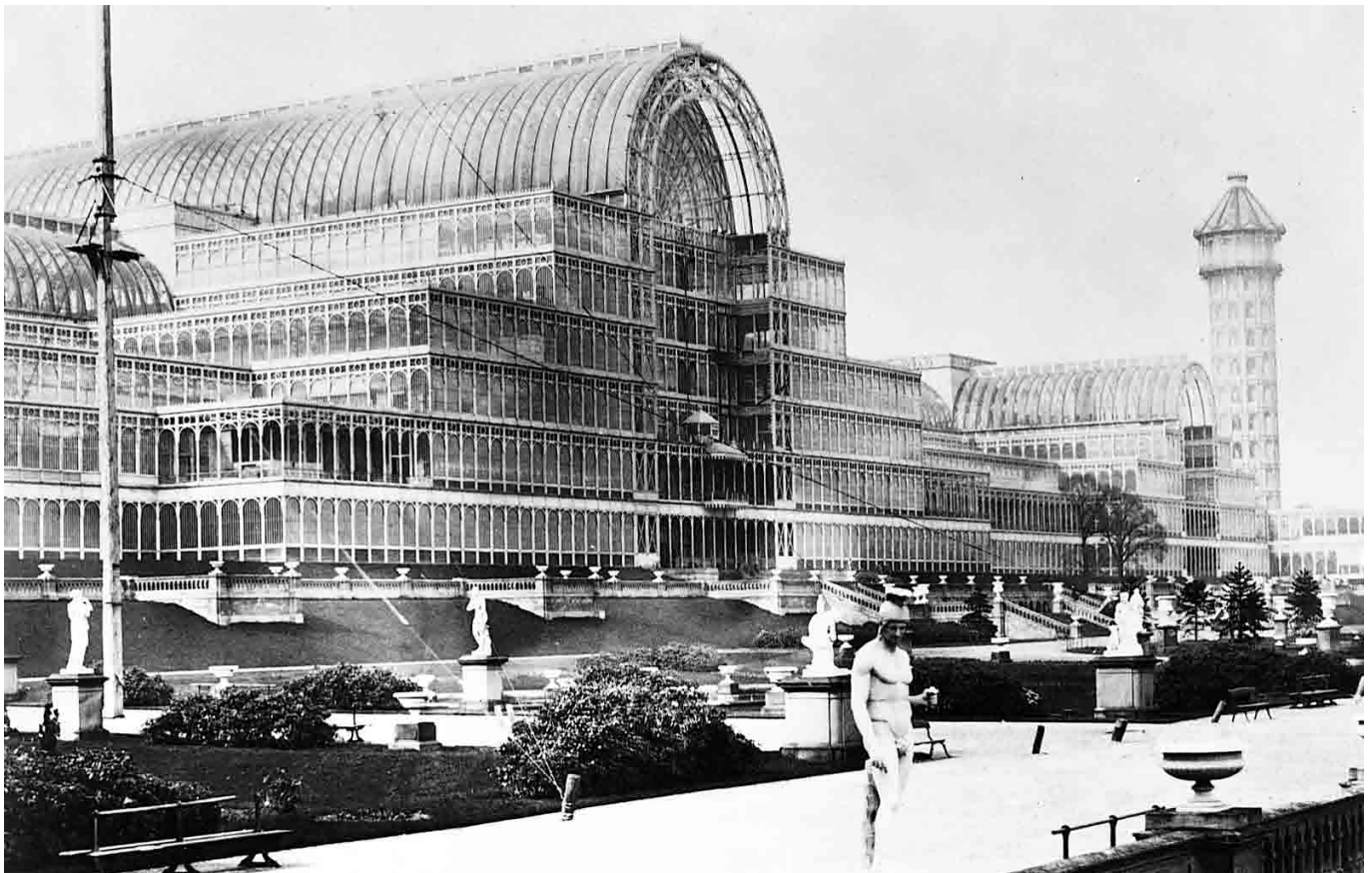
*Crystal Palace, London,
Joseph Paxton, 1851*

The first was characterized by exhibitions of a national character and were the expression of growing markets, which the single states sought to protect from competition by products from foreign countries, which were burdened with heavy duties. The first of these expositions was held in 1798 at the Champ de Mars in Paris and had a highly symbolic value. In 1791 the Corporations of Arts and Trades were abolished. That meant not only freedom to choose one's own occupation but even more importantly it released technological research and innovation from the control of the corporations. These had jealously guarded production techniques and forced compliance with their rules on all their members and those who, though foreign, wished to work under their jurisdiction. It is obvious that such a form of control constituted, practically and psychologically, a strong limitation on scientific and technological progress.

The working methods adopted by the Corporations tended to favour established interests by imposing techniques and procedures in which innovation was always carefully screened through the filter of tradition. Changes were introduced continuously and meticulously, without creating traumas that might upset the economic, financial or cultural equilibrium of a specific market. This traditional method of transmitting craft cultures, strongly selective and sometimes suspicious of innovation, was the repository and promoter of the values of continuity and unity characteristic of pre-industrial society. We can understand the close correspondences that existed between the abolition of corporate constraints and the aspiration of Enlightenment culture to free itself from the control of History, understood as a set of local histories, paralysing and segregating, and to place itself wholly at the service of a universal rationality capable of uniting different peoples in a new concept of community life which was cosmopolitan in inspiration. So even though the early expositions retained a national character so as to ensure easier conditions of growth for the rising industrial culture, they immediately acquired the significance of an appeal to the values of freedom and democracy in production, in which the progress of science and technology was set to work to serve the community by presenting the public with their immediate practical benefits. In fact, in promotional terms, it is clear that the Enlightenment spirit

was destined to gain an ascendancy over the traditionally distrustful sensibility of the people only when they were involved in the new procedures through the demonstration of the real practical advantages of the innovations themselves. The exhibitions thus initially had a strongly educational value associated with their commercial benefits. In the second half of the century conditions changed markedly. Industrial production began to be considered a natural part of the new society, having by this time become an established system which was exerting a broad influence over the development of ideas in philosophy (positivism), economics (liberalism) and society (the distinction between the working, business and administrative classes). The liberalization of the market and the progressive elimination of constraints on the free circulation of goods increasingly produced opportunities to compare industrial production in different countries. Expositions thus acquired a celebratory character, combined with the need for a real knowledge of a country's production methods, technologies, machinery and products. The original educational function was progressively replaced by recreational and commercial purposes. World Fairs were useful not only to industry insiders, who began to draft detailed reports running to several volumes on these occasions (they are still useful for understanding the society of the time), but they increasingly became fashionable and sociable occasions, absolutely original celebrations of a collective kind. This gave rise to the problem of their architectural guise, a "*container*" for the "*contents*" of industrial society. Fig 1

Fig 1. The power of the Crystal Palace lies in its ambivalence and ambiguity: it simultaneously reminds a glass house, a basilica, a gallery and a train station. At its origins, the bourgeois imaginary unconsciously encompasses a wide range of possibilities far beyond the limitation of any specific language. The experimentation still takes the command.



The architecture of expositions thus acquired a role as important as that of the individual products presented or the conferences organized to coincide with their celebratory side. Because of this celebratory spirit, the wide range of products displayed and the large numbers of potential visitors, from the start the expositions called for large unified facilities capable of allowing the greatest freedom in the layout of the interiors and a perceptual openness to enhance the collective, mass character of the event. In this way the problem of the container became an essential factor in the design of the new spaces. Finding a solution entailed recourse to new materials, whose properties necessarily exploited the value of the applications of industrial production in the field of construction.

So it is no accident that the first Great Exhibition of the Works of Industry held in London in 1851 had as its patron Albert the Prince Consort, supported by his trusted advisor Henry Cole. The Prince was an energetic proponent of the cohesive potential of industrial society in uniting different peoples. Cole, who had considerable influence in British industry, maintained the need for close cooperation between industry and culture in order to ensure that industrial production would achieve the same refinement as had long been attained and was widely established in the market for craft products. To achieve this he promoted a program that envisaged the foundation of art schools to educate popular taste in the quality of the new products. Significantly he founded the first “*museum of ornamental art*”, the Victoria and Albert in London.

Understandably the choice of the architecture of the pavilion to house the Great Exhibition was entrusted to an international competition, with 245 participants, held in 1850. The winning project was by Hector Horeau, who submitted a shed made of iron and glass. But his proposal was judged unfeasible (as well as the other submissions) because it did not provide for the recovery of the materials after the necessary demolition of the building. Implicit in the Royal Commission's decision was a new interpretation of architecture as the art of the ephemeral. The only precedent for this in European architecture was the scenery that still used to be installed during the Enlightenment revolution for great popular festivities and under the *Ancien Regime* for the arrival of reigning monarchs on official visits or for royal weddings. But the substantial difference consisted in the fact that while traditional ephemeral architecture was built out of flimsy materials, trade fair and exposition buildings used durable materials.

So it was not the nature of the building materials that was in question, though with a degree of artificiality much greater than in the natural materials traditionally in use; rather it was the conception of architecture itself, its principles and social responsibilities. The Royal Commission appointed to oversee the event decided to devise a project on its own responsibility to meet the planned requirements of the exhibition, enforcing the use of mass-produced materials and inviting different firms to submit tenders for construction. The engineer-gardener Joseph Paxton, after fruitlessly seeking to get the committee to accept his project, was finally awarded the contract in partnership with the contractors Fox and Henderson. Joseph Paxton adopted a solution

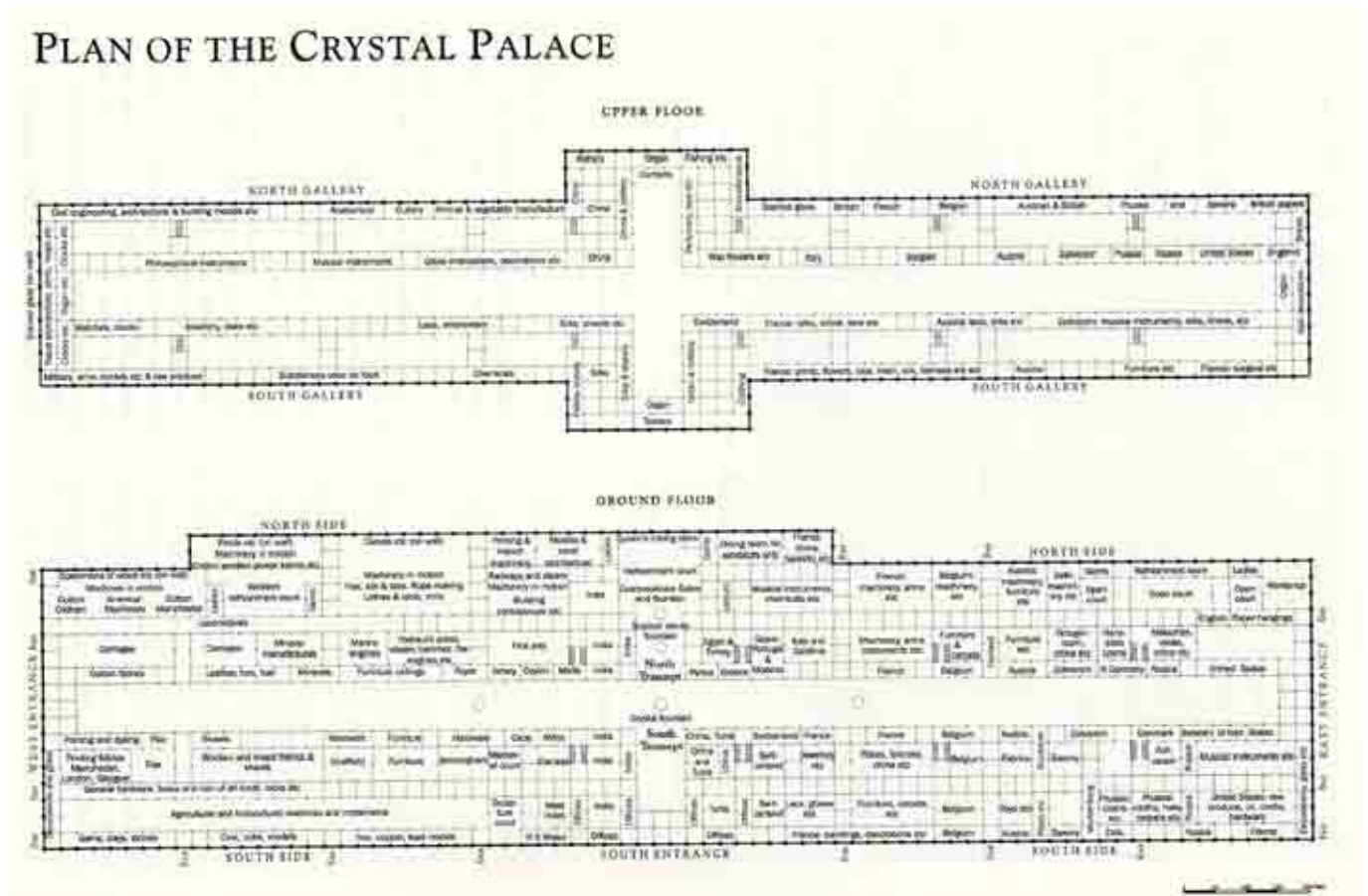
for the container which he had already used for the conservatories at Chatsworth in 1837. But above all he subordinated the design to a system of modular prefabrication based on the largest dimensions permitted by the current production systems for the manufacture of glass panes, whose maximum width was four feet. This choice was a significant pragmatic limitation on the development of the project itself. The site chosen for the pavilion by Henry Dole was Hyde Park, so confirming the celebratory character he intended to confer on the whole event.

The system of prefabrication was adopted for all components of the building, which retained a somewhat traditional character in its plan. It was a symmetrical linear composition based on the serial repetition of a section with a stepped profile of a nave and four side aisles 550 meters long. The nave was 21 meters wide and had a structural span of 7 meters. A transept that traversed the structure from the entrances was added to the design to save some ancient elms from being felled. The syntax was thus open-ended, theoretically unlimited and serial, a significant emblematic "*representation*" of that industrial logic that the Royal Commission wished to promote by its work. The space inside the structure was likewise open and permeable. Its transparency and lightness were enhanced by the spacious galleries that multiplied the display areas through a singularly effective (and innovative) stratification of "*artificial ground*", a device that became increasingly recurrent in the capitalist consumer society established in the second half of the nineteenth century.

The morphology of the plan was already implicit in the decision to multiply the stepped cross section endlessly along a single axis, with the only counterpoint provided by the transept at the entrance, which introduced a rounded profile for the roof set perpendicularly to the nave and resting simply on its load-bearing structures. The reference to greenhouse architecture is obvious, though on a drastically altered scale and with the potentially boundless spatiality deriving from it. *Fig 2*

The building's grammar was based on the repetition of a system of bays resting on profiled iron lattice girders, bolted to a structure of uprights consisting of specially stiffened cast-iron columns cross-braced with lattice beams. In this way it was possible to use the vertical load-bearing elements as drainpipes to bring rainwater to ground level, where an underground network of pipes, besides connecting the uprights, took the water directly to the drainage system. Hence the whole complex defined a potentially isotropous modular spatial structure which imposed a unified internal measure on the complex both horizontally, by simply multiplying the same modular unit 230 times, and vertically, by the simple addition of a finite number of forms. From this derived the dimensions in elevation of the nave and aisles, respectively of three, two, and one module starting from the nave and moving outward.

The lexis used is also very elementary. All the components were prefabricated, being manufactured in Birmingham, to be assembled in situ: frames, sash-bars, girders, pillars, steps. In this way it was possible to complete in just six months a building that, as contemporaries proudly observed, had a surface area no less than six times St. Peter's in Rome.



In expressive terms, the materials used were largely artificial, such as iron for the lattice girders and stairs, glass for the envelope and cast iron for the uprights. Wood was used only for the sash bars. Even if the materials were traditional, the method of prefabrication was not. While externally the elevation was dominated by the standard repetition of the basic form of the window frames, for the programmatic reasons described in the beginning of the text, inside the spatial quality of the pavilion was characterized by the multiplication of the space available by the endless repetition of the spatial module made up of the framework of iron girders and cast-iron pillars. Also the use of colour decisively enhanced the general spatial effect. Owen Jones was appointed to supervise construction of the Crystal Palace so as to confer architectural dignity on it. For this reason the complex was painted internally with stripes of red, blue and yellow alternating with slender bands of white, while white and blue were used on the outside. The use of fundamental colours must have heightened the abstract, “*conceptual*” character of this revolutionary work. But in terms of statics it was fairly traditional in character, being a “*box*” system with cross-braced joints clearly inspired by wooden carpentry, like all its predecessors in greenhouse architecture. The general dimensions of the complex combined with the simplicity of the solutions to all kinds of problems by recourse to an equally limited number of components enable us to describe this building as the creation of a unprecedented conception of architecture, and as such it was interpreted by contemporaries and for many years afterwards.

Fig 2. Plans show a more conventional quality. The glass house type seems to prevail.

Besides the effect of a boundless spatiality, obtained by the endless repetition of the same surface and spatial modular components, which made it hard to measure the space of the Palace, it is useful to remember the observation of Sigfried Giedion on the importance of the solution adopted: “*Only photographs and etchings remain as witness to that overcoming of gravity in apparently floating constructions (which is the essence of any solution to the problem of vaulting) was achieved in magnificent form during the nineteenth century.*”⁽²⁾ This was an important achievement and drew in unrepeatable fashion on the architecture of engineers. Their experimentation, however paradoxical it may sound, lies outside the traditional principles of tectonics. As we have seen, this does not mean indifference to the constructional question, but rather that the static-technological factor is simply the expressive component of a more complex and highly articulated language, which systematically seeks for its logical-conceptual dimension and is no longer identified in itself as an architectural language tout court. This thesis is borne out by Giedion’s observation, which I fully endorse, that the aspiration to conceal the problem of gravity became the decisive factor in the principles of architectural organization through the use of a new architectural language.

It is also worth remembering that the structure of Joseph Paxton’s Crystal Palace clearly recalls some vertical and horizontal combinations represented by Durand in his treatise, though reduced to a principle of simplicity which only the logic of industrial production in a phase of consolidation could effectively illuminate with significance in all its fullness. Then it should also be observed that the Crystal Palace effectively expresses, by virtue of its endless incommensurability and the implicit lack of any “*architectural*” order or measure, the idea of the interior as the exterior, introduced for the first time in a deliberate and systematic way by bourgeois culture. *Fig.3*



Fig 3. The majesty of the interior emptiness seems to be suspended, waiting for life colonization.

The theme of the covered market has a more conventional significance than other functional programs introduced for the first time by bourgeois culture. The term *halle* itself traditionally designated a covered area open for the sale of products which required a stable form of shelter and protection from the weather. It was clearly distinguished from the marketplace, which was an open space, at most characterized by the presence of porticoes, for the sale of products of all kinds. More generally the concept of the marketplace did not entail the existence of a signifying form, a roof, but more simply defined a place for dealings of a commercial nature. This explains the semantic drift which occurred in the term market in the nineteenth century, until it came to define in an absolutely abstract way the network of possible relations between subjects who did not necessarily require a place to conduct their business in. This note explains the role and importance acquired by the architectural presence, the container, in the concept of the Halle. Victor Baltard's project was set against the backdrop of Haussmann's electrifying transformations of the city, and was located in an area of the city traditionally distinguished by the presence of halles and markets. There was already an attractive structure on the site by 1760 (though it was only opened in 1767): it consisted of a ring-shaped stone gallery designed by Nicolas Le Camus de Mezières. This had twenty-eight arches on the ground floor while the central open hall was surmounted by a vaulted roof in order to protect the cereals from the threat of fire. In 1782-1783 the central court, forty meters in diameter, was covered by a large wooden dome to define the Halle au blé, close to the church of Saint-Eustache. Its architectural value subsequently saved it from the clearances made necessary by the construction of the new Halles Centrales, and it actually became the pivot on which the new complex turned. *Fig 4*

*Les Halles Centrales, Paris,
V. Baltard, 1853.*

It should be remembered that by the middle of the nineteenth century the population of Paris had passed the one million mark. This meant that traditional covered structures for commerce were faced with unprecedented problems of complexity of scale. Projects were being put forward for the Grandes Halles as early as 1811, under the Napoleonic empire. In the 1820s a further covered timber structure was built. Known as the Marché des Prouvaires, by 1840 it had already become inadequate to cope with the increasing demand for sales spaces, while the Halle au Beurre and the Halle au Poisson were completed nearby in 1823 and in 1824. The need for covered markets of exceptional dimensions revived interest in the site where it had been planned to build the market in 1811. Numerous projects were put forward. Baltard presented a first project in 1844. After various complications and repeated changes to the plans, in 1852, following the demolition of the remaining urban fabric, construction began in stone on the first of the eight pavilions planned. In 1853 Napoleon III visited the site and was so angered by the results achieved that he immediately ordered work to be halted. There followed a long series of counter-projects. Baltard and his partner Cellet submitted a new set of plans, this time relying on the expressive potential of architecture in iron. Through the mediation of Baron Haussmann, who could claim a far from marginal role in the successful conclusion of the project, including the architecture, work

finally began again on 1 February 1854.

The project presented consisted of ten pavilions, grouped in two separate blocks, one consisting of four modules and the other of six, separated by an impressive urban axis running from north to south and providing a link with the city. Each pavilion was designated to sell a specific type of commodity, respecting the functional needs of the forms of commerce previously existing on the site. Each of the pavilions was further organized on a module of pillars and girders measuring six meters square, which rigorously articulated the sales spaces. The complex was articulated in accordance with an innovative logic as an urban fabric in which the individual pavilions were given the character of veritable city blocks and the covered arcades linking them became roads, their pattern articulated by an open grid divided into meshes of variable sizes. *Fig 5*



Fig 4. The complex shows its successful attempt to subvert Paris urban tissue and its traditional value. The new structure proportion explicitly alludes to the building block size and pattern, confirming it as its referent. But as soon the existing city is evoked, its significance is completely subverted: solids become voids and open space becomes closed ones. In such a subtle way the city morphology is reduced to its cast, ready to be colonized by the bourgeois vibrant life.



Fig 5. *Les Halles* suspended as an urban *still life*, at its development peak. Life is slowly consuming it in an underhand manner. The premises of a new world?

The result was that pavilions nos. 7 and 8, which occupied the middle part of the larger block had two more structural bays (nine in all) than the others. Hence the syntax of the complex is additive, with a strong level of integration with the surrounding urban fabric, of which it seems to be a simple “*inversion*”. The streets become continuous covered passages suitable for vehicles, while the densely built fabric creates urban spaces housed within pavilions with enclosed perimeters. The morphology of the complex is very interesting. The subdivision of the plan into a “*weft*” (that of the pavilions corresponding to the different meshes in the principal fabric) and a “*warp*” (the network of covered routes) had a marked degree of modernity and conferred a notable sense of urbanity on the whole complex. The structure of each pavilion consisted of a pyramidal roof supported by Polonceau trusses which traversed the existing space and rested on two external supports placed by the walls and two more placed inside them. These exploited the presence of iron pillars arranged to form an ambulatory with a modular breadth, providing access by steps to the underground warehouses. The area circumscribed by this ambulatory was defined by the roof with a double-stepped profile to provide further illumination at the sides, so suggesting on the outside a morphological articulation with a concentric layout which contradicts and enriches the syntax of the general plan. The measure of each pavilion was clearly classical in the clear correspondence between structure, articulation of the spaces and definition of the volumes. This was clearly confirmed by the legibility of the plan of the different pavilions seen from outside. The same division into base, elevation and covering is systematically used to resolve in a formally correct way the stepped development of the overall section of each individual pavilion.

The formal grammar of the composition operates by successive modular subdivisions of the structural bay so that the variations of scale in the morphological articulation of the parts can immediately be perceived by the observer. Hence in the outermost envelope of the pavilions, which makes legible in the facade the presence of the internal ambulatory with steps emerging from the basement, the use of the structural gauge is six meters; while the gauge for the first step up in the section of the roof structure, which makes legible the presence of the inner courtyard, is based on a structural gauge of three meters, which is again confirmed in the last skylight. *Fig 6*

The lexis used is the traditional one of engineers’ architecture, namely truss structures consisting of lattice girders and iron pillars whose slenderness confirms the desire to conceal their real load-bearing capacity and suggest a sense of lightness and transparency. Seen in these terms, the design of the louvres is very elegant: they fill the panels between one structural element and the other, making it possible to graduate the quantity and quality of the light inside. The solutions adopted in the details are also elegant. There is always a precise correspondence between the design of the decoration and its structural function.

In this way the Halles Centrales combined some aspects of the classical language of architecture with the new objective of immateriality in the architectural space sought by the experimental research under

way. Undoubtedly the most significant aspect of the project was the consonance of the solutions adopted with the urban structure and the clear expression on the outside of the differentiation between the structural parts and curtain walls. Though this had now become customary in utilitarian or recreational architecture, it had difficulty winning recognition for its potential in densely built contexts. Unfortunately the demolition of the Halles in 1971 deprived us of a space which has been paradoxically duplicated not far away, though in a contemporary language, in the Beaubourg complex, showing that the linguistic consonance between old and new was evoked without being full understood. The urban void left by their demolition still awaits successful resolution.



Fig 6. The lightness of the interior evokes an ephemeral presence, a scaffolding architecture. Structure at its utmost, before to fall. Life whispering is the reason.

We have seen that the nineteenth century was characterized by the appearance of buildings which were unprecedented in preindustrial societies. Among them the department store was one of the most fascinating themes, capable of illuminating bourgeois culture and its aspirations to a “representative” character.

Sigfried Giedion furnishes a precise definition of the department store: “The department store is the product of the industrial age; it results from the development of mass production and of the direct loss of contact between producer and consumer that was one of its consequences. The department store has no equally large forerunner in the past. In this respect it is like the market halls, railway stations and exhibition buildings of the nineteenth-century; and the purpose it serves is the same: the rapid handling of business activities involving huge crowds of pedestrians. Like these other buildings already seen, the department store arises out of the growth in the population of the city, from the heightened tempo of living and the demand for cheaper goods.”⁽³⁾ Giedion stresses the originality of the rituals expressed by bourgeois society in the second half of the nineteenth century, as a mass consumer society, organized on principles whose modes and times were unprecedented in cultural history. Clearly these new social rituals required appropriate spaces for their full expression. These stores stocked merchandise in big buildings which made it easier for customers

Magasins à Bon Marché, Paris, Gustav Eiffel and L.A. Boileau, 1852-76

3. Sigfried Giedion, *Space, Time and Architecture*, Harvard, 1965 (1941), p. 234.

to locate the products and view them, without feeling isolated or losing their bearings. The origin of these containers is uncertain. They probably first emerged in the United States as warehouses in which floors would be rented out to different firms for the sale of industrial products, in a sort of condominium. The spaces were artificially lit, given the considerable depth of the buildings, and they failed to become popular until the introduction of the elevator to take people to the upper floors. In Paris in the 1860s there existed the docks *à bon marché*: these were places which stocked quantities of cheap goods. So the project by Gustav Eiffel and L.A. Boileau built on an established culture with at least a decade's experience. The *Magasin au Bon Marché* stood at the front of a block with a Haussmannian matrix, with frontage on three sides and overlooking a public garden of some importance. *Fig 7*



Fig 7. The exterior acts as a mask, to dissimulate the transformative process which is under action within the urban form, according to the haussmanian *decor*.

The outside of the building, with corner towers, was fairly featureless in the Parisian eclectic style of the later nineteenth century, and did not clash with the taste of the day. Inside, however, it embodied a free spatiality of a truly striking beauty. The novelty of the design is all the stronger if the French experience is compared with the American. While department stores across the Atlantic were conceived as a series of flat floor slabs stacked one above the other in unbroken succession, *Le Bon Marché* was distinguished by the presence of a series of internal covered courts which rose the full height from floor to roof. In this way it was possible to ensure abundant illumination of the interior through skylights which received light from the fully glazed pavilion roof above. The syntax used in the building was thus defined through an implosive logic, as a systematic operation of “*extrusion*” of empty volumes with different sections which articulated the space by hollowing out the nineteenth-century city block, defining the development of the space in sculptural fashion.

The immediate result was that the morphology of the complex was absolutely unprecedented and very modern, above all if we think of the

success enjoyed today by similar arrangements in the most advanced architectural experiments. There is no real division of the complex into elements endowed with a clear structural, distributive and volumetric character. The parts are reduced to the simple horizontal stratification of floors treated as “*artificial ground*”. These multiply the available display surfaces, connected perceptually by the permeability of the inner courts to their full heights and functionally by an elegant system of light metal catwalks traversing them and scenic aerial staircases. This made it possible, in a volume of relatively compact dimensions, to obtain a floor space equivalent to 30,000 square feet through the congestion of space and transit times unequalled in coeval buildings, and destined to become a model for similar functional purposes. The morphological innovation was impressive compared to traditional architectural language. *Fig 8*

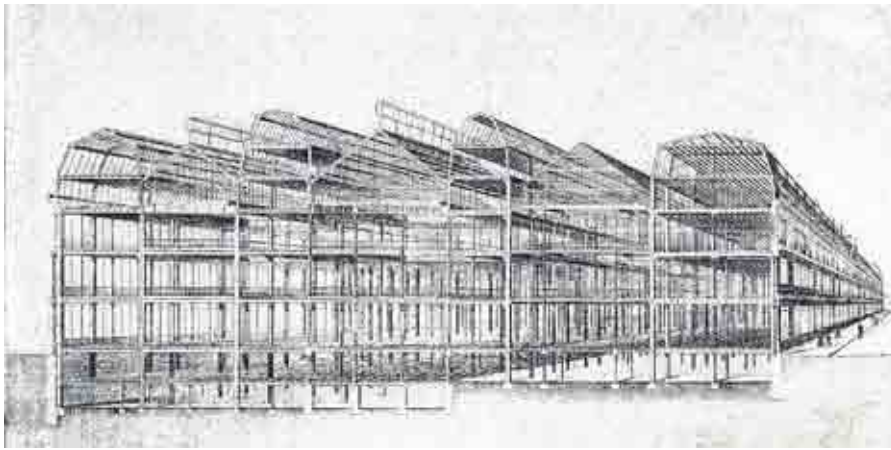


Fig 8. Architecture identifies with its envelop: a provisional scaffolding to support life development.

Durand was the first to undermine the tectonic interpretation of the language of architecture, yet in defining the parts he had given a description of them in which there still persisted a correspondence - though not deterministic - between the structure, the articulation of space and the definition of the corresponding volume, hence a legible relationship between the components and the whole composed with a classic imprint. Eiffel and Boileau's department store called into question the morphological correspondence between *firmitas*, *utilitas* and *venustas* for the first time in an architecturally complete way, replacing them with a reciprocal autonomy between the structural, distributive and volumetric components. The structure was shaped as an elegant and unrhetorical perspective grid used to organize the space, restoring it to measure and unity, its material consistency completely effaced by the slenderness of the iron pillars and the formal elaboration of the balustrades and architraves, which were almost reduced to decorative textures. The floor space was completely open, both vertically and horizontally, producing a clear anticipation of Le Corbusier's open plan layouts, being partly restricted and confined only by the display stands stacked with goods. The volume expresses the reduction made by the Modern Movement of the tectonic consistency of the building to pure “*skin*”, an enveloping surface absolutely independent of whatever takes place inside. This choice perhaps explains the architects' desire to

dissimulate outwardly the excessive freedom of the interior through a wall in traditional eclectic Haussmannian style.

It should be said that the solution adopted does more than just meet the objective of maximizing the display surface, though this is implicit in the brief. It also produces an equally important transformation of the social rituals conducted inside the department store into spectacle. Also in this sense the project is an extremely innovative product: the association of the containing form and the ritual content achieves a complete synthesis in a sign perfectly adapted to the requirement for representation in the bourgeois society of mass consumption, which had no role in experiments with the early prototypes. In this way the department store was translated into an occasion for complex socialization, similar in scope, except for the greater acceleration of the tempo, to that of the traditional city square or street. Undoubtedly the ritual of commerce facilitated this objective, but it is equally true that this is not a simple example of functional determinism: it entails refined research into architectural language. *Fig 9*

Fig 9. The architecture of the *Gran Magazin* pushes to the limit the classical ambition to give an architectural vestige to the city, or to identify human being mindset with its principles and categories. At its top, life starts a process of corruption to subvert architecture legacy and to declare its demise. The interior space emphatically shows the spectacle of life at work in that perspective. This seems to be a foretelling meaningful picture of the contemporary time: there is not anymore room for architecture, being it at the mercy of an overwhelming life.



The grammar is less revolutionary, but it contributes decisively to the general morphological order. The system of “artificial ground” is made possible by an elegant iron framework of girders and pillars. The spans of the load-bearing elements are variously modulated so as to match the alternating rhythm of the elements of vertical connection and the courts. Although the catwalks and staircases are easily identified, it is

not possible to distinguish the spaces of distribution from the spaces distributed: there is a high degree of continuity of space which is an important innovation compared to coeval architecture. In the same way the architecture effaces any distinction between figure and background, between prominence and connective fabric. The hierarchization of the parts is achieved without interfering in the sense of freedom and the feeling of multiple connections between the perfectly permeable levels. Even though the iconography adopted is always that of the architectural order, the image suggested by the building system is one of great continuity in the ligaments, confirming the impression resulting from the articulation of the spaces.

The richness of the whole was confirmed by the components used, such as columns, architraves, roofing, catwalks, balustrades, light sources, etc. These were components manufactured industrially but without forgoing the refinement and elegance of the corresponding products crafted by hand.

The materials used also contributed decisively to the sense of lightness, transparency and density in the spaces. The repeated use of glass in the roofing superimposed on the skylights shapes the idea of an open space contained within a single building, without this being resolved through an “*architectural*” measure. The use of iron confirmed the industrial character of the building without reducing it to a simple framework.

The *Magasin au Bon Marché* thus constituted one of the most wonderful examples of landscape in “*miniature*”, an artificial backdrop capable of enhancing the products on display and making the ritual of consumption a sublimated form of spectacle, a very elegant device capable of multiplying perceptual connections and accelerating the traditional experience of space. In this way bourgeois culture succeeded in defining the prototypes of the department store for years to come. In fact the building provided a benchmark for all following examples. This result was achieved through the definition of an extremely revolutionary architectural language, still capable of orientating avant-garde research.

2.2.3) The phenomenon interpreted: analysis of the sources and spread of themes

The foundations of traditional architecture are brilliantly expressed in indirect fashion by Peter Eisenman in dealing with the attempt to destabilize the principles of “*Classicism*” and the difficulties always encountered by any systematic attempt to do this. “*We then have to ask ourselves why it is so difficult in architecture to move beyond a condition of post-Hegelian ideas. The answer lies in the fact that architecture is simply the most difficult discipline to destabilize, because the core of its activities consists in achieving stability. Architecture, in the collective consciousness, is the structure of reality, presence and objectivity. It is literally made of bricks and mortar as home and palace, shelter and closure. Architecture does not involve a purely speculative interest in gravity: it works against and with gravity. For these reasons, its objective presence in terms of reality*

The architecture of tradition

has traditionally been devoted to symbolizing these terms, to expressing its vocation to provide shelter and protection ... The idea that architecture should belong to the tradition of truth, that it ought to express its function of protection, to express the good and the beautiful, is actually a primitive and tacit form of repression. It is in fact the truth of instability that is repressed. And yet if the laws of architecture correspond to a set of conventions, and are hence in no way 'natural', it means that there are other truths that can be expressed beyond the natural truth of the classical object. Only when this conception of a natural truth has been dismantled, removing the repression contained in the concept of 'natural', will architecture become significantly part of the post-Hegelian project.”⁽⁴⁾

The soundness of the theses rigorously expounded by Eisenman is indirectly confirmed in the Abbé Marc-Antoine Laugier's description of the origins of architecture. It shown as stemming from our need to build a stable and convenient shelter, capable of protecting us from the adversity of nature, and was manifested in the form of the primitive dwelling, made by assembling materials spontaneously to serve this purpose. The problem of its origins is raised as an essential question for the development of architecture. *“All the splendours of architecture ever conceived have been modelled on the little rustic hut I have just described. It is by approaching the simplicity of this first model that that fundamental mistakes are avoided and true perfection is achieved.”*⁽⁵⁾

The rhetorical topoi of the description are those of uniqueness (architectural forms are derived from the primitive hut alone), of origins (an event that really happened from which architectural practice derives), and supremacy (all the subordinate works derived from that original act do not possess the same importance but are subordinated to it also in terms of symbolic value), of presence (no architecture exists in the absence of its built manifestation), of simplicity (because the constituent act of the primitive house underlies every more complex articulation of space which has really happened or is merely conceivable), of function (the need of a shelter for dwelling in constitutes the foundation of all spatial practices), of duration (architecture was born to endure in time, making use of durable materials). All these aspects, symbolically associated with the earliest architecture, are credited with a character of naturalness simply because they are not associated with a conventional value. The merit of this recognition is clearly Durand's who says of the primitive hut: *“Can such a hut be regarded as a natural object? Surely this is no more than the inchoate production of the first falterings at art?”*⁽⁶⁾ It should be added that the supremacy of the house made it an archetypal formula, a universal one belonging to the cultures of all peoples, so enhancing its value and symbolic significance.

This long prolusion on the principles that inform traditional architectural practice, of which classical architecture is a simple sublimation of register, is necessary to show that the architecture of the engineers, in its most complete formulations, systematically undermines these same principles. In the absence of direct documentation confirming the conscious intentions of the architects, and which would explain the anomaly of this chapter compared with all the others, we have to rely only on built works, objects constructed and representations available in the iconographic record. They confirm our thesis. First of all we have to

4. Pippo Ciorra (ed.), *Peter Eisenman. Opere e progetti*, Milan, Electa, 1993, p. 213.

5. Marc-Antoine Laugier, *An Essay on Architecture*, Palermo, Los Angeles, Hennesey and Ingalls, 1977, p. 12.

6. J. N. L. Durand, *Précis of the Lectures on Architecture*, Los Angeles, Getty Research Institute, 2000, p. 83.

record the role of the project, understood as a synthetic foreshadowing of the building which is to be constructed. The traditional method of trial and error, based on the progressive acquisition of the results obtained from the experience of building, was progressively replaced by the science of construction, to which technology only subsequently made the necessary corrections to be translated into the current practice of building.

The primacy of construction - and the balance between "*thought*" and "*action*" of the Classical tradition, where however the former is in the service of the latter - was this definitively called into question, destabilized, by a series of operations of a logical-mathematical order organized systematically into a body of theory, namely by the predominance of thought and scientific language over the practice of building. In other words there developed, to paraphrase Peter Eisenman, the consciousness of a purely speculative interest in gravity, compared to a simple practice against gravity as such. It is no accident that the most important builders with new technologies in the nineteenth century were those who held patents for construction systems. The architecture of engineers thus definitively and practically took control of the built environment away from the corporations of arts and trades, which had already seen a formal decline in their monopolistic privileges following the French Revolution. The technical skill of the craftsman was no longer the factor behind the growth, promotion and transformation of architectural practice through the sedimentation of experiences; this was now replaced by the development of mathematical thought.

The theme of the house also lost its traditional centrality and unifying capacity for two reasons. Firstly because the bourgeois city expressed its function by stressing the significance of other themes, and the rituals associated with them, such as the production, distribution and consumption of industrial products; and secondly because the development of scientific disciplines dispensed with the existence of traditional models as archetypal forms of the architectural and urban dimension. So the myth of the hut was replaced by the "*secular*" dimension of the structural span, always mutable in its configuration depending on the principles of statics adopted. Despite this, the early applications of cast-iron, iron and glass technology to building used traditional static schemes, and this choice was considered a strong limitation of the expressive and symbolic possibilities of the new architecture.

The foundation of architecture itself was further sought in a universal rationality, not as lacking a conventional foundation, but because justified by a method, that of the science of construction, which is the shared legacy of all cultures willing to abandon the prejudices of current practice. This discourse is fundamental if we think of the form of generalized rejection which the new technologies encountered at their first appearance, even more by insiders - bound by habit to the traditional technologies - than by the users, who soon found pleasure in the spectacular qualities of the new solutions.

The progressive replacement of natural materials by artificial materials manufactured industrially raised the problem of originarity and authenticity. The individual components of construction were not

simply assembled using industrial methods, but were also manufactured industrially, die-cast to ensure the identical and endless reproduction of a specific piece. Moreover economies of scale meant it became cheaper to use a single component on several construction sites, so making the building itself, within the limits of the sensibility and taste of the period, as standardized as possible.

The concepts of stability and durability were clearly undermined. Many of the most interesting engineering works were conceived to be decommissioned rapidly. Some, like Paxton's Crystal Palace, were dismantled for this very reason to be reassembled elsewhere once the building's original function was at an end, so undermining the supremacy of one function with respect to the others in the development of the practice of construction.

Nevertheless there exists one factor that markedly differentiates the architecture of the engineers from the architectural tradition with an Enlightenment matrix and associates it with traditional architecture. This is represented by that quality of homogeneity and uniformity that relates the different buildings and does not allow us to speak of architecture as a language within which the different programs undergo an obvious specialization. In the same way the theme of the house became a factor of uniformity which conferred a unified character on the traditional city, in which the non-residential buildings were related to the residential ones by a clear relationship of budding. The typological research of the engineers, as acutely observed by Hilbersheimer in *Hallenbauten* (1931), was aimed at the definition of hall-shaped forms with broad structural spans, striking covered and open spaces which made it possible, with few adaptations, to meet the needs of any theme through their inner articulation. We can therefore say that in the nineteenth century only the architecture of engineers seems to show it contains in embryonic form those elements of "anonymity" distinctive of the tradition, and which its spread across the urban territory was to emphasize, suggesting an image of the city substantially different from that was inherited from the culture of eclecticism and revivals. On the contrary, the contrapuntal use generally proposed of it, compared with the rampant historicisms, unjustly brings out its exceptional component.

The Modern Movement

We have already noted the destabilizing function of the ideas received from the culture of the eclecticism acquired by the reference to the culture of the engineers in the theorizations of the pioneers of modernity. In particular it was Le Corbusier who sang their praises, devoting a whole chapter of *Vers un architecture* to the contribution made to Modernity by the inventors of wrought and cast iron, concrete and glass. "Our eyes are made for seeing forms in light. Primary forms are beautiful forms because they are clearly legible. The architects of today no longer make simple forms. Relying on calculation, engineers use geometric forms, satisfying our eyes through geometry and our minds through mathematics; their works are on the way to great art."⁷

It is interesting to note that Le Corbusier's words contain no reference to the qualities of the new materials. In the pages that follow they are

7. The Corbusier, *Towards an Architecture*, London, Frances Lincoln Ltd., 2007, p. 5.

simply evoked for their instrumental function in the construction of the new spatiality, dominated not by the experience of construction but logical-mathematical thinking, i.e. pure thought, in the control of which the engineers are masters. In this sense we find a profound connection between the architecture of the engineers and the culture of Modernism. It should in any case be said that the quest for aspiration promoted by the new pioneers, seeking to give form to the designing thought and not to the “*constructing*” materiality, led towards greater experimentation into static systems than had been the case before, systematically eschewing all possible visual references to the architecture of tradition.

The attitude towards the problem of typological specialization was different, being driven by the Modern Movement to its most extreme conclusions in the attempt to connect deterministically, naturally, and not conventionally, the signifying forms to their ritual signifiers, reduced to a statistically determined function. On this aspect, the elegance of many of the solutions in the nineteenth century was unfortunately lost in the Modern Movement’s corresponding experimentations.

But there exists a further factor which inseparably relates the architecture of the engineers to the most innovative achievements of Modernity. The experimentation conducted in the second half of the nineteenth century entailed effectively overcoming the classical morphological articulation of the parts. In the most advanced developments they abandoned the threefold division into base, elevation and roof, directly derived from the tectonic interpretation of the origins of architecture, as was still clearly emphasized in the Enlightenment by the Abbé Marc-Antoine Laugier. Even more important was the destabilization created between structural, distributive and volumetric correspondence within the traditional morphology, itself also plainly derived from the tectonic interpretation.

For the first time the theme of architecture for a mass consumer society, marked by the loss of the direct relationship between production and consumption, the expressive accentuation of the condition of anonymity that derives from it, intentionally created a dissociation between structure, distribution and volume, which eventually prompted Le Corbusier to undertake the theoretical clarification of the “*free plan*” in the prototype of the Maison Domino. So the structural system was reduced progressively to an immaterial grid which acted as the organizer of a free and theoretically boundless spatiality, multiplying the points of view and the opportunities for articulation, while the volume lost tectonic consistency by being translated into a pure envelope-surface, which osmotically related interior to exterior without however making them into a single substance.

The idea of interior as exterior, expressed by the architecture of bourgeois mass consumer society, constitutes a public domain understood as a built environment. This aspiration is shared by Structuralism, though there are substantial differences in the significance of the intentions and in the architectural “*languages*” used to achieve them.

With regard to the first point, we have to remember that while

Structuralism

bourgeois society resorts to this type of solution to accelerate and multiply the urge to consume and opportunities to satisfy it in a society substantially dominated by the speed of relations and their potential anonymity, Structuralism uses it to definitively undermine the concept of functionally specialized space, held to be responsible for the process of progressively impoverishing the architectural experience. So the open and indeterminate spatiality of the last generation of the CIAM became synonymous with the possibility for free interaction and multiplication of unpredictable opportunities for relations between objects and rituals.

As for the second point, there are two observations to be made. The first is syntax. Precisely because the objective of Structuralism is to recover the sense of urbanity lost in the traditional city it uses an open syntax, additive in nature, unlike what had happened mostly in nineteenth-century culture. In this period the freedom in the layout of the interiors encountered an evident limit to their vitalizing effect in the clean and compact surface of the outer volume, as if seeking to reveal a qualitative difference between the urban dimension and the architectural by relating them to completely different scales of reading. In an interpretation of the city still substantially “*classical*”, Structuralism directly reflects on the exterior the complex spatiality of the interior, in evident opposition to the traditional practice adopted in urban design.

The second is morphological in character. Paradoxically, the choices of Structuralism are more traditional than those pursued in the architecture of engineers. While the latter, in its boldest experiments and in dealing with less institutional themes, led to the morphological dissociation between structure, space and volume, anticipating Modernism, Structuralism sought to mediate between the Classical unity of *firmitas*, *utilitas*, *venustas* and the serial logic of the industrial world. The parts, multiplied in highly articulated patterns, capable of producing unpredictable and complex configurations, often restored the Classical threefold division into base, elevation and coping, besides the integration between structure, space and volume. Also in this case an analysis of a linguistic kind makes it possible to analyze in far more detail the complex dialectic between innovation and tradition within the urban project, revealing unprecedented correspondences which more conventional instruments of interpretation would fail to bring out.

2.2.4) The role of architectural “*language*”

In discussing the architecture of the engineers we have to distinguish the experimentation of those who understood the potential of innovation in purely technical terms from those who intuited the great spatial properties which could be achieved through the instrumental use of those same technological innovations to serve the needs of consumer society. In the latter case - and the works analyzed have enabled us to verify this - give the lack of first-hand written testimony by the

Dissolution of the traditional morphology

protagonists themselves, particular emphasis should be laid on the progressive disintegration of the traditional morphological categories. On a number of occasions we have seen that the architectural tradition and classical culture, which constitutes a sort of progressive abstraction of the former that reduces it to its essential logical-syntactic structure, associated with a tectonic foundation of architecture, reposed in the threefold division of the order, though in its different variants, the synthesis of the first principles of the correct articulation of space. The presence of a base, an elevation and coping always represented a paradigm to which to relate the contribution of *firmitas*, *utilitas* and *venustas* in unified and strongly integrated terms.

The architecture of engineers calls into question the tectonic foundation of architecture, denying that the primitive hut can be taken as the model from which are derived all the splendours of architecture, and therefore implicitly rejecting the idea that the classical threefold morphological division can be taken as the logical-syntactic foundation of architecture. But it is extremely interesting to observe that the architecture of the engineers also distances itself from Enlightenment culture which, while denying the logical foundation itself, and opposing it with the universal one of the compositional method, in the definition of the parts, which constitute the smallest units endowed with spatial significance, maintained the advisability of a unified and integrated combination of the structural, functional and distributive factors so as to fully achieve their ultimate configuration.

Hence within Enlightenment culture there also persisted evident debts towards a theory of architecture, that of the treatise-writers derived from Vitruvius, which was, nevertheless, substantially deprived of its tectonic foundations. The most innovative achievements of the engineers opposed the traditional morphology with a free articulation of the structure, space and volumes. The static responsibility of the structure was dissimulated through its progressive reduction to a pure three-dimensional frame ordering and measuring space, even when its endless repetition tended to make it substantially lose its full recognizability. Even though the uprights and horizontals of the frame repeat the forms of the architectural order, this meets the need not to offend against the current taste rather than being implicit recognition of the tectonic foundation of architecture. Likewise, the space is organized as an open plan, an artificial ground reiterated so as to multiply its potential and its degrees of freedom, cut out and shaped to suit the needs of specific programs, which can be articulated with flexible diaphragms without entailing the loss of a unified conception of their development. The volume no longer has the classical responsibility for rendering manifest the syntactic articulation of the spaces on the outside, since it also takes over the relevant static functions, and is reduced to pure envelope, artificial "*skin*", texture. Finally it is capable of only meeting the need to screen the internal space of the architecture from the external space of the city, hence subordinated to programs of a completely different scale and order. Even though this property is substantially used in the nineteenth century to avoid shocking the public's sensibility and conventional feelings, this does not lessen the value of the innovation introduced. Naturally these results always were

not always attained. It is necessary to distinguish, as we said at the beginning of this paragraph, technical experimentation from linguistic. A work like the *Magasin au Bon Marché* is a masterpiece unequalled by any other text in the period. Also Baltard's deposit for the *Bibliothèque Nationale* in Paris, though anticipating this morphological dissociation, does not seem to show the same spatial awareness. He may have been partly hampered by the lesser degree of novelty in the brief he was given.

So what it seems relevant to emphasize is that once again every materialistic interpretation of architecture is thrown into crisis. And the architecture of the engineers, in this respect, paradoxically presents truly exceptional testimony, destined to provide a frame of reference on the methodological level for subsequent experiences. The constructional factors are therefore largely subordinated to the achievement of a spatial purpose which, in terms of pure conception, completely ignores them, and is developed on the logical-syntactical level, as a product of langue, a result of thought. The new techniques available to architects and engineers in the second half of the nineteenth century helped foster a new spatial sensibility, but to no greater degree than the decisive contribution of the new rituals expressed by the consumer society, of whatever nature they were. The role of technologies and materials returned overwhelmingly into play when that spatial thought sought a coherent expressiveness.

To confirm this thesis, I feel it is useful to note the surprising assonances between the experimentation of the engineers and the most advanced contemporary work, discussed fully in the last chapter of this book. Even though the expressive connotation is different, the interpretation of spaces presents numerous analogies. There is a profound consonance of a logical-syntactic-conceptual nature. So it hardly seems irrelevant to remember that contemporaneity found its "*retroactive manifesto*" in the American "*technology of the fantastic*", namely in an experiment developed in the second half of the nineteenth century by the American engineers in parallel with their European colleagues. Likewise, relative to the American experience, Koolhaas recalled in *Delirious New York* that the revolution subtended by those experiments was made possible by its responsible and conscious non-theorization. In the same way it seems we can justify the theoretical silence that surrounded the works of the French fathers, perhaps aware that a too obvious clarification of the revolution under way would have definitively denied them the continuation of a fascinating adventure.

2.2.5) The role of "*type*"

If the culture of the Enlightenment can be considered the first complete and conscious push towards typological specialization, evident in the case of traditional building production, paradoxically the architecture of the engineers, while introducing unprecedented functional themes, even in relation to the theories current at the start of the century, restored the idea of anonymity to the field of architecture and the

The foundation of the new archetypes

urban project, as far as this was possible, given the very small number of experiments on this scale (only the universal expositions could give a complete idea of the new urban potential of architecture in iron and glass).

If Enlightenment specialization is bound up with the loss of importance and centrality of the subject of the home in architecture, on any scale, in turn attributable to the rejection of the tectonic foundation of architecture implicit in the archetype of the primitive hut (as the Abbé Marc-Antoine Laugier still considered it), the homogeneity of the production by engineers is not achieved by a recouping of that same theme, nor by its abstract reduction. The architecture of the engineers does not resort to the elaboration of a spatial module, classically complete in terms of *firmitas*, *utilitas* and *venustas*, in order to confer a unified and homogeneous form on the different genres and species of current production.

As we have seen, by introducing the induced morphological revolution, the quest for anonymity and homogeneity was conducted within a complete dissociation from the classical heritage. For this reason it is perhaps inappropriate to speak of archetypes, if the term is used to define an innovative model easily visualized, such as Le Corbusier's *Maison Domino* for Rationalist Modernity. If, however, we understand the term in its more general sense of a universal property, which has no conventional value and historicity (and in this sense we could open a very interesting strand of research, above all relative to certain examples going back to primitive cultures), we can legitimately affirm that the archetype of the hut was replaced by that of the "*artificial landscape*" and that this has become the potentially unifying factor (the potential is inevitable, seen the unfortunately meagre use of the results obtained in the field of the urban planning) of the whole of current production, regardless of the limitations of its functional program. The New York experience, which I have chosen to analyze more systematically in the penultimate chapter, seems to show this clearly. The brief experience of the architecture of engineers thus constitutes a fundamental phase in the definition of a new language of architecture and of the city, which remained "*frozen*" for more than a century and has only been rediscovered in recent decades in a new-found affinity in the cultural climate. Once again it has been shown that language has neither boundaries nor territory, revealing itself as a transversal factor of continuity capable of relating cultures that are distant in space and time, without necessarily presupposing their presence. Hence the necessity of language and its awareness.

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2.3) Architecture, Urban Planning and positivist thought

2.3.1) The cultural context

Positivism has had a considerable influence on the principles of organization of urban space with the increasing relative complexity of its structure. At the same time it offered an alternative to the response given by eclecticism to the problem of the “*representatability*” of a situation in constant transformation. Transformation has always been a feature of the city, seen in a diachronic perspective. However, the modes and phases of the phenomenon in the second half of the nineteenth century were unprecedented. Haussmann’s transformation of Paris left a vivid impression on contemporaries, as is well known, due to its relative intensity and the radical way it altered the traditional pre-industrial landscape of Paris.

The city as organism

This rapid and consistent dynamic, seemingly unstoppable, gave rise to the spread of the so-called “*organic*” metaphor, an interpretation which likened the city to a “*natural*” phenomenon, governed by laws of growth and transformation similar to those found in nature.

The city was increasingly regarded as a self-regulating functional organization capable of metabolizing all market forces within itself and optimizing the use of available resources. Characteristic of the “*positivist*” attitude was the conviction that the city itself is simply the product of those forces that determine it and are external to it, the processes of reality. Simultaneously, for the first time it was now denied that, apart from those pressures, there existed any possibility of endowing the city with a form complete in itself, hence that the city could be seen as a system of representation of values endorsed by part of the bourgeois society of the period. It was the assimilation of the city to an organism, or to a natural phenomenon, which denied in principle

the possibility that the city could endow itself with a conscious image of itself.

One of the immediate consequences of this attitude to the city was a sort of dismantling of architectural values, a system of rules by which to organize the city as significant form. It was simply and progressively replaced by technology, namely planning technique, whose purpose was to regulate urban growth so that its results did not contradict the principles that had fostered it. The emergence of urban planning was thus closely related to the spread of positivism. In this respect there is a precise relevance in Alan Colquhoun's characterization of the crisis in the discipline of planning during the 1950s caused by the encroachment of sociological, political, technological and systemic interpretations onto the field of architecture. "*These tendencies – which are still very strong – are, in one sense, the result of one of the most powerful motives of avant-garde art since the mid-nineteenth century – the drive toward 'realism' or 'naturalism'. The successive artistic revolutions of the last 150 years have all been attempts to 'get behind' the 'stylistic' representation of ideas, to destroy the artificial rules which not only mediate between the representation and the reality, but also give this representation a special ideological colouring.*" (1)

It also explains the aversion of positivism to any form of conventionality or any system of rules other than the "*natural*" rules used to reconstruct reality, understood as a pure phenomenic datum, on the basis of artistic laws. In this perspective of research and analysis, "*positivism*" and "*materialism*" deny the "*structural*" nature of the city. Another result is the cessation of one of the most interesting paradoxes of urban design: that of the physical form of the city as a state of conflicting coexistence between "*representation*" and its object or referent, which have never succeeded in coinciding.

As we have seen, urban planning arose as a technique to control the "*natural*" growth of the city, in compliance with the shared principles of a bourgeois culture engaged in affirming and consolidating its own status.

It is also clear that, as an instrument for the management of a process, which (like all processes of an "*organic*" nature) does not aspire to achieve an urban form complete in itself – though there are exceptions – urban planning sees the pursuit of an a priori image of urban space as a possible limitation to the spontaneous manifestation of the forces that contribute to its development. These forces, seen in purely utilitarian terms, are primarily economic.

Having identified the substance of the city, the introduction of a master plan and general urban planning code established a first clear divide in the way the city was developed. This approach first made a distinction between the instruments specifically adopted to control the functioning of the city (namely the location in its territory of the public parts in relation to the private parts and the possible ways they could be correlated) and the instruments used to define the city's architectural image.

The first function was that for which Master Plans and building

*Town planning as technique:
master plan and building
regulations*

1. Alan Colquhoun, *Essays in Architectural criticism*, New York, The MIT press, 1981, p.67.

regulations were introduced. The second was strictly related to the urban project. The first two were clearly regulated in their reciprocal spheres of influence and detailed in content; the latter was left to the interpretation of the individual and did not attract specific attention until the late nineteenth century. The reasons for this divorce were implicit in the utilitarian philosophy that governed the transformation of the city. The Master Plan and building regulations organized the new urban rituals by defining their various functions, the ways they could be integrated and the possible connections between them, as a function of various economic, social and political parameters. The urban project was only responsible for designing the expressive features of the city. To this point, of fundamental importance, should be added a second. The urban system and the style of building were no longer considered as correlated phases of a single criterion of the organization of space, but as clearly belonging to separate spheres of influence, as were the various forces involved in their conformation, though they were in all cases economic. This distinction seems to confirm a distinction of fields of competence between the powers affecting the system of property ownership and those which are limited to the construction of individual parts of the city.

The Master Plan established the system of infrastructure, regarded as essential in a “*naturalistic*” metaphor of the city, because it materially governed the flows through which investors’ capital moved, and the areas with specific functional uses or the principal organs of the urban “*body*”. The building regulations established the criteria by which each type had to be defined, as an expression of the institutions of bourgeois society. These instruments clearly expressed a new factor in social organization: the forces that promoted the city, i.e. capital, acted on a different level from those that actually built it, i.e. the building market. This was, of course, a reflection of the changing times. The principle which nevertheless continued to foster the city was purely utilitarian.

The adoption of the organic metaphor as a principle governing the criteria for the organization of the city involved an implicit equivalence. The affirmation that the construction of the city was not a social or cultural problem implicitly undermined its historical foundations. The construction of the city was no longer the result of a system of shared knowledge closely linked to its location and history but of a wealth of technical information that could be developed in very different geographical situations. Technical manuals dealt with the various types of buildings which could be adopted by the market, and there were studies of models of the most appropriate urban organization to guide the city’s growth. They expressed the awareness that the problem of the construction of the city was increasingly independent of a heritage of memories and increasingly dependent on a scientific approach to problems that had by this time acquired a universal character, being common to all societies of a bourgeois kind.

Apart from these factors there were others of equal importance. The models presented in construction manuals were strictly utilitarian and functional. In other words, they were essentially layout plans which

Manuals: models for planning and the city

adopted the same approach to the scale of the building as to the city as a whole. The building type is simply interpreted as a functional scheme which maximizes economic choices. Thus the organization of home units on different levels, their forms, the layouts of rooms within each dwelling and the connections between them are aimed at maximizing capital investment and economies of construction. The models in the manuals defined the rituals of dwelling in relation to housing conditions. They offered the maximum economic yield for the “*artificial ground*” of the building, in the same way as zoning and building regulations subordinated the definition of the rituals of the city to the maximum economic yield of urbanized land.

All the organs of the new urban “*body*” were analyzed and recomposed with the same rigor as in an anatomical dissection. The different parts were then relocated on urban land to maximize the utilitarian criteria. Likewise the complex urban ritual was reduced to its elementary actions, subsequently reorganized into structures and systems so as to maximize the economic yield of the urban body itself.

For this reason the city was designed by division into its systems: circulation, workplaces, dwelling places, places devoted to recreation and leisure, community services. Each of these systems was in turn divided into structures. So, for instance, the system of circulation was divided into rail, road and pedestrian circulation, and design principles were established for each of these categories so as to maximize their functioning. The same distinction was made for the materials used in the construction of different kinds of buildings.

After this “*partition*”, based on a division by systems, structures and elements homogeneous in their functioning, planners passed to a subsequent phase of consolidation, intended to maximize the economic yield of the resultant organisms. This whole process was managed through the instruments of the master plan and building regulations. It followed that the elementary actions into which the urban phenomenon was subdivided were then recomposed on the basis of utilitarian criteria. Hence the resultant urban rituals were restricted by the choices made in this phase.

Infrastructures: circulation, housing, parks, work, services.

Though the pre-industrial city was characterized by deep internal differences in its different parts and subject to traumatic events such as wars and plagues, it developed over time by a continuous process of small-scale adaptation of pre-existing built and urban structures. Thus it is fair to say that the city, as a system of built forms, guided the processes of its transformation. The form became in effect a bond that characterized the results of processes of change which, by their nature, tended to be embodied in the same forms in different contexts. Under constant economic and political conditions, which enable us to speak legitimately of phenomena that traverse Europe in the course of the different historical periods with a substantial similarity of behaviour, the territory, understood as a highly distinctive support for urban life, and the local culture of building, become responsible for the assimilation

New cities and pre-existences

and translation of the pressures that tend to be standardized.

This scenario changed dramatically during the nineteenth century. It seems to have become impossible to transform the city gradually so as to adapt it to the changing conditions of use. The nature and intensity of the forces at work were such as to require a wholly new form to match an equally profoundly altered society. The form of the traditional city was considered in all respects an impediment to the free expression of the forces involved in the organization of the bourgeois city. This scenario justified the desire to recognize the validity of the deterministic relationship between cause and effect, the basis of the natural sciences, in economics and social sciences, and to assimilate the urban phenomenon to a demonstration of Newtonian "*mechanics*". The aberrations of this attitude became evident in the course of the urban experiments of the twentieth century, but the first signs were already contained in the urban philosophy which informed the previous century. Conscious of the need to always judge the results of a real process in terms of consistency with regard to the reasons that produced them, and not as data to be subjected to the evaluation of different and above all later categories of thought, it must be said that the problem of the bourgeois city, tackled with scientific rigor and a productivist method, found in these experiences a first formulation entirely consistent with its postulates. The attitude with which the culture of the Enlightenment and Eclecticism had addressed the problem of the relation between the universal validity of reason and the mechanism of thought assimilated the reality of design to a scientific practice only in its adhesion to presupposed common values but never wholly shared the method. Rationality of thought in the Enlightenment, rationality of history in Eclecticism and rationality of the production process in the architecture of the engineers were thus replaced by the rationality of the method in the urban culture of positivism.

2.3.2) The ideas of authors: intentions and definitions

Ildefonso Cerdà's work is considered the first official act of foundation of a new scientific discipline, Urban Planning. This is not to say that the question of the project of the city had not been raised systematically before him. All the treatises of Renaissance origin, derived more or less directly from an interpretation of Vitruvius, had already considered the problem of how to give systemic form to the various kinds of knowledge which deal with the organization of the city. Nor can the difference in approach be reduced to a simple recognition of the different kinds of problems that arose in the nineteenth century compared to earlier times (massive urbanization, the issue of overcrowding, the organization of transport systems, the division of society into classes which emerged for the first time). This, if anything, as Cerdà repeatedly observes in his treatment of the question, is the "*content*" of the urban phenomenon, namely the condition of its very existence.

The truly innovative factor was purely methodological. It was a question

*General theory of urbanization,
Ildefonso Cerdà, 1867*

of observing the city with the same rational attitude with which the scientist observes the natural fact in order to establish, through comparisons with similar cases, hence through a clearly “*associational*” approach, the laws and their nature that govern the behaviour of urban data. The assimilation of the city to a natural phenomenon, a “*body*” Cerdà often calls it, is the most direct proof that the study of cities which he was proposing was to be based on facts and not on the authority of a tradition invoked in order to cope with issues that are clearly contemporary. In this respect the experience developed by Cerdà implicitly measures his critical distance from classical treatises, in which, instead, the direct appeal to the authority of Vitruvius is taken to guarantee the approaches and proposals contained in the treatise.

This clear desire to rethink the city and analyze it as a “*natural*” phenomenon, meaning the city as a phenomenon which presents itself for our observation without any affectation of a cultural kind, but simply asking to be analyzed for what it really is, or that its evolving social “*content*” expressly requires it to be, relates Cerdà in one way to the attitude of Rousseau and on the other to the culture of positivism, with which he shares a clear desire to deal with any socio-humanistic factors with the same instruments used in science. Whatever your opinion of the author and his work, there is no doubt that his attitude towards the urban phenomenon is innovative.

For the purposes of our argument it is also more important to note that Cerdà undermines the classical idea of the city as “*representation*”, still clearly expressed by the culture of the Enlightenment (as in the for urban picture painted by the Abbé Laugier for the new Paris and that of Ledoux for Chaux), i.e. its image as a signifier of the urban form that responds to a precise idea of the configuration it should take, based on widely accepted conventional codes. Cerdà opposed this “*representation*”, associated more or less precisely with one urban type (though applying the term type to the city involves some exaggeration, due to the difficulty of assuming control in architectural terms of the urban phenomenon in its implicit complexity), by the construction of a complex phenomenon, in accordance with a calculated and rational sequence of elementary operations into which the former is decomposed, which acquired a precise significance by virtue of their temporal scansion and not as projections of the present, forecasts - or representations - of the probable future configuration of the urban organism. Cerdà opposed the perspective depth of the urban image with the organic dynamic of datum of culture reduced to a fact of nature. In this way he was forced to free the city from all its historicist encrustations, which might disturb a scientific analysis of the urban, starting from the very language traditionally used to indicate all the constituent parts of the city. The knowledge acquired concerning the planning of cities has therefore first to be “*cleansed*” of any undue reference to a specific city or identified historical events. Only in this way will it be possible to identify the whole range of constituent elements of the city, because common to all cities regardless of their history, and study their functioning so as to meet the needs of the urban contemporary phenomenon.

Antonio Lopez de Aberasturi produced and translated an abridged

version of the text to which we refer. Originally over two thousand pages long, he reduced it to two volumes, with four planned for the complete work. It is worth quoting the words in which he recognized the innovative nature of Cerdà's contribution: "*The urban ceases to be a system of 'representation' rooted in the episteme of classicism and explodes mentally in the same way as it had exploded physically under the weight of the industrial revolution. His significant references to other systems (urban society, the rent of land, techniques of construction of buildings and public works, etc.) and the unity of the sign, representation, no longer contains its significance.*" (2) All these aspects, which were therefore expressed succinctly in the representation of the type, of housing and/or urban as the case may be, suffered a sort of internal explosion, under the effects of the analytical spirit with which the man of science "*vivisected*" their organic body, to be reassembled within the new configuration, still vague in character, so that every vital force could freely expand and thus reveal itself fully so as to shape its corresponding organ. This life force, if it is not enabled to express its potential freely, as the very reason for the city's existence, or its "*content*" (in nature as in phenomena of a social character) comes into conflict with its "*container*" or "*organ*". Life can be transformed only by giving it the opportunity to change the city to fit the measure of its own nature.

This need, according to Cerdà, was even more compelling in the capitalist society of the nineteenth century, with new forces demanding the provision of new instruments capable of communicating and adequately exploiting the energies induced within them. This new force was the application of the engine as motive power, a revolution that was destined to change the course of history and to bring about a traumatic change in the traditional classes and relations between them. The cities of the nineteenth century, the "*containing*" forms, were a hindrance to the new civilization. For this reason Cerdà in 1849 abandoned a successful career in the Engineering Corps to devote himself entirely to the foundation of an urban science. He wrote: "*Our cities are organized in such a way that, in every field, they disturb, obstruct and impede the activities of individuals, whatever their class or social status, at every step.*" (3) Where this impediment would be considered as a distinctive and valuable aspect of the identity of an urban context, Cerdà simply found an undue restriction which was the expression of a vitality that was social, economic and political, and simply wishes to release its strength independently of any kind of formal constraint. Still on the same theme Cerdà continues: "*Our cities are like the layers of geological formations: each of them reveals to the eyes of the scientist the true conditions of nature at the time of its formation.*" (4) So it is not laws of a formal kind and that guarantee and perpetuate the growth of the urban organism, but economic, political and social laws. The city, in its formal consistency, has been continuously subjected to more or less minute and extensive processes, and this has been made possible, according to Cerdà, by a degree of continuity between one civilization and another. "*The important question is ... whether, when a profound and radical change is made, this monumental work, the result of successive periods none of which is similar to ours, can be adopted and adapted to new needs that we feel today.*" (5) Cerdà is aware of the traumatic transition entailed in

2. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, pp.50-51.

3. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.76.

4. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.77.

5. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.77.

an attitude of continuity with the existing city compared with one of rupture, as is inevitable. For this reason he opts for an intermediate solution which he calls “*transitional*”. Urban vitality, in other words, has to cope with the power and rootedness of habits. In this respect Cerdà implicitly acknowledges the limits of the “*scientific*” interpretation of the urban phenomenon when he accepts the confrontation with the persistence of inherited values, which are primarily cultural (including in the urban sense). However, his stated aim is to study the “*container*” as a direct expression of the urban social and economic “*contents*”, in the same way as the form of natural organisms is analyzed as a natural explanation of the forces acting through them and modelling them. In this sense, form, anticipating the ideas of Le Corbusier, acquires a purely instrumental value, which is far from being independent from its arguments, unequivocally heteronomous. The city becomes an essentially “*technical*” phenomenon, which requires a resolution of the same nature. In this way any reflection on the nature of language in its forms loses all significance, as well as its importance in the process of organizing space. The overriding objective thus becomes to understand the process by which the huge urban agglomerations of industrial society have gradually formed. Cerdà defines the structure of his work: to clarify the nature of the basic components that make up the city in order to isolate its “*ills*”, to present a theory capable of extirpating them, to translate the theoretical elements into an organic technique of intervention, to submit the proposed model to the verification of a sample application. It should be stressed that his primary object was not so much the definition of the morphological categories that make up the urban form, or even the city as an artefact. The author explains: “*Beyond materiality, I wished to indicate the organism, the life, so to speak, that animates its material part.*” (6) The emphasis is therefore placed on the “*contents*” and not on the “*container*”, in a way consistent with the ambition to establish a science of the urban phenomenon, capable of recognizing its functioning, establishing its causes and constantly the analogy of its effects in the different possible applications.

As we already noted, the objective of strengthening the scientific status of analysis and the need to avoid a compromise with aspects of the history of cities and their territories, led the author to establish a new technical terminology.

He had firstly to choose the most appropriate term to define the urban phenomenon. His choice fell on “*urbanization*”. “*The term refers to the set of acts that tend to create a group of buildings and to regulate their functioning.*” (7) The emphasis is on operations that justifies the creation of a built-up area, and not on the form of the area itself. In this respect Cerdà draws on etymology: “*The word urbs, a contraction of urbum which indicated the plough, an implement which the Romans used at the foundation of a city to delimit the area occupied by a population when it was founded, reflects and expresses everything that would be contained within the space circumscribed by the furrow traced with the help of the oxen sacred.*” (8) The origins of urbanism are to be found in the history of primitive man, or natural man, ideally devoid of historical influences, in seeking to follow the evolution of social relations from individual forms to the first complex events. In particular, Cerdà observed: “*Where there is this*

6. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.81.

7. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.82.

8. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.82.

9. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.84.

first shelter there is also the origin of urbanization."⁽⁹⁾ The problem of housing is therefore of central importance to an understanding of the roots of urbanization.

Primitive urbanization has known three ages. In particular in the third age, which Cerdà called the "*Tuguric*", was divided into three different periods, dominated by the shepherd, the farmer and the hunter. These are simple homogeneous combinations as they are supposed to have occurred at different times. Each of these societies in their embryonic stage is matched by specific needs and equally specific landscapes. The pastor needs fields, hence arises the need to have a simple grouping of fields without fences and with few roads. With agriculture individualism grows significantly and the homes are isolated. This state of isolation is substantially superseded by the need to exchange products. In this way, rural settlements distinguished and characterized by equally diverse or specialized forms of production tend to pool their knowledge and their products. The houses are built closer together and are articulated through divisions into housing, storehouse and work space, and are linked by an increasingly dense network of roads. Hunters originally had no needs that could alter the configuration of the settlement. Only when they gave up hunting animals to devote themselves to hunting men, as they become warriors, did they encircle their settlements with massive walls, significantly altering their character.

The elements that Cerdà recognizes as constituents of primitive settlements, because of their specific needs, do not in fact occur in isolation but coexist in various ways. The result is what Cerdà calls simple heterogeneous combinations. This phenomenon generally appears at the foundation of a colony. Inside the houses remain isolated in relation to the needs of each group. The instinct to socialize brings houses into ever-closer relations by means of the streets. This gives rise to dispersed urbanization or ruralization. When the population grows beyond a certain threshold, the head of the tribe with the supernumerary inhabitants abandon the original settlement in order to found a new one. Choosing a different territory and being able to enjoy different products, over time accelerated relations of socialization through increased trade and cultural exchanges. The primitive city, in its original manifestation, is characterized by the coexistence of different peoples, instead of just one. From the examination of contemporary urbes, Cerdà comes to recognize the existence of three parts: the region, the suburb and the urban core proper. The region arises from the interrelation between the city and the territory to which it belongs. The region, in this sense, gives each city the identity in time that defines its character. The suburb is organized along the roads linking neighbouring regions to guarantee the traveller in transit between one city and the next the opportunity of a pause for refreshment. Over time, with the growth of cities, the suburbs are destined to be absorbed into them and become an integral part of them. Speaking of the urban cores, Cerdà says: "*By urban core we mean the agglomeration formed by the buildings of the urbs, linked by a system of roads ... The urban agglomerations were formed at various times under a law imposed by the human need for socialization, in the same way in which natural crystallizations develop by molecular affinity.*"⁽¹⁰⁾ Once again the city is defined using an organic

10. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.104.

metaphor as an expression of forces of nature which are extraneous to that of its “containing” forms. Fig 1

Associated with the same metaphor is the idea that the form of the city is attributable to the different nature of the forces acting on it, which depending on specific cases will fall into centrifugal, centripetal or others. It is interesting to note that, once again, within an avowedly positivist outlook, though careful not to unduly disrupt the traditional approach to the problem of the city, which presupposes its “idea” or synthetic prefiguration, the form of the city is expressed as a result of a process whose forces are similar to those that govern nature. Despite this attitude, Cerdà’s argument contains references to the history of the city and in Barcelona in particular. On the question of the limits of the city, Cerdà recalls how the presence of the walls, although justifiable for defensive reasons, over time becomes an obstacle to the transformation of the urban organism. In particular, it causes a marked increase in density of construction, raising the values of rents of position and creating a *de facto* monopoly of land by those living within the walled city. He also reveals an awareness of the role played by so-called “invisible” limits, such as those established by the imposition of customs duties and direct taxes or simply due to administrative boundaries that have no direct correspondence with the form of the city, so showing the impact of heteronomous forces on the configuration of urban space.

Having defined the urbs, Cerdà passes to an analytical examination of its components. He takes streets, city blocks, building land and housing as the basic “materials” of the urban organization, in their turn constituting elementary urbes. Urban public monuments are analyzed in terms of productivity, as possible obstacles to the organization of the urban circulation of vehicles. The installation of a tramway in urban streets is mentioned as an example: it is an undeniable obstacle for traditional circulation yet a mirror of the changing times. Once again the author returns to the conflict between “content”, the urban vitality that justifies the organization, and the “container”, meaning its form, which no longer corresponds to a clearly recognizable functional need and therefore requires be modified. Innovation is no longer possible in a society that has profoundly subverted its economic, political, social and cultural equilibrium. The logic of the transformation that characterized the city until the industrial revolution is now subjected to heavy criticism.

The rationality of Cerdà’s analysis of the urban phenomenon appears in the systematic way he examines the urban question, taking it point by point. The first “material” he considers of fundamental importance is the road network and control of the street screens, which effectively demarcate the urban road network. Streets are divided into transcendental, meaning those connecting the city with the region; urban, connecting the different quarters within the city; and private, leading to individual homes or distinct groups of homes. The various categories are reciprocally interrelated, so that their functioning should be seen in an integrated form.

Similarly, each city block can be considered an elementary city, with the pavements delimiting them clearly. The block is, however, a term that evokes several historical meanings, by virtue of its multiple occurrences.

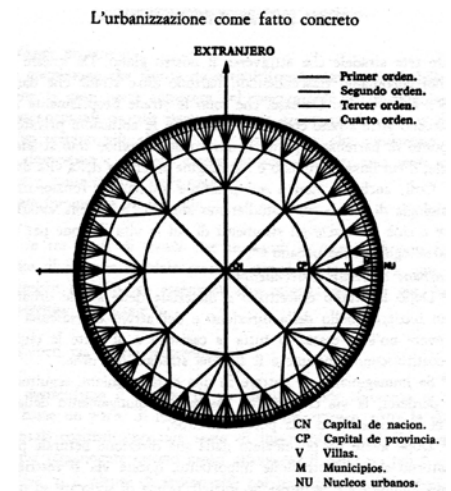


Fig 1. Urbanization as a “concrete fact” implies the capacity to immediately recognize the existence of an underlying structure, or a relational system, which is grounded on two fundamental principles. The former is the implicit recognition of entities (the different level of power control or the “roles”) which are in the author perspective urban nucleus, municipalities, cities, Province capitals, Nation capitals. The latter is the implicit assumption of the existence of a mutual correspondence (the shared language or the “rules”), which are in the author perspective the four different Orders. The problem is that the structure is presumed and not questioned. The Modern urban perspective, at its foundation, is therefore based on the implicit identification of principles and categories which are presented as natural phenomena observed through the lenses of a scientific approach. The resulting urban catalogue is therefore coherent with those presumptions, not presented as hypotheses.

For this reason he terms it the “*interway*”. The irregularities found in the historical city are recognized as constraints of a functional kind, but Cerdà believed they should be eliminated in the nineteenth-century city. It should be replaced by a criterion capable of laying out the interways in parallel lines, so as to create uniform conditions of exposure to sunshine during the day. Cerdà also analyzed systematically the methods of subdivision of land, showing that the monopoly of building land related to the walled city was the cause of the progressive fragmentation of ownership, in an effort to maximize land use.

Cerdà recognized the importance of building land and its design as a “*material*” of urban organization which provides the support for housing. In this respect he observed: “*It might seem logical for housing, the final target of urbanization, to impose its laws on building land. The reality shows the opposite: it is the building land that imposes its tyrannical laws on housing and determines the conditions for its construction.*” (11) In this way Cerdà anticipated one of the topics on which Modernist building culture was to develop. The city has to rise by successive aggregations, according to a process of addition, from the recognition of the basic characteristics of its elementary building cells, their aggregation into urban tissues and districts, endowed with the basic services, until they compose the city itself as the sum of districts sharing certain services at a superior level. The “*logical construction*” of the city is identified, in keeping with a method of scientific analysis, through the sequence of operations for determining the characters of its components and their preservation, once the former are inserted in increasing levels of articulation. This process, which cannot be called modern in the strict sense, being the method of composition followed by Durand, became the basis of all architectural composition in the nineteenth century in the Beaux Arts Schools. This approach invariably started from a synthetic and general preconception of architecture and proceeded through successive refinements to the identification of its elementary components.

Cerdà considered the house as an elementary city. Hence speculators operated in the following way: given a piece of land, they inserted a building on it that would contain the largest number of dwellings. The city and the home are treated as analogous structures. “*The reason is clear: given that each space has to fulfil two necessities – movement and staying still – these needs are the same for the individual, the family and for collective bodies.*” (12) Given these premises, the detached house seems to be the only one that meets the needs of human nature. Significantly, referring to the properties that the house must have, Cerdà speaks of satisfying “*human nature*”. This is again a symptom of the aspiration to identify the satisfaction of psychological needs as the satisfaction of needs of a universal character. Instead of pursuing the model of the detached house, the only kind capable of ensuring adequate living conditions, real-estate speculators continually adapted the existing stock of housing through operations of superposition, juxtaposition, and especially the reduction of the original living standards. They eliminated specialization from the interiors so as to promote serialized and repetitive building.

After defining the components, Cerdà analysed the integrated

11. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.128.

12. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.132.

functioning of the city, from the study of circulation at intersections with the need to minimize the shared use of parts, etc. Fig 2 He saw the public administration as having a central role in the management of the integrated functioning of the different urban “materials”. His analysis clearly shows that the formation of the city, its transformation over time and the current urban situation should be reviewed in relation to the transport systems, which constitute the fundamental reason for its existence. Cerdà proposed a reading of the city that would take into account primarily the relationship between its form and the modes of transport. In the past, when people walked, paths were traced by their habitual movements; with equestrian transport people’s material and temporal horizons were significantly broadened, being consolidated by transport by pack animals, first, and later by the wheel. Cerdà acknowledged steam locomotion as being unprecedented in human history. The transformation of Paris by Baron Haussmann derived from the need to update the obsolete “container” of its form to a “vitality” (the content) that was entirely unprecedented in its forms and phases, while trying to safeguard the established mechanisms of rents. In this respect the author considers the onerous expropriation of land by the Public Administration as an absurdity, given the immense profits produced by land as a result of real-estate developments. He believed that on the contrary the problem of the city ought to be addressed systematically and with scientific rigor by “*putting ourselves completely in the hands of science and obeying it blindly, in isolation from everything that exists, in order to subdue our achievements to its indisputable principles.*” (13)

To achieve this goal, the author stated in the prologue to the first volume: “*I believed it would be useful to begin with a detailed analysis of all the elements that shape cities ... The analysis begun in the first volume was as simple as possible, abstract and general.*” (14) After dealing with the material part of the city understood as significant form, Cerdà was aware of the need to verify the functioning of the city in the abstract by its application to a particular case, that of Barcelona, so as to check the relations between “container” and “content”. In this regard, statistical analysis proved an invaluable tool, capable of giving an objective representation of the life of the city and of its functioning. “*We apply the term ‘functioning’ to the way the content uses the container and we express it quantitatively through the relations between the members of the urban organism and the members of the demographic organism.*” (15) Once again the city was described through an organic metaphor, distinguishing its material forms from its “vital” manifestations and postulating a direct correspondence between the two. With regard to the problem of the growth of the city, the author observes: “*To say that the urban development of Barcelona took place in concentric circles around the nucleus is to affirm a definite fact; to add that the cause was a natural and instinctive force is pure falsehood... The real reason for this type of development was the tyranny of governments, which have despotically compressed the city and its inhabitants, so stifling the true natural forces of the human spirit.*” (16) Cerdà therefore expressed the conviction that the city would express the natural course of the forces that determine its growth, were it not for undue external intervention which disturbed its historical character. History indirectly appears to be a constraint

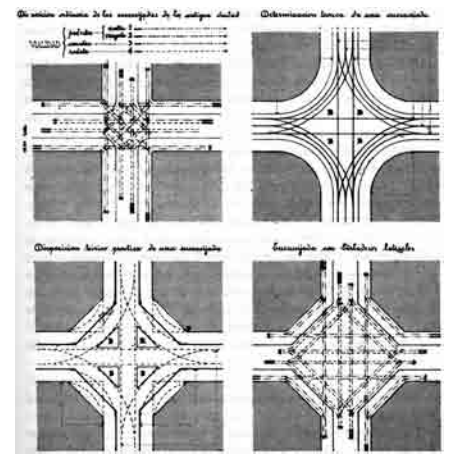


Fig 2. Urbanism as “functioning management” tends to reduce any kind of driving force as flows to be guided in order to avoid as much as possible reciprocal interferences and limitation. The traffic crossroads analysis is, in that perspective, particularly instructive.

13. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.170.

14. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.175.

15. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, pp.186-87.

16. Cerdà Ildefonso, *Teoria generale dell'urbanizzazione*, Milan, Jaca Book, 1995, p.201.

on the “*natural*” growth of the city. Freeing urban development from the constraints of history meant, according to Cerdà, guaranteeing the free expression of human nature. Cerdà intended to write two further volumes assessing the “*content*”, which enabled him to understand the true complexity of social organization in the city, which was far more highly articulated than his contemporaries realized. A third volume was to be devoted to the theory of the contemporary city and the fourth was intended to translate that theory into a technique that could be applied consistently. The plan was not, however, completed according to the author’s intentions, and this serious omission in part explains the discontinuity and a certain lack of uniformity in his analysis. An interpretation on the epistemological plane, as it emerges from a reading of the text, however, confirms the rigor and coherence with which the analysis was conducted, regardless of the results obtained (which are unlikely to be considered acceptable today). They justify Cerdà’s importance as forming a link between the earlier rationalist and idealist culture with the pragmatism of the twentieth century.

Ebenezer Howard’s work can legitimately be regarded as one of the most pragmatic contributions to social reform in the second half of the nineteenth century. At the same time the author constantly draws on that strand of Positivist philosophy which sought to restore a state of nature to the economy, with the aim of righting the social injustices believed to stem from historical institutions that existed before the industrial revolution, while keeping a critical distance from the abstract-utopian ideas of the French philosophes. From this point of view it must be said that Britain was in an advantageous position, to the extent that the Crown had never been such a centralizing and totalizing power as had been held in France by Louis XIV. In particular, the tradition of the Common Law, ever since the Middle Ages, had established the independence of local powers over the central power. This had no counterpart in European nineteenth-century culture and its force is still important.

This premise is necessary in order to understand the nature of Howard’s reformism and more generally that of the English-speaking countries. It is closely bound up with the issue of private property and the relationship this has with the public authority. Real estate above all plays a vital role in the processes of transformation of the city, as it represents a limit, sometimes almost insurmountable, to the pursuit of certain objectives which are both morphological and social. In nineteenth-century England there still existed the institution of the feudal tradition known as a building lease. It defined the distinction between the bare ownership of the property, or “*freehold*”, the right to use the property itself for a variable period of time set by the building lease, or leasehold (generally defined as 99 or 999 years). The surface rights guaranteed the user, called the “*tenant*”, the right to build on land even though possession was vested in someone else. The user retained all rights of possession to the building only for the duration of the contract. On payment of an annual rent, the tenant enjoyed all revenues from use of the property, which was to be conducted in accordance

Garden Cities of Tomorrow,
Ebenezer Howard, 1898

with principles and rules agreed with the landlord, on condition that at the expiry of the lease all improvements made to the ground should be turned over to the landlord without any compensation. This last point was challenged for the first time in 1875 with the Prime Agricultural Holding Act, aimed at safeguarding the rights of the tenant against the landlord. This mode of land management was widespread in England, to the point where it was used equally for contracts governing the cultivation of land as well as those relating to the construction of cities. In this way the major cities in England had expanded on land owned by the Crown. It is essential to understand the legal status of the organization of the city and of agricultural landholding if we are to comprehend the significance of Howard's proposals, and their critical distance from the French utopian attitude. The objective was therefore to change the meaning of history, considering it as an instrument and not an end, and destabilizing by making use of its own results. In this respect we can recognize the pragmatic attitude we mentioned above. Howard's greatest merit, in my view, is thus that he pursued a reformist case aimed at legitimizing the rights to equality of all citizens of the now established bourgeois society, using the elements already in place in society. In that sense he did not intend to reject the principles universally recognized as legitimate by the culture of the time, and which were severely criticized by utopian socialism. A reformer who distances himself completely from the historical context is bound to fail to the degree that he comes up against the obstacle of common sense, the weight of conventions. The social battle, according to Howard, should be conducted precisely within those same conventions so as to show how they can be used differently in order to pursue the kind of innovative ideals now felt to be necessary and urgent. True reformism is accepted only insofar as it is able to satisfy the common feeling, the conventional nature of the social pact, the willingness of individuals to subscribe to a cooperative agreement that is not perceived as too invasive of their personal freedom in favour of the collective dimension.

Fig 3

The issue of ownership, as is noted by Howard, was crucial to resolve the serious situation in the English culture at the end of the century. The phenomenon of massive urbanization, or the sudden abandonment of the countryside to large urban concentrations, caused major disruptions in the social and political order, already well established through the recognition of the condition of the working class in England in mid-century. It was considered advisable to study the nature of the forces of attraction to the city and reverse the trend so it flowed towards the countryside. Howard was convinced that British industrial cities had by that date far exceeded their critical level of tolerance of the pressures of development. In addition, the structure of English cities was unable to cope with the logic of industrial production. They were substantially medieval, with specific changes caused by the policy of urban "*estate*" development which flourished particularly in the seventeenth and eighteenth centuries (especially in London). At the same time Howard considered it utopian to oppose urban development by a simple return to the countryside. He considered certain phenomena as irreversible in the logic of progress, of which he was a convinced supporter as an

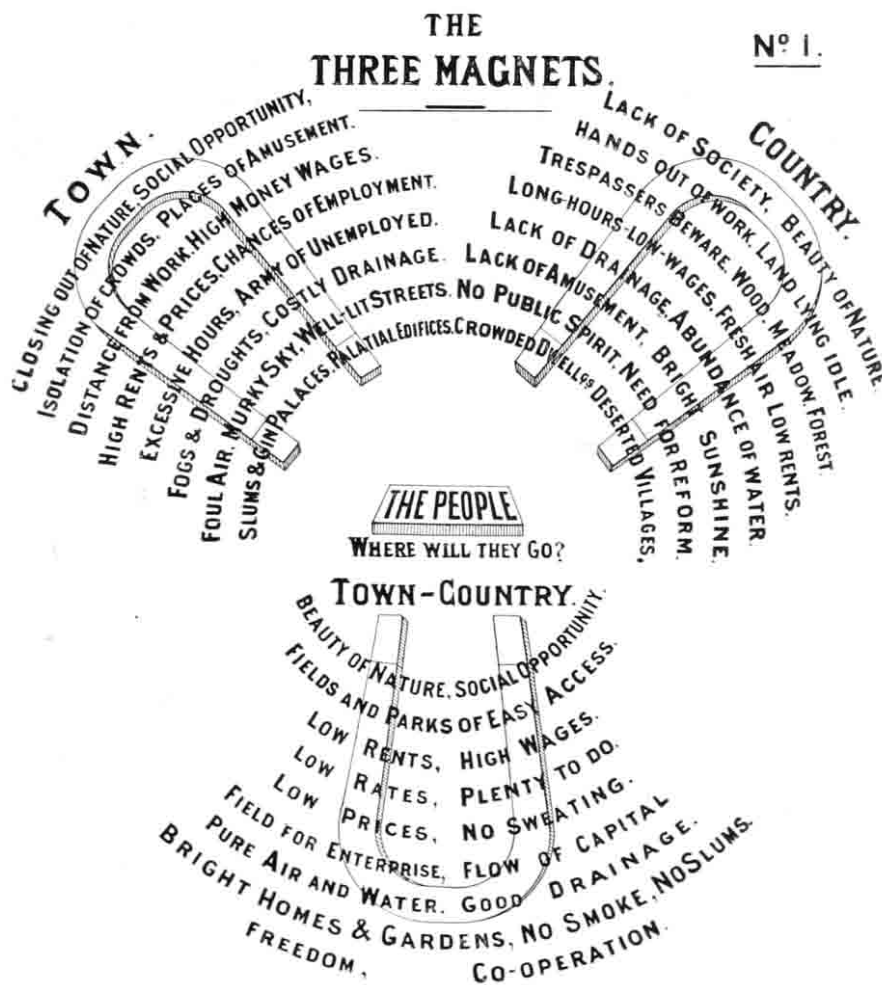


Fig 3. The Garden city theory is grounded on a laboratory experiment. It aims at bringing into the third Magnet the better values of both the other two, the city and the countryside. The design strategy is therefore based on a tentative process of selection of ingredients (coming from different contexts) and their combination into a new territorial recipe. The future citizens are requested to verify it by inhabiting it. The success of the initiative implies a trial and error procedure: this justifies the sequence of different garden city generation. The scientific process is therefore fully applied to urban design strategy with the participation of test subjects.

exponent of positivism. “*There are, in reality, not only two alternatives, as so constantly assumed – town life and country life – but a third alternative, in which all the advantages of most energetic and active town life, with all the beauty and delight of the countryside, may be secured in perfect combination.*”

(17) His goal was therefore to reverse the process under way by trying to make the positive aspects of both models coexist and so create a truly innovative urban system, one compatible with industrial systems of production and the healthy living conditions which are hopelessly compromised in the contemporary metropolis. In this way he justified the famous diagram of the “*three magnets*” and the belief that town and country should be wedded.

Howard describes in detail the way to create the Garden City. He describes a new formula intended to constitute a model of social reform, without being a utopian ideal, which would have been alien to his mindset.

He planned to buy 6000 acres of land, borrowing the money by issuing bonds at a fixed rate of 4%. Bare ownership of the estate was to be vested in four trustees, called “*freeholders*” who were its trustees on behalf of the debenture-holders. The time it would take to redeem the land by the trustees in 1898 was estimated at thirty years. The mechanism by which the four trustees would meet the debts incurred in the purchase of the land was to be a simple leasehold given to those applicants who wished to reside in the Garden City, known as the leaseholders. By

17. Ebenezer Howard, *Garden Cities of Tomorrow*, Charlestown, Forgotten Books, 2008 [1898], p. 7.

charging a rent-rate, calculated on the basis of the annual value of the land, the trustees would not only be able to set aside the amount needed to pay off the debts to the debenture-holders but also create a sinking fund for the extinction of the capital debt and recover a sum of money to be paid to the “*Central Council*”, which would use it for the maintenance of public works necessary for the growth of the city.

Of the land purchased by the trustees, the city proper would occupy a thousand acres. In Howard’s model, the city has a basically circular form, with a maximum radius between centre and periphery of 1200 meters. It will be traversed by six radial boulevards on a radial plan with a section of about 36 meters. The centre of the city will be laid out as a garden covering some five acres with the public buildings ranged all around it. This nucleus will be set within an urban park of 145 acres of land surrounded by the Crystal Palace, a shopping arcade designed on the model of the large containers for the world fair, for the sale of the produce of the Garden City and in part used as a conservatory where people can stroll during bad weather. The Crystal Palace is interrupted where it is intersected by the radial boulevards leading to the urban periphery. *Fig 4*

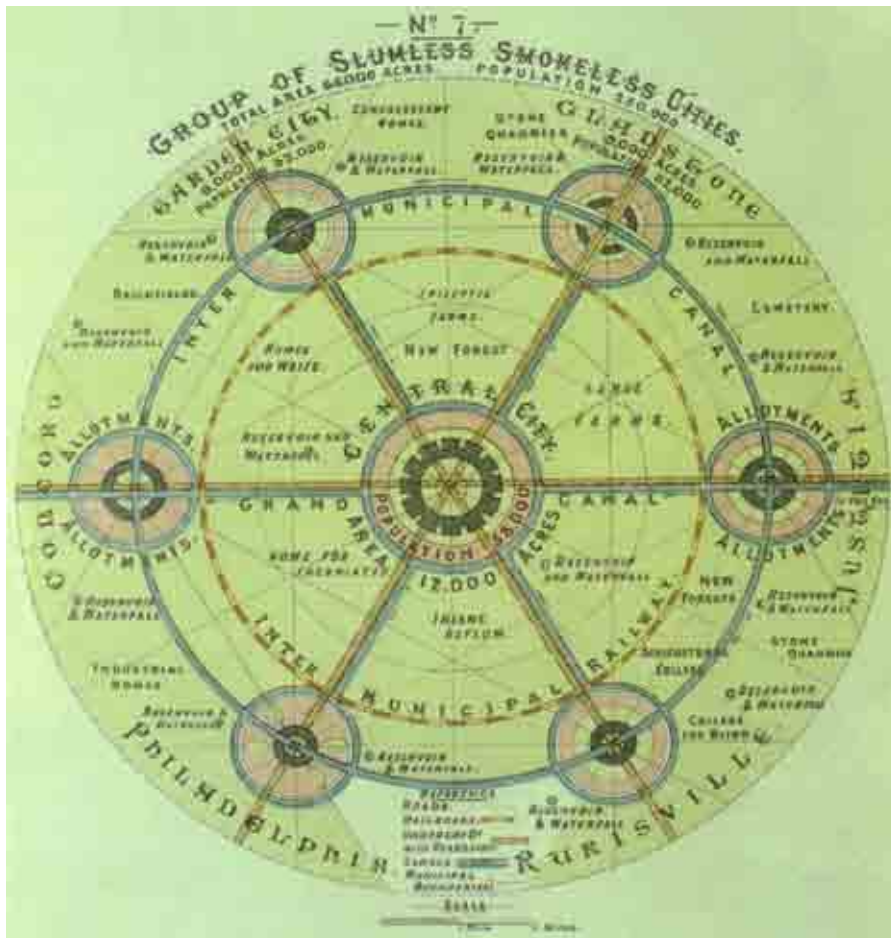


Fig 4. The Garden City diagram is not neutral, but is based on a metropolitan scheme, alluding to London. The seductive capacity of the centre is presumed to be unfolded over the periphery. Everything is arranged according to this implicit order, which is not put into discussion.

Beyond the Crystal Palace begin the residential areas arranged in concentric rings, with “*excellently built houses*” set in 5500 building lots with an average size of 6 x 40 meters and minimum dimension of 6 meters by 20. The city must provide for a maximum population of 30,000 inhabitants with an additional 2000 on the agricultural estate.

The city's building regulations should ensure strict observance of health and sanitation standards, but otherwise it will ensure the highest expression of individual freedom. Further towards the outskirts of the town we come to a broad avenue with a belt of urban parkland covering 115 acres laid out in a ring 128 m wide, within which stand the schools, churches and playing fields. Beyond this again will be located all the factories and warehouses, which will face directly onto the railway and optimize all movements within the city, without interfering with other activities and other urban centres. Outside the railway ring lies open countryside.

The city is a settlement with low density housing proportioned to the needs of a community which can be related to the average dimensions of a medium-sized village, organized by detached houses and extensive parkland. The limited number of inhabitants is appropriate to a concept of horizontal development intended to facilitate the movements of its inhabitants.

The rent-rate paid by future inhabitants of the Garden City will be its direct source of revenue. Howard notes that the progressive arrival of the population will increase the value of the land: "*This increment of value may, with some foresight and prearrangement, become the property of the migrating people.*" (18) This clearly expresses Howard's conception of the nature of social reform: an equitable distribution of land values to all the inhabitants of the new urban model he was proposing. Naturally this objective requires that the trustees on behalf of the community to be settled in the city should be able to redeem the debentures, so becoming the owners of the land to all intents and purposes, and then apply its surplus revenue to increasing the financial capacity of the Central Council to carry out works of public interest. In reality, the citizens will pay a rate-rent, because with the money paid they will not only exploit the opportunities due to the use of the property, on the basis of the lease they have signed, but over time the value of that asset will increase through the possibility of using a part of the revenues of the property for making improvements and investments in community facilities. This changes the estate in the favour of the leaseholders, since for the duration of their use of the property the freeholder, meaning the Central Council, will increase the value of the estate itself by its investment. These issues are considered important by Howard. In fact, he is convinced that the mere mirage of healthier urban living cannot be considered sufficient to justify an interest in promoting a real estate initiative of this type. There have to be clear incentives to reverse the rampant urbanization of English cities. This explains the desire to ensure that future citizens who set up businesses in the Garden City will enjoy more favourable tax conditions than they could find in an established town. In other words he understands that the lever for making the experiment feasible will be a substantial improvement in the economic conditions of workers and citizens. Without this recognition, the mere expectation of healthier living conditions would not suffice. Once again, pragmatism and positivist philosophy are combined in a felicitous synergy. After describing the model of his new city, Howard verifies the feasibility of the operation both for investments in the rural estate and also those which will be

18. Ebenezer Howard, *Garden Cities of Tomorrow*, Charlestown, Forgotten Books, 2008 [1898], p. 22.

needed in the city.

So what are the advantages that the farmer will have in Garden City for the rent he pays? First, the ease of transporting his goods, guaranteed by the railways and a road network unimaginable in the area already subdivided. In addition, his proximity to the town will make it more competitive for him to sell his products in Garden City than for any other place of production, no matter how famous it may be. Howard gives a meticulous list of the privileged conditions of the future residents of Garden City: *“That part of the rent which represents interest on debentures will be hereafter called ‘landlord’s rent’; that part which represents repayment of purchase-money ‘sinking fund’; that part which is devoted to public purposes ‘rates’; while the total sum will be termed ‘rent rate’.”*⁽¹⁹⁾

As for the inhabitants of the future city, Howard estimates that with a population of 30,000 the *“landlord’s rent”* will only be 13 pence, calculated in relation to street frontage. Of course Howard is aware that the amount needed to pay the interest and extinguish the debt will not be immediately available. The city will be built over a period of time. It will therefore be sufficient to ensure that, while building it piecemeal, the unbuilt areas will provide a temporary income, for example by using them as agricultural land. However, the construction of the city will require the issue of further debentures to be secured by a charge on the rent-rate. Once again the financial instrument for building the garden city is an interpretation of the ancient principle of leasehold, which already contained the distinction between ownership of land and ownership of property subject to a lease of limited duration and transmitted from generation to generation. The costs of constructing infrastructure and buildings will not be borne by the council but the tenants. It is not, however, clear in the text who will be responsible for issuing these further debentures. Logically it should be the tenants themselves organized in a consortium, trustees in their turn for other debenture-holders. This explains why Howard, concerned mainly to explain the workings of the Corporation, shows little interest in exploring this further problem. The economies which the Corporation would have in the construction of the city, as compared with any other city council, will be of two kinds: there will be no disbursement of money to buy land, since this would be already covered by the first issue of debentures, nor will there be the very heavy charges involved in expropriating land already built on, which are a heavy burden on rates. In addition, Garden City could ensure all the economies made possible by technological innovations in the provision of utilities, for example by using unified pipelines. This would lead to a sharp reduction in maintenance costs, which are high because of the need to keep breaking open the surfaces of the streets to make repairs to utilities in towns. In this way there could be underground pipelines which carry off rainwater and contain the gas pipes, telephone lines, electric cables, etc. Howard carefully reviews all the foreseeable costs of the various utilities essential to urban areas.

An important chapter deals with the relations between public and private enterprise, and areas of reciprocal interference. Regarding municipal action, the author says: *“Its extension will be measured simply by*

19. Ebenezer Howard, *Garden Cities of Tomorrow*, Charlestown, Forgotten Books, 2008 [1898], p. 27.

the willingness of the tenants to pay rate-rents, and will grow in proportion as municipal work is done efficiently and honestly, or decline as it is done inefficiently and dishonestly." (20) In this way he establishes the principle that a small community is capable of monitoring the way the resources of the citizens are invested through the physical development of the city and thus indirectly supervising the work of its administrators. The Board of Management will consist of the Central Council and the City Departments. The Central Council has the same powers as enjoyed by landholders under the Common Law. As a result it possesses many more powers than those possessed by other municipal bodies to achieve the results desired by its citizens. It is responsible for the general plan for the subdivision of the Garden City.

The City Departments are divided into Public Control, Engineering and Social Purposes. The first covers finance, law, assessment and inspection. The second covers roads, underpasses, sewers, tramways, the municipal railway, canals, public buildings, parks and open spaces, drainage, canals, irrigation, water supply, motive-power and lighting. The third covers building, baths and wash-houses, music, libraries and recreation.

The members of the individual departments are elected by those who pay rent-rates, while the chairmen and vice-chairmen of the departments constitute the Central Council. Howard also argues that the social structure of the garden city could include entities of different levels. The rent-rate payers need not comprise only citizens: they could also be cooperatives or associations of any kind. This would make for that articulation and complexity typical of all urban communities.

Howard also addresses the question of the relationship with the productive forces of the city and the permissible degree of interference by the public in the tasks of the authorities. He notes that for some activities, such as those conducted in the commercial markets, we can speak of semi-municipal businesses. The same principle could be adopted in the Crystal Palace, the city's shopping arcade. In addition, in order to ensure a more direct and democratic control over the economy of cities, Howard introduces the principle of the "*local option*" for traders. Indeed, the success of the whole operation, and the willingness of businesses to settle in Garden City is closely related to the problem of competition. The City should establish clear and fair principles for the licensing of firms. How are they to guarantee traders a good turnover if they move their businesses here and ensure they are not overwhelmed by an excessively liberal licensing policy? If a trader's conduct in relation to the expectations of other tenants is reasonable, the City will guarantee him a monopoly in his line of business; otherwise it will be adopt a system of free competition. In this way the trader becomes a sort of municipal employee through the pact established with the community.

Howard is also convinced that the success of the initiative will depend solely on the economic and fiscal advantages offered to the tenants. It is also essential to ensure a broad representation of the different social classes and appropriate forms of association. To all intents and purposes the Garden City is treated as a colony, whose success, as exponents of Positivism observed, is bound up with the moral stature

20. Ebenezer Howard, *Garden Cities of Tomorrow*, Charlestown, Forgotten Books, 2008 [1898], p. 61.

and rectitude of its members. In this respect Howard believed we ought to follow the example of classical antiquity, in which the founding of a colony was entrusted to the most illustrious members of the mother city. Their presence would act as an incentive for all those who gave up the certainty of a stable situation for the uncertainties of a condition in which everything had still to be achieved. In this respect, Howard found assurance in a thinker like John Stuart Mill. From Herbert Spencer Howard derived the belief that society could not exist without a truly equitable participation of all citizens in the ownership of private property. *"Surely a project which thus brings what Mr. Herbert Spencer still calls the 'absolute moral law' – that all men are equally entitled to the use of the earth – into the field of practical life, and makes it a thing immediately realizable by those who believe in it, must be one of the highest public importance."* (21) Howard describes himself as a reformer who seeks to adopt the best of all the ideas produced by Positivist thinkers. A further indirect confirmation of this attitude appears in his observations on the changing nature of the modern city, whose forms are constantly modified by technological progress. *"So marked are the changes which society exhibits – especially a society in a progressive state – that the outward and visible forms that our civilization presents today, its public and private buildings, its means of communication, the appliances with which it works, its machinery, its docks and its artificial harbours, its instruments of war and instruments of peace, have most of them undergone a complete change, and many of them several complete changes, within the last 60 years. I suppose that not one person in twenty in this country is living in a house 60 years old."* (22)

Howard asks himself how the garden city he has designed could become a widespread urban model. He instances the city of Adelaide, which has grown by the addition of parts beyond the rural area. Howard therefore defines a system of Garden Cities of suitable dimensions, embodying the principle of low density, economic-financial independence and good connections, being linked by the rail network and integrated with the mother city. The success of the Garden City will depend, in essence, on the opportunities it offers for better economic and financial results, operating on virgin soil rather than in a city that already exists. But there will also be effects induced by its presence in the overcrowded cities. The flight of people from old towns to the Garden City will create the conditions to reduce the pressure of population. It will lower the values of real estate, so that landowners, to remain competitive, will be forced to demolish the old slums that plague the most densely populated areas and gradually replace them with green areas to ensure a higher quality of life. London, for example, will have to change in order to survive, allowing the countryside to become a component of its landscape.

It is interesting to see how Ebenezer Howard's reformism reflects the cultural climate of his time. In dealing with the ideas of Herbert Spencer, he observes: *"When a great philosopher in effect says that we cannot conform our life to the highest moral principles because men have laid an immoral foundation for us in the past, but 'if, while possessing those ethical sentiments which social discipline has now produced, men stood in possession of a territory not yet individualistically portioned out, they*

21. Ebenezer Howard, *Garden Cities of Tomorrow*, Charlestown, Forgotten Books, 2008 [1898], pp. 100-101.

22. Ebenezer Howard, *Garden Cities of Tomorrow*, Charlestown, Forgotten Books, 2008 [1898], p. 111.

would no more hesitate to assert equality of their claims to the land than they would hesitate to claim equality of their claims to light and air' – one cannot help wishing that the opportunity presented itself of migrating to a new planet where the 'ethical sentiments which social discipline has now produced' might be indulged in."(23)

Validating the ideas of the Positivist philosopher, Howard confirms that individuals, empowered to freely express the values of equality and freedom promoted the new bourgeois culture, without the constraints produced by past history, would “*naturally*” accept its consequences. Social reformism brings back the aspiration to a state of nature, understood as universal, shared apart from any convention. The same conventions, which Howard however uses, are deprived of any historical connotation and presented as a spontaneous “*representation*” of the aspirations of man, no longer subjected to the deformations of history.

Significantly the lever that is to determine the success or failure of Garden City, according to Howard, is economic in nature and is presented as a natural law. Just as the laws that govern nature and ensure its operations are economic in nature, so the same principles are to be the foundations of the new society. Garden City and the urban model which it proposes thus become a metaphor for the re-establishment of the spirit of bourgeois society and its laws guided by the purest economic utilitarianism. The limits of Howard's thinking lie precisely in his failure to realize the important part played, in the decisions that men are called on to make, by non-economic considerations, with their crushing emphasis on certain conventional ideas, the weight of tradition, values historically shared, the weight of memory, which makes human society a unique and unrepeatable reality compared with other forms of aggregation in the plant and animal kingdoms. These are the same values that crush the heroine of *The Scarlet Letter* by Nathaniel Hawthorne, which is quoted ironically by Howard himself. More generally, the assimilation of the social phenomenon to a natural phenomenon, based on principles of utilitarianism and economics, is the hallmark of all architectural culture and urban planning which has a Positivist matrix, of which Howard was undoubtedly a convinced exponent.

The collection of writings by Eugène Hénard is an important document for understanding the reaction by the compilers of building manuals to the Positivist interpretation of the problem of the city. Hénard, as a man of his time, was well aware of the problems caused by the concentration of resources and their transport entailed by the new urban dimension, and the consequent need to develop new models that would satisfy the community's new expectations. In other words, the contemporary city fosters new expectations which have to be reckoned with if we are to understand the changes that lie ahead. At the same time Hénard was convinced of the need for these models to be continuously compared with specific locations, the need to adapt them consciously to the language of the city to which they were to be applied. For this reason he did not speak of the bourgeois city in

The Construction of the Metropolis, Eugène Hénard, 1903–1910

23. Ebenezer Howard, *Garden Cities of Tomorrow*, Charlestown, Forgotten Books, 2008 [1898], p.101.

general but addressed specific cases, seeking to derive all their possible consequences from them. In addition, he never referred to the problem of the new city but the transformation of the existing city, viewed in its entirety as an integrated system. His approach therefore consisted of a continuous verification of an abstract model, shared by experiences distant in space and systematically related to a real context.

Important consequences stemmed from acceptance of these limitations. Firstly an awareness that judgments of the advisability of planning measures cannot be separated from a willingness to understand history. But, unlike the "*historicists*" such as Sitte, who saw tradition as a reliable guide in dealing with the questions posed by contemporaneity, Hénard was convinced that the context, understood as the material dimension of the city, is only the concrete context in which the feasibility of the model can be verified.

In fact, Hénard's urban models are always the result of a process of an inductive nature or the outcome of a series of evaluations of reality. In this way Hénard differs from the most prominent authors of manuals of urban planning, for whom the models are always the result of a process of derivation from abstract principles following a logical path of a deductive kind. Another important consideration is his approach to the city. It is never totalizing, meaning he does not claim to bring the existing city completely up to date, but transforms it by parts, treated as specific sub-systems of the urban organization yet capable of interacting with the urban context as a whole. As a result of this approach, Hénard approaches the project of the new city as the accumulation on the urban geography of specific solutions to equally definite problems. The distinctiveness of this approach is evident in any context.

The question of the new urban plans is particularly effective for analyzing this perspective. Hénard focuses his attention on Paris. Other cities are mentioned only to provide a comparison when dealing with analogous issues. While acknowledging the work of Baron Haussmann, whom he credits with having systematically modernized the face of the city when it still had a medieval plan and adapting it to the needs of contemporary life, Hénard believes that these new plans are devoid of aesthetic qualities and too monotonous. The absolute linearity of the vistas does not offer any intermediate point of interest on which the eye can linger, with the result that it glides over surfaces and loses itself in the distance. The requirements of the bourgeois city, according to Hénard, call for a compromise with the need for aesthetic control. Though Hénard endorses the advantages of designing straight roads rather than the traditional tortuous street layouts, to favour the growing importance of wheeled traffic, he did not feel that streets and buildings should necessarily follow the same alignment as the roads. It is an arbitrary convention that we have inherited from the past, which leads us to organize buildings so as to mirror road alignments. While straight roads can be justified by the use of vehicles, the facades of buildings can develop independently.

It is important to note that Hénard created the theoretical premises for the dissolution of the relationship between buildings and roads that was later made explicit and taken to its logical conclusion by Le

Corbusier. But as we shall see, his anticipations of Le Corbusier's ideas were not confined to discarding the concept of the rue corridor. From these considerations, which are based on a process which is clearly deductive, or at least based on principles of a general kind, he derived his idea of the *boulevard à redans*. This was a built fabric organized with linear buildings, of different dimensions according to the requirements of the final users, which is notable for the rhythmical recessing of the street front to create space for screens of greenery to mark off public and/or private courtyards laid out as gardens and arranged so as to form a filter protecting the façades of the buildings behind them. This had a twofold purpose. It was intended to break up the continuity of the traditional road alignment and create recreational areas which would enjoy direct access from the major arterial streets, while also providing adequate spaces for functions that require higher standards of isolation. Hénard produced data to prove, on the basis of criteria of economic efficiency (a prerequisite for any economic initiative in the bourgeois culture of the time), that his arrangement would not entail any economic restrictions on the financial success of the operation. Compared with Hausmann's solution, the *à redans* layout would lead to lower built densities, but allow for a greater linear development of the facades of buildings, with obvious advantages in profits from the sale of the building plots.

Immediately after representing the theory of building *à redans* as an effective solution to the problems posed by the contemporary city, satisfactory from all the points of view analysed, including economic factors, Hénard raised the question of how to apply this model to Paris. An opportunity was at hand. The demolition of the city's last fortifications would bring the municipality a ring some 33 kilometres in circumference with an average depth of development, including the military buffer zone, of some 350 meters. That surface area was sufficient to guarantee the installation of a twofold system of buildings laid out *à redans* with a boulevard in the middle and service routes behind.

Fig 5 Hénard justified his decision by the very attractive opportunity to use a space free from all easements or other constraints on its use. To confirm the "rationality" of his project, Hénard showed that in all the successive phases of expansion of the city of Paris the area of the walls had been used for urban extensions, thus confirming a "natural" rule implicit in the logic of urban transformation. The problem of the sudden availability of such an important area entailed careful decisions about its use. Speculators were eager for it to be subdivided completely for development. This decision would be a serious mistake for the community. Paris was seriously deficient in the provision of public green areas, both public parkland and gardens. Its urban density was significantly higher than that of the other comparable major metropolises, such as London, Moscow and Berlin. The demolition of the walls would provide a unique opportunity to increase the provision of open spaces while safeguarding the quality of the developments which would progressively occupy the area.

The availability of land for parks and gardens in Paris was compared in particular with the situation in London. The British capital was considered a model for its balance between green and built-up areas.

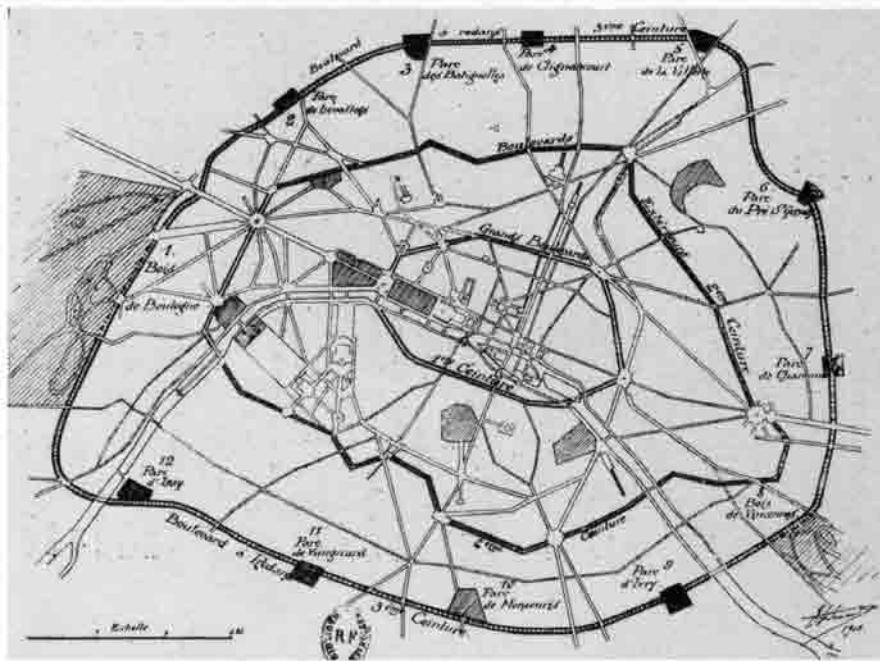
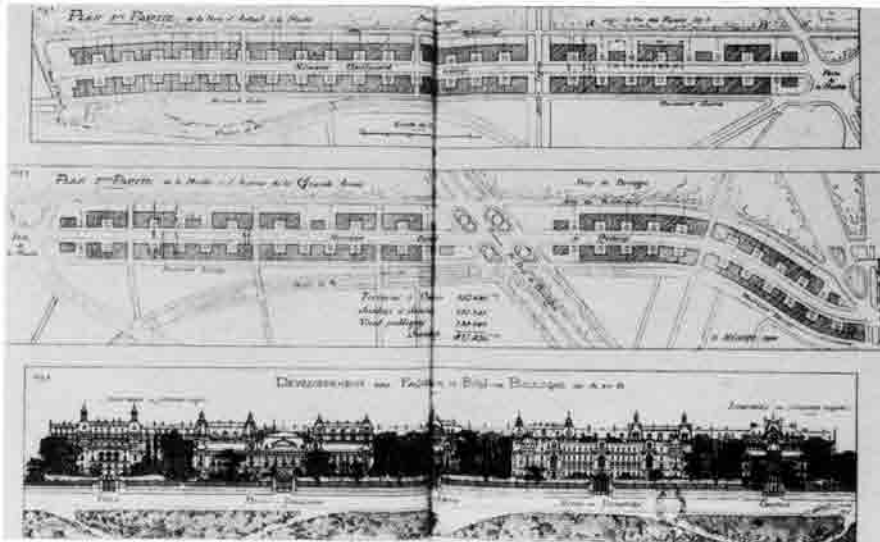


Fig 5. The apparently pragmatic approach offered by Hénard, in the reality defines a crucial theme, or argument of discussion, at least since the Middle Age. The bourgeoisie society is not simply tempting to subvert the morphology of the Royal Paris, which still resist to its continuous attaches, but more subtlety to undermine its principles, categories and catalogues. This justify a plain shift in perspective. The focus is on the border to translate it into a soften boundary. The original fortified wall and custom barriers assume a strategic role to reconsider urban hierarchies and the related possibilities.



The reasons for this privileged status can be explained historically. Hénard was never superficial in his analysis. Having identified a model, he first sought to verify whether it could be translated into a different context by analysing the actual conditions that had generated it. For these reasons Hénard concluded that Paris could never emulate the English examples without adjusting them to its own conditions.

The structural differences were due primarily to the administrative organization of the territory: the jurisdictional area of London overlapped no fewer than four different counties and since the Middle Ages had been administrated by a large number of parishes, jealous of their legal and administrative autonomy. For this reason the number of boundaries has been significantly multiplied in the city, providing a substantial proportion of green areas. To this we should add the uniqueness of the English system of landholding: London had expanded systematically since the seventeenth century by the successive annexation of “*estates*”, extensive properties of the local landowning aristocracy. They sold leases to property developers, who enjoyed the revenues from these estates for the duration of the lease, upon payment of an annual rent, with the undertaking to restore the patrimony - the land together with the buildings erected on it - on the expiration of the lease. This singular condition, which historically explained the exceptional nature and quality of the English experience, allowed the city to expand by extensive enlargements which were highly homogeneous in their design and morphological characters and regularly attained outstanding results, with a provision of green spaces, parks and distinctive squares unparalleled in other European countries. Paris, by contrast, had always been characterized by an extreme fragmentation of land ownership, increased at times through the Enlightenment heritage of progressive alienation of the property of the Church and nobility. The practice of breaking up landholdings, endorsed by bourgeois culture as a criterion for optimal growth, in the absence of strong protective action by the state, has made the provision of green areas equally fragmented and limited. To this we should add the notable English love of landscape and Parisian indifference, with the exception of the art of gardening in patrician houses, often remote from the city. Green areas have never entered into the composition of the city as a structural element, of equal dignity with the built fabric. At the conclusion of this historical-critical analysis, Hénard justifies the built density of Paris, which is almost double London's. Paris has significant provisions of parkland outside the military belt, in the Bois de Boulogne and the Bois de Vincennes. But their location does not allow for their easy use daily but rather weekly. Parks and squares can solve the problems of the city on condition that they become an integral part of its plan. This entails a search for new forms of urban design. *Fig 6*

The attitude of the municipality of Paris seems, on the contrary, to have been the opposite. An emblematic case is that of the Champ de Mars, which Hénard reconstructs with great accuracy in its chronological development. Over time this site had retained the character of a large void, where the collective mass events of the city had always been held. It was the traditional setting for events that had changed the course of French history. It had been the venue for the pageantry at every

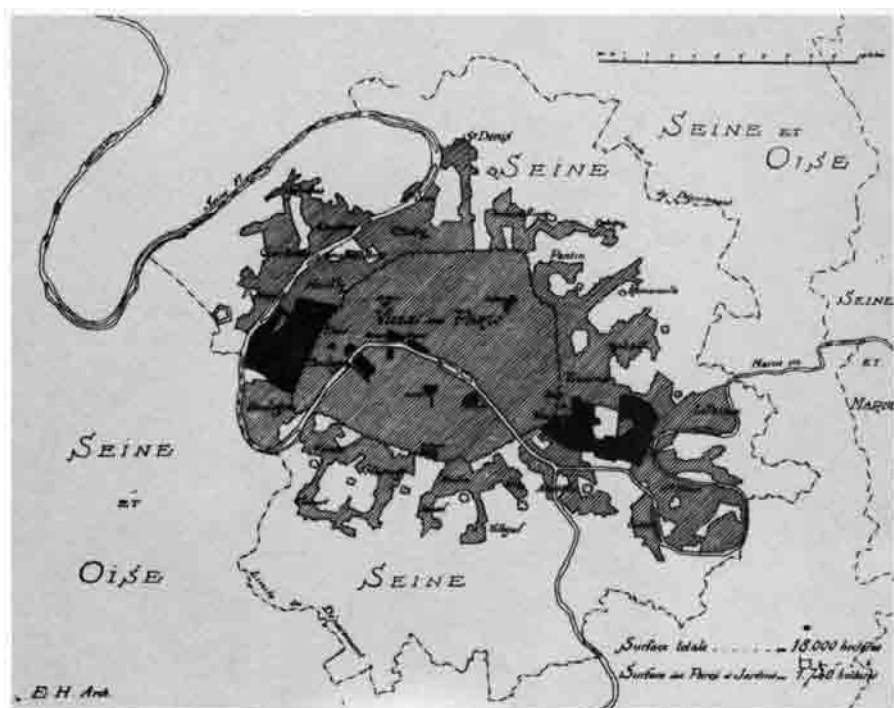
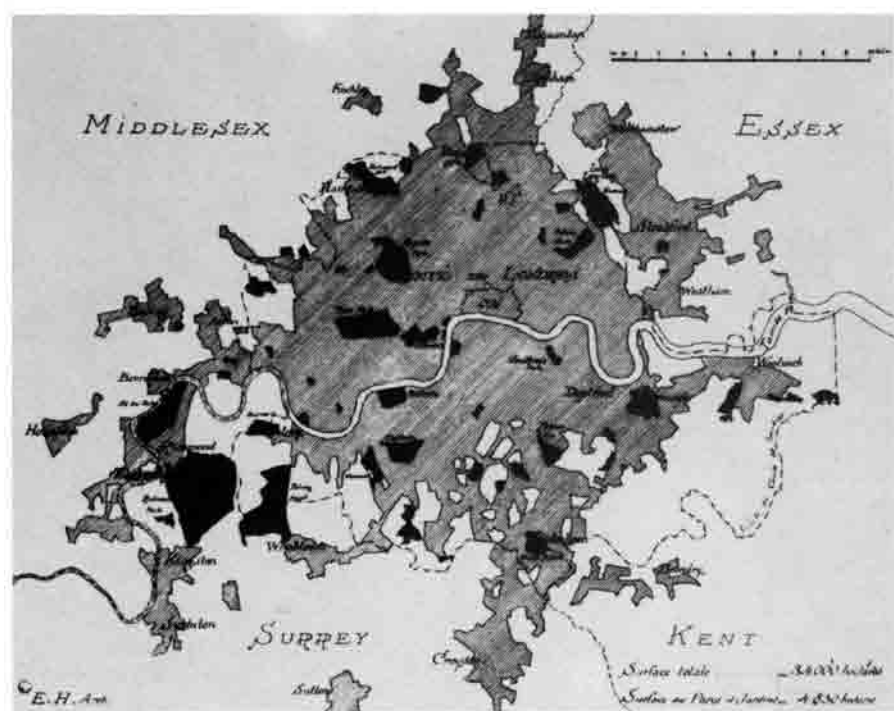


Fig 6. Hénard is completely aware that cities are urban facts made possible by a shared changing cultural project. The green area distribution in Paris and London refers to historical limitations coherent with the above mentioned intentionality.



change of power since the Fête de la Fédération in the aftermath of the French Revolution. In the nineteenth century the area was used for holding the Expositions Universelles, so perpetuating the community function which related it to its origins. At the turn of the century fears arose that the great universal exhibitions were doomed to be replaced by more specialized exhibitions for individual sectors of commerce, so as to cope with the increasing numbers of guest countries and products. Conditions seemed to have changed. According to Hénard's contemporaries, the location of the Champ de Mars, now well inside the city, failed to respond to the pressure for new uses. Instead of proposing its reuse for more specialized activities, many citizens wanted it to be subdivided and sold off to private developers. The function of the site, an area with a very significant impact on the provision of green spaces in the city, was sacrificed to real-estate speculation. The constraint of inalienability which lay on the area was felt to be a heavy burden. Even the Galerie des Machines, one of the most successful achievements of the "*architecture of the Engineers*", was slated for demolition to make way for more lucrative functions.

The sad story ended with the subdivision of the site into three belts, of which the central one alone remained as a public park, while those on either side were used for the construction of rental buildings. The city devised the project to reduce its debt, without truly realizing the damage it was doing to the community.

Hénard always analyzed problems in theoretical terms, but he was careful to verify the possible solutions by drawing the reasons for his observations from specific conditions of the context. Above all, as mentioned in the introduction, his position differed from that of his contemporaries because of his acute sense of innovation within a logic of continuity with the existing city, as if the author were aware of the narrative or logical-sequential structure of the urban system he was working on. Hénard can certainly not be seen as standing outside bourgeois culture - far from it. But he believed the city as an abstract entity did not exist; there are only cities viewed and analysed in their actual conditions of occurrence and transformation. These basic facts are translated into necessary and significant constraints on the project. This is why in Hénard's thinking the project is a "*strategy of change*", or a constructive engrafting of innovative elements onto the fabric of relationships established by tradition. There can be no new Paris apart from the existing one, because a refusal to work on the legacy of the past would inevitably lead to the euthanasia of history, depriving the old Paris of a future and the new one of its identity. In order to survive itself, history needs to be constantly reinvented, meaning inserted and absorbed as living material in new creations. At the same time the future, in order to acquire a significant identity, has to engage in a dialogue with the past, however contradictory and confrontational it may be.

The case of the Palais Royal is again symbolic of Hénard's outlook. *Fig 7* The author raises a question easily generalized to any built environment: what should be done with all those buildings whose *raison d'être* has disappeared? Clearly the question arises of their conversion, hence the very logic by which the tissues of cities have always been regenerated to

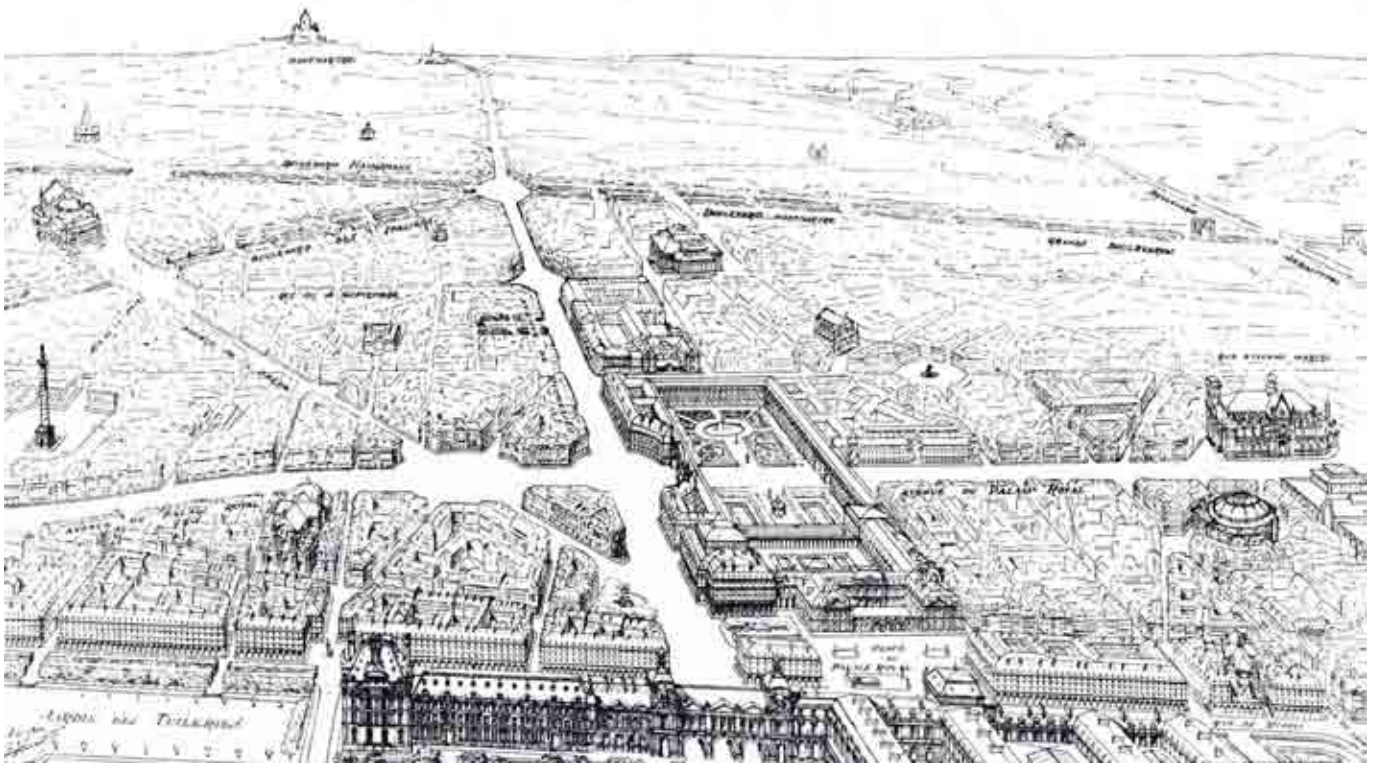


Fig 7. The Palace Royal acts, in Hénards' proposal, as a new Forum capable to intersect the main flows of the new Paris centre, showing how it is possible to solve urban problems making use of urban form, and not vice versa.

meet the needs of changes in customs. The question of a general nature, once raised clearly in its essential terms, does not entail an equally general response, as the solutions have to be evaluated on a case by case basis.

The problem in question was that of a building which was badly decayed. The opening of the nearby Avenue de l'Opéra, with its large spaces, had gradually enticed away all the jewellers' shops which had previously filled the window space of the Palais, causing a slump in rents and the consequent replacement of upmarket occupants by less profitable businesses. Certain public functions were still carried on inside, these being the only ones that could ignore market pressures.

The alternative proposals were essentially these: fill the garden with a new building; find a new function for the existing buildings; introduce changes to the garden alone; change the system of access. Hénard offered a brief but reasoned opinion on each of these. The freshness of his thinking is clear from his choice of parameters for the assessment. He tried to identify the conditions that would ensure the maximum benefit for the city as a whole, hence solutions that created optimal conditions for interacting with the existing city. The Palais Royal is architecture on an urban scale, perhaps one of the last that Paris possessed before the change that led to the proliferation of fragments of the city on the architectural scale, so dear to bourgeois culture. Hence the solution he proposed was one that would ensure maximum benefits for the entire city. The problem of the conversion of the Palais Royal thus became to find a positive solution for one of the key places in Paris by replacing Baron Haussmann's old Grande Croisée with new and more modern Grande Croisée. What did this amount to? Simply a reprise of the intersection of the Cardus Maximus and Decumanus

Maximus, whose presence is still easily identified in the fabric of Paris. It consists of the system of Rue Saint Martin and Rue Saint Jacques running north to south and Rue Saint Honoré and Rue Saint Antoine running east to west. These have always constituted the major road axes traversing the city and connecting it with the surrounding territory. During the transformations of the road network in the second half of the nineteenth century, Baron Haussmann doubled the system to cope with new pressures, well aware of its importance it was sure to have in the physical dimension of the city. He added the system of Boulevard de Sébastopol-Boulevard Saint-Michel to the existing north-south route, while the axis of Avenue des Champs Elysees and Cours de Vincennes were laid out running from east to west, with the same objectives as those sought in the first Grande Croisée. Careful study of the transformations to the Parisian road system enabled Hénard to seize the opportunity to introduce an innovation, made necessary by the exponential increase in the numbers of cars, necessitating significant increases in the section of the road. The future of the Palais Royale was therefore seen in relation to the third Grande Croisée. This was to rest on the system formed by the Avenue de Richelieu running north to south and Avenue du Palais Royal running east to west. In this way it exploited the presence of existing routes which, in keeping with Haussmann's logic, could be enlarged in section. Again the recognition of a general problem led to a compatible solution through an interpretation of the physical dimension of the city. Hénard's pragmatic approach laid due emphasis on the existing situation. Hence he gave the third Grande Croisée an irregular form from a desire to connect all the monuments it contains in such a way as to make the most of their presence.

The problem of the road network and vehicular traffic was one of the issues that most closely entailed a review of the urban systems inherited from the nineteenth century. Hénard held it was important to assess its function in relation to the prevalent direction of use, intensity and distribution throughout the day, the predictability of its flows and its modes of use. By putting together the various parameters he listed, Hénard even identified five different types of road sections for domestic, professional, economic, holiday and routine traffic. Each was characterized by a particular value of the parameters previously defined, although Hénard's analysis did not go so far as to quantify their relative impact in terms of numbers. All coexisted in varying degrees within the urban structure, and sometimes overlapped in traumatic ways.

The metropolitan dimension was so great that needed to be dealt with by a network. To understand the nature of an efficient road network that would make it possible to cope with contemporary problems, Hénard analysed the principal road systems of the most important European capitals, seeking to deduce rules to apply to this specific case. Again the philosophy of the approach to the technical problem is easily identified: since these cities are actually experiencing the same logic of development they must be faced with similar problems. Once they have been identified, it is necessary to apply the results of his analysis to each specific case. Once again we are faced with a question of models which can be generalized and applied to different spatial situations by homogeneous temporal intervals, and their subsequent

adaptation/translation to local conditions. Local and global dimensions are integrated to solve a given problem. A scientific outlook and a historical analysis produce a successful synthesis within the planning debate.

By comparing different cases and examining the effects of the traffic system on the general functioning of the road network, Hénard came to understand the those systems which functioned best. Examples were Berlin and Moscow, which had adopted what he called a “*perimeter for the distribution of the radials*”. This was a ring road within the city, tangential to its most significant monuments, which formed the starting point for a system of radial arteries running to and from the surrounding territory, capable of rapidly reaching all the districts encircling the city and then connecting them with the territory. When this bypass/ring road was too large he found diseconomies of service, similar to the case where, as in Paris, the radials did not stop at the ring road but continued until they intersected in the centre of the city. These points of maximum convergence of the traffic were very harmful, and were also the cause of traffic congestion. Having identified a general problem, Hénard immediately sought the corresponding response to the specific problems of Paris.

He therefore identified a quadrilateral whose perimeter corresponded to those defined as optimal on the basis of his comparative studies of previous cases. In drafting his plan he incorporated observations already made on different scales and then traced it on the city. At the vertices of the quadrilateral, slightly adjusted to match existing structures, he located the radials leading out of the city. The problem was always to find sources of finance for road building, a problem that had beset Baron Haussmann earlier. No contribution from private bodies was envisaged for the construction of infrastructure, so municipalities had to meet expenditure on their networks with different forms of taxation or through sales of their landholdings.

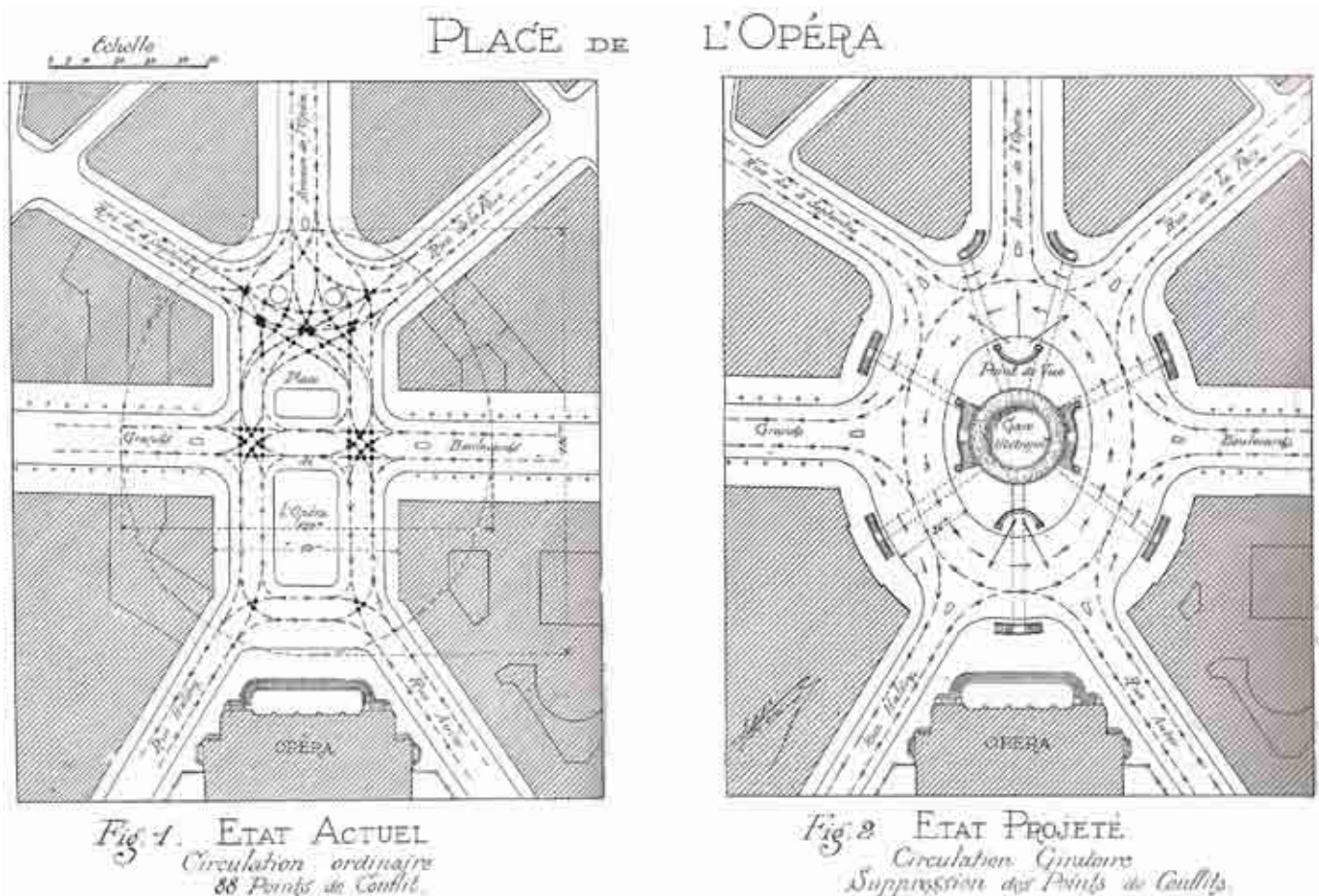
Another important issue Hénard dealt with was the design of squares. In agreement with Camillo Sitte, he argued that these spaces had undergone profound changes. But even greater than their physical transformation was the impoverishment of their function, their role. They had always been outdoor gathering places, ever since the time of the first agora. The Roman forums were also distinguished by the great variety of their uses, which eventually resulted in reciprocally specialized functions in bigger cities. The medieval city itself, from this point of view, is living proof of the existence of the place or public square as centres of secular power, the institutional seats of civic power, the marketplaces of commercial power, and spaces reserved for liturgical activities and the exercise of temporal power on the parvis of the church. All of these spaces are distinguished by being places for meeting and discussion. Through the public reading of municipal ordinances or the organization of collective events, the people who gathered there were informed about developments affecting the entire city. The squares were therefore seen as places for the accumulation and exchange of information as well as goods.

The spread of printing as a means of disseminating information effectively deprived public squares of the unique role they once had.

The squares therefore lost that *hic et nunc* which presupposed “*presence*”, “*being there*”, as a value and a primary, existential motivation. However, while Sitte believed these principles should be preserved and sought to recover that community life in which the traditional city was very rich, Hénard argued that the traditional role of the square was now superseded (though unlike Sitte he did not explain what replaced it), and therefore its forms should reflect the new times. To this end he made a distinction between squares for circulation, fairs and interchanges. In the last of these alone, the points of access to the city by rail, or points of arrival for the new means of transport (the new gateways to the city, as Sir Raymond Unwin called them a few years later), there had to be a correct balance between the functionality of the connections and the quality of the built and unbuilt spaces around them. The case of the Place de l’Opéra is emblematic in this respect Fig 8. Hénard’s proposal was intended to make the system more functional as a roundabout, with at its centre the opera house itself, and the screens of the surrounding buildings are conceived as mere backdrops to be appreciated in the distance.

Though Hénard refused to deal with the problem of the modern city in general (hence abstract) terms and preferred to act on single sub-systems, in each case assessing their integration and interaction with the whole, he did not hesitate to offer a comprehensive judgment on the city of the future, using the data available and extrapolating other information on the basis of the development of the applied sciences.

Fig 8. Hénard does not consider the function as the automatic output of a requirement/performance relation, but the conventional project of an intention/values correspondence. The Place de l’Opéra’s proposal is very clear in that direction. Compared to the existing situation, traffic flows are arranged within a neo-Baroque solution which emphasizes the public building role within the urban ensemble.



Then we must not forget that some of his predictions proved widely influential, significantly affecting the thinking of Le Corbusier. One difference with Le Corbusier's ideas is that Hénard's specific areas of intervention did not necessarily foreshadow a completely new city so much as a city that would gradually change as a result of the increasing emphasis on mobility and which would remodel its forms.

One of the factors Hénard studied was the relationship between streets and houses. The *boulevard à redans* responded to a particular need for the aesthetic and environmental quality *avant la lettre* of the street corridor. Fig 9

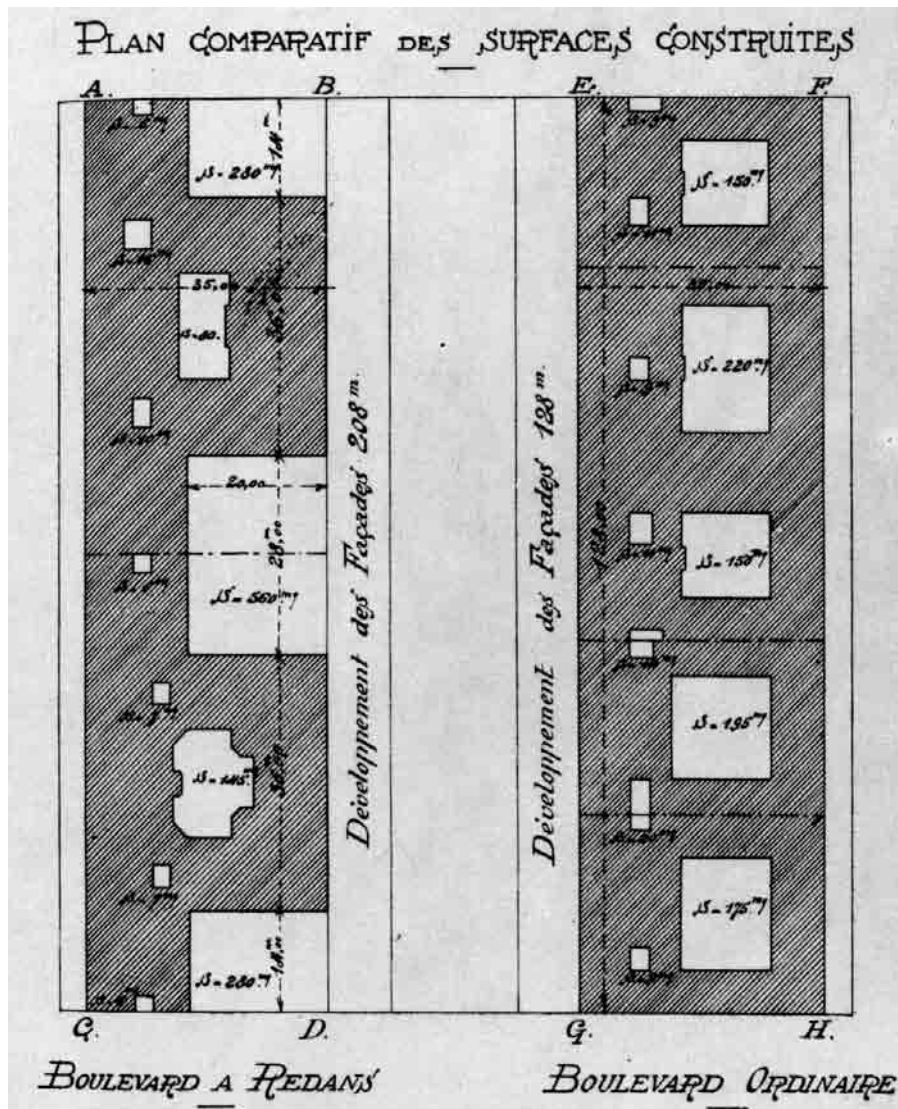


Fig 9. Hénard's positivistic approach to the city is evident in this comparison. Its perspective is based on the land use exploitation. The hypothesis is that its implicit law is described by the façade development: the more one maximizes it the more a consistent revenue is granted. The thesis is therefore that the Block "à redans" perfectly fits the initial purpose, making the law explicit and offering itself as a new urban tissue prototype to be applied in the reality of the city.

But this only involved the visible aspects of the street, not necessarily its technical aspects. Networks are essential, as confirmed by the evolution of the bourgeois city, and their increasing complexity in the subsoil of Paris has resulted in an inextricable labyrinth of intertwined paths that are difficult to maintain. Hénard proposed to raise the level of traditional streets above grade in order to use the ground level to install equipment for individual buildings and lines for the transport of waste and maintenance of utilities. In a not too distant future we would have different levels of underground roads, to be used for specific

types of network. The structure of buildings, using the potential of reinforced concrete, would change and help transform the traditional pitched roofs into terraces, which in Hénard's scheme could become a helipad available to every home, an idea inspired by certain forecasts especially prevalent in his day. The city would be subjected to zoning, depending on the density of traffic it was required to absorb, with tower blocks in the centre to control the traffic at a distance. Though set against a utopian backdrop which verges on science fiction, Hénard introduced some principles of practical urban design that were adopted and appropriately developed by Le Corbusier: the elevated city with the ground level used for the maintenance of utilities and provision of public transport, roof-terraces used for parking vehicles, extensive open spaces used as parkland in which float individual fragments of the urban fabric. *Fig 10*

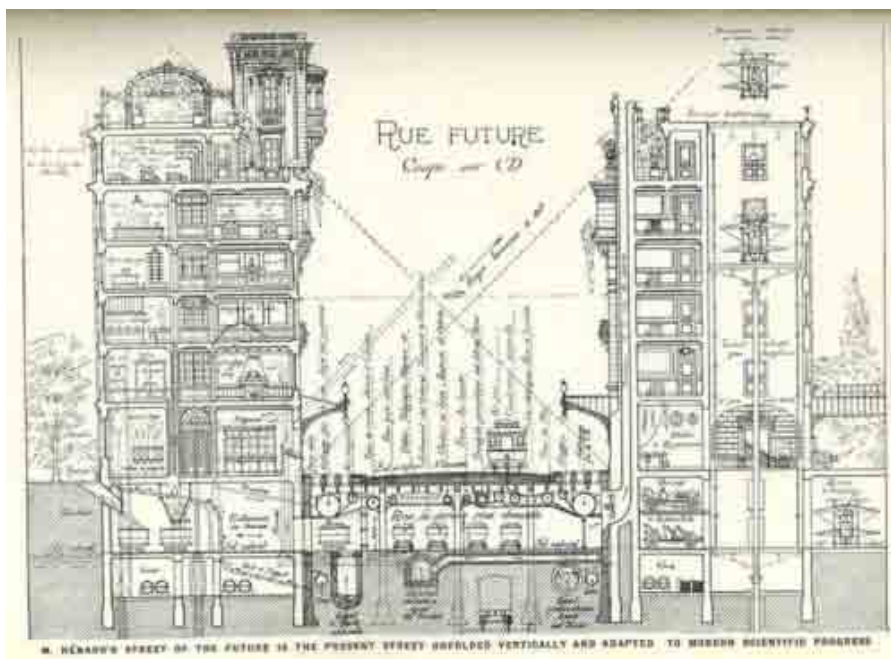


Fig 10. The *Rue Future* proposal is based on the overwhelming capacity of the infrastructures and of the networks to lead the *Ville Future* structure. Who is leading the infrastructure and the network is unquestioned, as if they had an autonomous competence to do it. Le Corbusier will push this implication to the extremes.

The last of these features emerged in particular when it came to the issue of new expansions in Paris. The model of the garden city, as theorized by the British, fails to ensure sufficient density for a modern metropolis, and is therefore doomed to fail because it lacks appeal to the market. This gave rise to the idea of increasing the density of development above the level current in Paris - in other words producing artificially congested development - so as to be able to earmark adequate areas as urban parkland with squares in the immediate vicinity. This aspiration again emerged clearly when Hénard reviewed the various proposals for the development of the city's last remaining city walls. To those who proposed a single green belt within which to create a continuous building system, he opposed a discontinuous system in which green spaces alternated with built. The former would make the green areas more user-friendly and ensure there were adequate roads cutting through them, while the latter would use above-average density housing to increase property values. Once again Hénard's arterial roads, developed on a tangential system, were similar to the viaduct-buildings later theorized by Le Corbusier.

While the transformation of the city still required a modernization of existing infrastructure networks, the widening of road sections should be accompanied by more purposeful innovations, particularly at intersections. To achieve this Hénard introduced the idea of crossings at grade in the form of roundabouts. Hénard argued that the trouble with traffic lights to stop vehicles was that they interrupted the flow of traffic. Roundabouts would keep the traffic flowing, though more slowly, and would eliminate intersections where lines of traffic converged from different directions. This solution to a general problem enabled Hénard to seek solutions to the real needs of the city. The faith in scientific development which Hénard shared with the scholars of his generation did not deny the role of historical analysis in addressing new problems in the city. But it insisted that the city is still a system, and so must constantly increase its overall dimensions.

2.3.3) Projects and works

Ildefonso Cerdà was an exponent of the liberal culture of the left, convinced that the growth of modern society and the complexity of the problems it brought could not be effectively addressed without a coordinated operation involving collective interests, as represented by the municipality, and the individual, legitimized by those who concretely engage in the construction of the city and productive activities of an industrial nature. In 1854 he also endorsed the official application to demolish the walls of the city of Barcelona. He was a firm believer in the argument that the walled city and the radial organization of the urban model were responsible over time for exponentially increasing rents of position and fomenting speculation in building land, whose ownership was traditionally in the hands of few people.

Cerdà opposed the elitist ideal of the radial city, polarized on the system of existing structures and with its property values constantly increased by the addition of high-value projects (while those of lower quality were systematically moved to the outskirts). He contrasted it with a polycentric system, which he saw as more democratic and egalitarian, because it would have a more equitable distribution by offering opportunities for economic enhancement throughout the urban area. In this way Cerdà sought to eliminate inequalities attributable to differentials of rent and location, the former stemming from the proximity of property to the most attractive poles, the latter from the different kinds of functions assigned to individual portions of urbanized areas by zoning. The attainability of this objective was bound up with overcoming the distinction between town and countryside.

His liberal and democratic motives, aimed at expanding the number of people who would benefit from increases in value in the city's growth, were combined with legitimate aspirations of increased control by society over the decisions affecting it, like those concerning urban organization and its rituals. Cerdà argued that the costs of networks ought not to be borne by the public administration but equitably shared

The plan for Barcelona
I. Cerdà, 1859

by all those who would enjoy a direct benefit from the development of building land. This resulted in the request for the free provision of the land necessary to create the infrastructure and private funding of the work, so showing great foresight by anticipating contemporary practice. If the works were particularly extensive, Cerdà suggested providing subsidies by raising money through higher rates imposed on the increased value of property due to the development.

Opportunities to test his theories presented themselves at two distinct times. In 1858 Cerdà was commissioned by the central government to prepare an analytical study of the structure of the urban population in Barcelona on a statistical basis. This gave him an opportunity to gather extremely important data shedding new light on the social and economic complexity of the context. In 1859 the Catalan city announced a competition for its urban expansion after the demolition of the city walls. Cerdà did not take part. The winning project was by the architect Rovira i Trias *Fig 11*. It appealed to the jury as a coherent scheme which used architectural order and measure to cope with the problems of urban growth through recourse to urban sectors: these were relatively self-sufficient parts of the city, abutting in a fan-shaped arrangement onto the different segments of the new ring road, to be built on the site of the ancient fortifications. Each part of the city was endowed with a clearly recognizable identity and morphology and organized in a traditional way through a system of city blocks enclosed around their perimeters. These blocks occupied the meshes in a modular street grid aligned on the axis of symmetry of each single sector, along which were located the most significant public spaces. The central sector was sublimated in its role as a link between the city and the existing village of Gracia through an increase in the section of its main road axis. In addition, the Forum of Isabel II was laid out at the point where it joined the ring road, which was meant to form the ideal link between the old and new cities.

The central government in Madrid, however, cancelled the results of the competition and gave the commission to expand the plan to Cerdà. In strictly programmatic terms his plan proposed an unprecedented urban expansion, taking in all the land between the coastline to the south, the village of Gracia to the north, Montjuïc to the west and the Besos River to the east. This model of the city was based on recognition of the key role of infrastructure in fostering economic growth, with close integration between green spaces and built-up areas, developed as an alternative to the traditional opposition between town and country. The program also provided a unified but polycentric urban structure, organized on the basis of twelve self-sufficient districts. So once the inevitable teething troubles were overcome, medieval Barcelona would eventually become just one district in the new urban organization.

Cerdà's overall objective was to define in advance optimal standards of provision of infrastructural, recreational and production facilities as well as community and residential services. These would then be combined with the "*significant form*" that would best fulfil these conditions. In this way the city was conceived as a natural organism. His project therefore took into account the pragmatic limitations

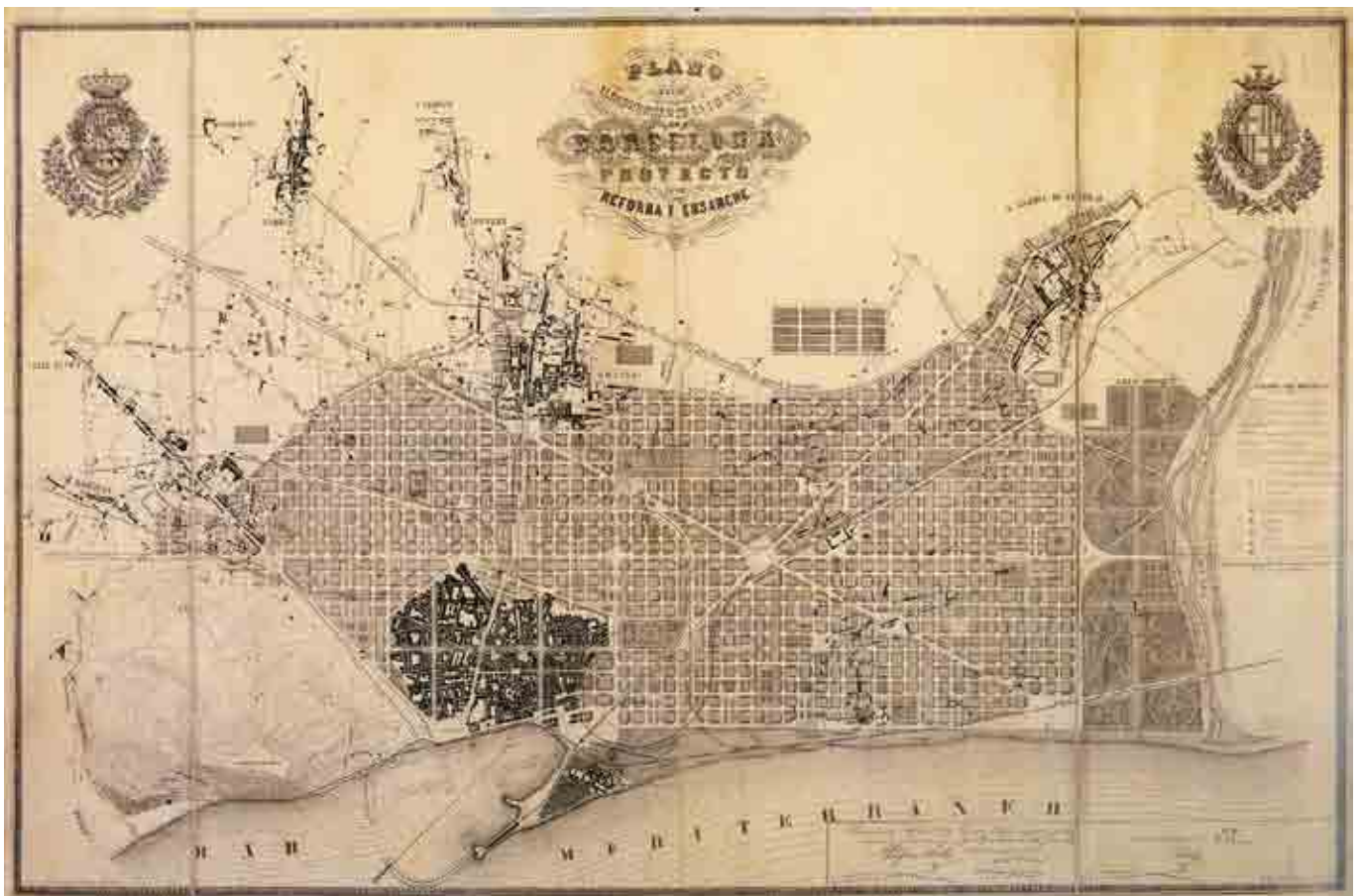


Fig 11 Antoni Rovira i Trias' proposal for Barcelona interprets the ideal Renaissance city model, grafting the new quarters into the old core of the city, simply shifting its symbolic centre to better practically mediate between the two.

imposed by the context and the brief, viewed in the light of the general purposes suggested by the historical situation. He devised a system of subdivision of land for development through a modular infrastructural grid rotated 45° with respect to the direction of the prevailing winds. The meshes of the grid, called *manzanas*, constituting the unit of measurement for the entire plan, were squares measuring 113 x 113 meters with the corners chamfered at an angle of 45° in order to improve visibility at intersections and enhance road safety. Their open isotropic repetition, theoretically unlimited, generates the continuous paratactic structure of the Ensanche and the resultant pattern of the street layout. The exceptions are four *vias transcendentales* that cross it diagonally to cope with the pre-existing system: these are the Diagonal, the Meridiana, the Parallel and the Litoral. *Fig 12*

The morphology, subdivided for the first time on the basis of homogeneous functional systems, presents innovative features. The traffic system is specialized in cross section according to the role assigned to it, with street widths of respectively 20, 30 and 50 meters, with exceptionally large sections in the major road axes of regional importance. The *manzanas* avoid the model of city blocks completely closed around their perimeters. They are organized so that only two of the fronts are built up and they can be oriented in different directions in relation to the overall layout. The internal space is left completely clear, so providing space for public parks laid out as belts which create a dense, complex green fabric running virtually through the whole city. This gives it the character of urbanized countryside *avant la lettre*. Services and housing alike are laid out in the *manzanas*.

Fig 12. The *Ensanche* acts as the new ground which makes possible to subvert the role of the existing urban structures: Barcellona, Gracia, S. Andren de Palomar. They are not simply reduced to its figures, but assimilated to fragments, leftovers of a past condition doomed to decay. The grid logic clash with them as if they were natural objects, sharing the destiny of the Montjuic: to be absorbed and metabolized



Formally the services differ from the housing mainly by scale and zone of influence. They are located within the urban region with a supramodular logic so as to ensure a balanced coverage of the densities of development planned for individual neighbourhoods. Hence the administrative buildings occupy a surface area corresponding to four modules and the gardens two modules, while markets, schools, churches and other facilities of a collective interest occupy only one. The urban morphology is therefore governed by this serial principle present at the syntactical level. The only exception allowed is at the intersection of two diagonal axes, where Cerdà laid out a new urban centre with the construction of the Plaça de les Glòries Catalanes.

The grammar is certainly innovative, especially in the organization of the individual *manzanas*. The buildings are not subject to compliance with the street hierarchy and they are oriented freely in order to counteract the effects of winds in the inner and more protected parts of the *manzanas*. Even the green areas are not subject to any architectural order; they are laid out in the remaining available parts of the block so as to accommodate a completely independent design.

If we consider the building system in lexical terms, the plan envisaged the adoption of the typology of Barcelona's artisans' housing. This model was developed in depth on the narrow fronts, with internal courtyards for ventilation and light, and transformed to house several families.

There were no prior guidelines for the expressive qualities of the complex, but the image of the built city allowed discretion in its construction for eclectic imagery, firstly, and then for the absorption of all sorts of linguistic innovations. Variety was therefore a privilege implicit in a generally flexible scheme to which the manzana gave a unified measure in all its different scales and forms.

However Cerdà's expectations were left partly unfulfilled in the subsequent building regulations which implemented the plan. The pressures of speculation began gradually to undermine the original conception of the manzana by providing a progressive saturation of the free spaces and an overall increase in the planning heights of up to 15 meters. *Fig 13* In this way the *manzanas* developed characteristics similar to those of the city blocks with closed perimeters. Despite this reinterpretation of its initial provisions, the general nature of the plan was preserved. As a result, it remains possible to recognize the innovative decomposition of the city into functionally homogeneous systems through a serial logic, without specialization in the city leading to the loss of an overall unity of purpose.

Arturo Soria y Mata was a leading member of the Spanish Progressive Democratic Party. He fully endorsed the socialist ideals of rehabilitating the working class and petty bourgeoisie from the contradictions implicit in the capitalist mode of production applied to the city of the nineteenth century. In particular, as a professional planner it was his intention to redress the inequalities brought about by the mechanisms of rent, due to the ownership of urban land by the privileged few, and the principles of growth based on the prevailing transformation of existing cities. For the same reasons he sought to go beyond the urban culture characteristic of bourgeois society, based on the centripetal model and the instrumental contrast between city and countryside. Fig 14

La Ciudad Lineal,
Arturo Soria y Mata, 1882-1897

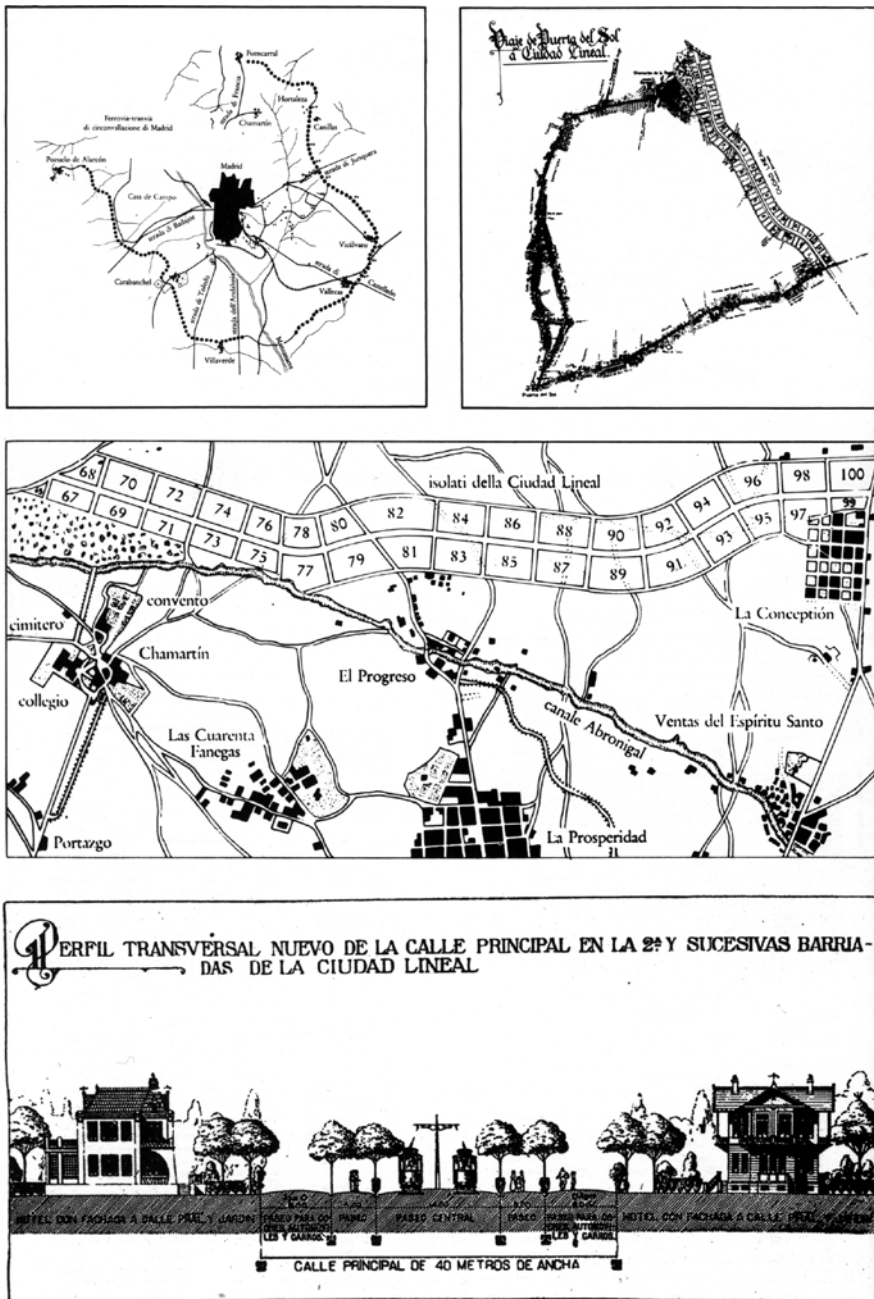


Fig 14. Hénard around Madrid. The density was too low to really deploy the radical quality of the proposal. The result is simply a garden city supported by the railway system.

He proposed a linear model of the city, which he presented for the first time in the pages of the party newspaper, "*El Progreso*". He believed it could be laid out along all the trade routes of the world until it ideally

form a single infrastructural system uniting Cadiz, Saint Petersburg, Beijing and Brussels.

An opportunity to test these principles, despite the utopian streak running through them, occurred in 1892 in Madrid. Soria y Mata was awarded the concession to operate the railway-tramline linking the satellite towns which had developed around the city, from Fuencarral to Pozuelo de Alarcon in a horseshoe-shaped route some 48 kilometres long. A further new tramway link was meant to ensure a direct connection between the town of Concepcion, one of the stops on the railway circuit, with the central area of the Prado. In 1894 he proceeded to purchase land along the railway by private treaty. The inevitable financial difficulties led to a drastic reduction of the initial scheme, limited to one stretch about five kilometres long, but this did not substantially alter the substance of the project as a whole. In terms of the functional program, the city was conceived as a major infrastructure populated with predominantly horizontal and low-density housing, with all the other networks converging on the rail network. He did not, however, specify how the residential areas were to be related to the workplaces, while he stated that facilities of a collective nature would be located at regular intervals.

The project thus acquired the form of a central infrastructural spine along which were arranged all the installations essential to a transport system, and two belts of buildings at the sides to a maximum depth of the entire system, equivalent to five hundred meters, this measurement being determined by the need to optimize links with the principal road network. The latter was laid out in accordance with a symmetric cross-section measuring some 40 metres, with the railway lines running down the middle, followed on either side by a broad pedestrian avenue lined with trees, the roads for vehicles, pavements for pedestrians and residential blocks, arranged perpendicularly to the principal road front. The urban plan is simple in its characters (there is nothing reminiscent of the complexity of the modern city, as described by leading theorists of the time) and is defined as a simple serial repetition of the same standard section along the primary infrastructure. The open and additive syntax of the plan was matched by an urban morphology reduced to its elementary components, which evoked that of a medieval village near a gate in the city walls, paradoxically even in the general dimensions of the road network and city blocks. In essence, the models for the projects were fairly conventional, with streets arranged perpendicularly to the primary infrastructure and the distance from one street and the following one equal to twice the verge of the single road axis, so determining the recurrent modular pattern of the city blocks. *Fig 15*

The urban grammar itself is also traditional. In the residential areas it produces orthogonal lots facing the road and compliance with the logic of their rotation in the transition from the original matrix roads to planned roads and ending with the connecting roads located on the margins of the whole urban system.

The lexis presents no innovative features. It consists of single-family lots with prevalently green areas and detached houses in a vaguely eclectic style. In addition, little can be said of the expressive qualities of the project, except that it alludes, in the summary outlines presented by

the author, to the use of very traditional technologies.

The model of the linear city has aroused the interest of many theorists and even influenced highly innovative projects. Yet in Arturo Soria y Mata's version one has the feeling that his "*positivist*" emphasis, present in the way he deals with the problems of infrastructure networks and the need for control over the urban dimension as a whole (represented by the idea of the system as a theoretically unlimited repetition of the optimal response made to a fixed standard) is essentially traditional in nature and it draws on processes of a spontaneous kind that could be easily be found in the layout of the suburbs of Madrid.

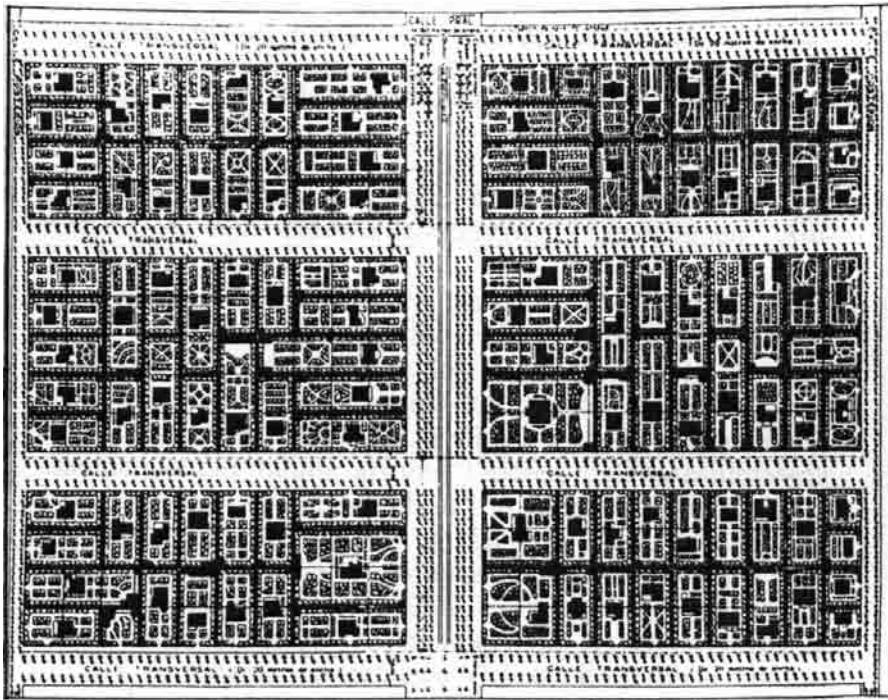


Fig 15. The plot arrangement of each block resembles an urban condition not supported by the necessary density and life congestion.

The situation of Paris following the demolition work of the Baron Haussmann provided the occasion for a series of reflections that acquired a precise significance, not only in relation to the specific context but as a general model for solving similar problems in different situations. In this sense we can relate Hénard plans to the cultural climate characterized by Positivist thinking about the modern city.

The structure and its appearance of late nineteenth-century Paris had changed radically. The rich urban fabric of the medieval city, still clearly visible down to the middle of the century, was rapidly been replaced by a homogeneous system which affected both the plan of the city and its more strictly constructional features. The strategy of creating straight boulevards which restructured the urban fabric by cutting through it was applied single-mindedly. It showed no regard for existing structures, with the exception of buildings of a monumental character. One result of this is that the alignment of buildings in relation to the street front has become common practice, having been rapidly inscribed in the building regulations. "*Straight streets triumph, compact walls, battalions of horse chestnuts, sycamores, elms or Japanese shrubs stretch indefinitely without any details on which the eye can linger and the spirit can dwell for a moment. The modern road system tends increasingly to be Americanized*

Boulevards à redans, Paris,
E. Hénard, 1903

and it transforms our cities into a series of compact blocks devoid of character, without any surprises or noteworthy profiles.” (24)

The rationalization of the design of the city therefore spared no aspect of its configuration. The emphasis was on controlling the built volumes, which produce an immediate income, compared to the quality of public spaces. According to Hénard there was no legitimate reason, in Positivist “*scientism*”, except pure speculation, to subordinate the design of cities in their built parts to the system of infrastructure. Though there are reasons of regularity and speed of flows which justify a preference for rectilinear avenues, there is no reason why the whole city should be required to follow the same principle. *Fig 16*

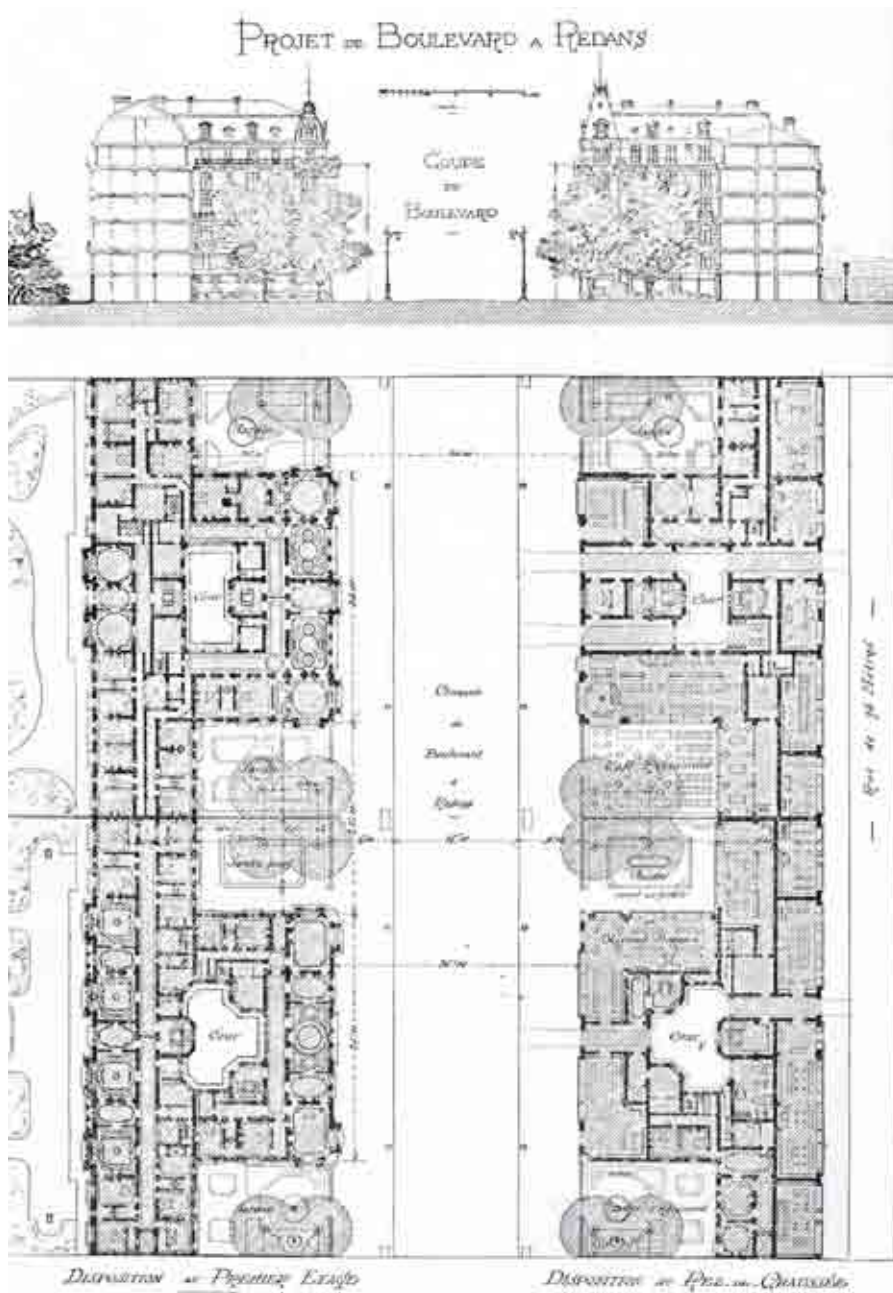


Fig 16. The *redans* arrangement introduced into the urban perspective an innovation: an intermediate degree of publicness between the boulevard and the inner private courts.

The issue was particularly urgent in contemporary Paris, where the demolition of the last ring of fortifications, now rendered obsolete by advances in military discipline, and planned to be moved further out,

24. Eugene Henard, *La costruzione della metropoli*, Padua, Marsilio Editori, 1972, p. 65.

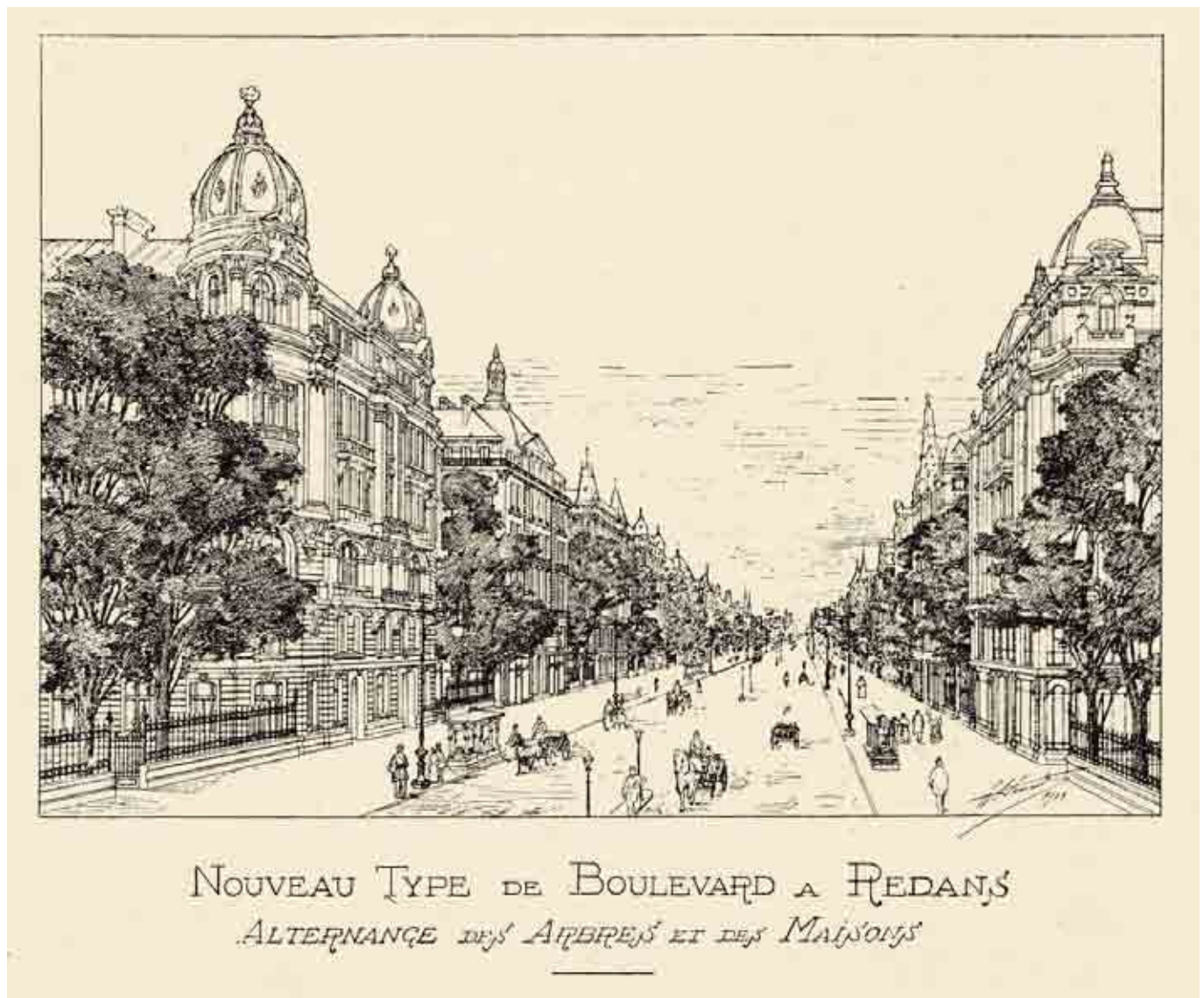
had made available for development a belt some 120 meters wide and 33 kilometres long, without being subject to any form of easement. This tangential ring, because of its “*natural*” position in urban organization, lent itself to becoming the location of a complex redevelopment project for Paris. It could become a ring road, which would be especially useful for rerouting incoming traffic around the city. At the same time it could provide a unique opportunity to achieve a more balanced redistribution of green areas within the city. The provision of urban parks was a felt to be a pressing need at the time to make living conditions more salubrious in the city. Paris had large areas of parkland, but they were all in the Bois de Boulogne and Bois des Vincennes, both on the outskirts of the city. The location of parkland was therefore irrational, and the area freed by demolishing the walls could allow for a broad diffusion of green areas, widespread along the major roads, if possible at fairly regular intervals. This scheme, unfeasible in any other part of the city, would be affordable because the cost of the land would be well below the average for the real-estate market.

In addition to dealing with important issues, such as the provision of urban roads and leisure facilities, the area would secure a more rational distribution of built volumes by balancing the legitimate expectations of the property market with the quality of the projects on public land. In addition, since the area was owned by the state, Hénard argued that if it were purchased by the City of Paris, the proceeds from the subsequent sales of urbanized land would be extremely healthy for the city’s finances. In this respect, too, the positivist approach with its close attention to the financial responsibilities of the public administration and the economic feasibility of the operations it conducted was a feature common to the contributions of Hénard as of Cerdà and Ebenezer Howard.

In addition to the pragmatic advantages of the operation in itself, there were more general benefits in Hénard’s plan. They clearly included the desire to develop the city without subordinating public to individual interest, so reversing the vertiginous speculative spiral which was paradoxically harmful to individual interests in the long term. Unless the plan of the city was framed within a long-term strategy, it was likely to be overwhelmed by decisions which would only be convenient in the short term. The city, in a positivist view, was an organism that survived because of its ability to constantly adapt to changing conditions of use. In this respect public control of the city was a rational and utilitarian necessity, with the concept of utility being extended to a broad spatial and temporal horizon. In addition, given the dimensions of the area, there was a concrete possibility of producing a new idea of the city, with better living conditions because of the reduced impact of mechanized traffic on the traditional urban rituals. Hénard proposed an urban plan with a discontinuous linear development which would follow the irregular course of the old fortifications. Running through the middle of the belt of land would be a boulevard 18 metres wide, considered sufficient to absorb traffic in the long term. On either side of this there would be pavements 9 meters wide. The width was intended to ensure the pavement was suitably removed from the roadway and convenient for pedestrians, while allowing for a significant reserve space in

case further enlargements of the road section became necessary, a provision that reflected the adaptability to change which positivist thinking was particularly sensitive to. The building land would abut onto the pavements. Instead of presenting closed city blocks lining the street front, Hénard proposed to build *à redans*, with the buildings rhythmically alternating with recessed fronts to create a saw-tooth pattern. The spaces between the projecting angles could be laid out as public or private gardens as required. The land behind the buildings would be laid out as strips of woodland and the entire system would be interrupted rhythmically around its ring-shaped layout to make space for local green spaces. *Fig 17*

Fig 17. The alternation of building and setback garden bring a shift in scale within the Parisian haussmanian *grandeur*.



The alignments of buildings on the street front should not exceed 36 meters, while the fronts could be stepped back for a depth of 20 meters by 28 meters wide. These measurements were designed in relation to the actual usability of the spaces: 36 meters was the maximum possible development of the front of a single luxury apartment, with no wasted space. Smaller sizes could be easily obtained by modular subdivisions of the facades, with apartments on a linear plan measuring 12 or

18 metres wide, thereby obtaining a great variety of different sized home units. This decision again allowed for flexible plans due to the unpredictability of future developments.

Hénard argued that his scheme would have significant advantages over traditional speculative projects. There would be a considerable reduction in internal courtyards while producing extensive forecourts, well ventilated and illuminated, so eliminating the problem of stagnant air. The inner courtyards could be substantially reduced to little more than wells with access to the services. Then there would be pleasing masses of trees between the screens of buildings, with the dual purpose of separating the facades from the pollution of the traffic and laying out these spaces with gardens, restaurants, or outdoor extensions of businesses. Finally it might finally create that variety of streets which was characteristic of the pre-industrial city.

Hénard knew he would be criticized by the developers. His *à redans* layout would reduce the amount of building land compared with a building occupying a whole city block corresponding with the same volume. Yet arguing from the data, he showed that against a decrease of only 12%, equivalent to 2% of the surface area, his plan would increase the development of the facades by 62.5%, which would produce an exponential increase in property values. *"The recesses in the gardens form open courtyards which are more pleasant, airy and hygienic than the inside courtyards of the existing buildings, and so all the living quarters can be set on the facades overlooking the avenue or the gardens."* (25) Fig 18

The syntax Hénard used therefore derived from the closed perimeter of the nineteenth-century city block. Just as the latter was created by scooping the hollow volume strictly necessary to ventilate and illuminate the interior out of the compact mass covering the whole surface of the urban fabric, so his *à redans* building worked in continuity by "gouging out" the buildings, eliminating the screen of buildings ranged directly along the street front.

In morphological terms, the *à redans* pattern of building was undoubtedly innovative. It modified the character of the parts, though they were still clearly identifiable, so essentially confirming their reciprocal hierarchies. The public buildings fronted the street, while the more private parts faced the open courtyards (except for the commercial activities on the ground floor). The service areas opened onto light and ventilation wells.

The grammar and vocabulary correspond closely to the repertoire of the Haussmannian tradition. Hénard was evidently aware of the weight of tradition, so this was intended to disguise outwardly the true scope of his project. *"How long will it take to carry out this transformation? It is impossible to predict. Regrettably we here have to deal with the heavy inertia of established prejudice. Conventional wisdom treated as demonstrable truth is often no more than bad mental habits. Eyes long accustomed to certain forms dull and annihilate all initiative, all new research."* (26) The positivist polemic against traditionalism as an end in itself is always present. It is conceivable that if the project had been carried out it would have acquired an "expressiveness" capable of no longer troubling the eyes of the bourgeoisie of the day.

25. Eugene Henard, *La costruzione della metropoli*, Padua, Marsilio Editori, 1972, p. 68.

26. Eugene Henard, *La costruzione della metropoli*, Padua, Marsilio Editori, 1972, p. 72.

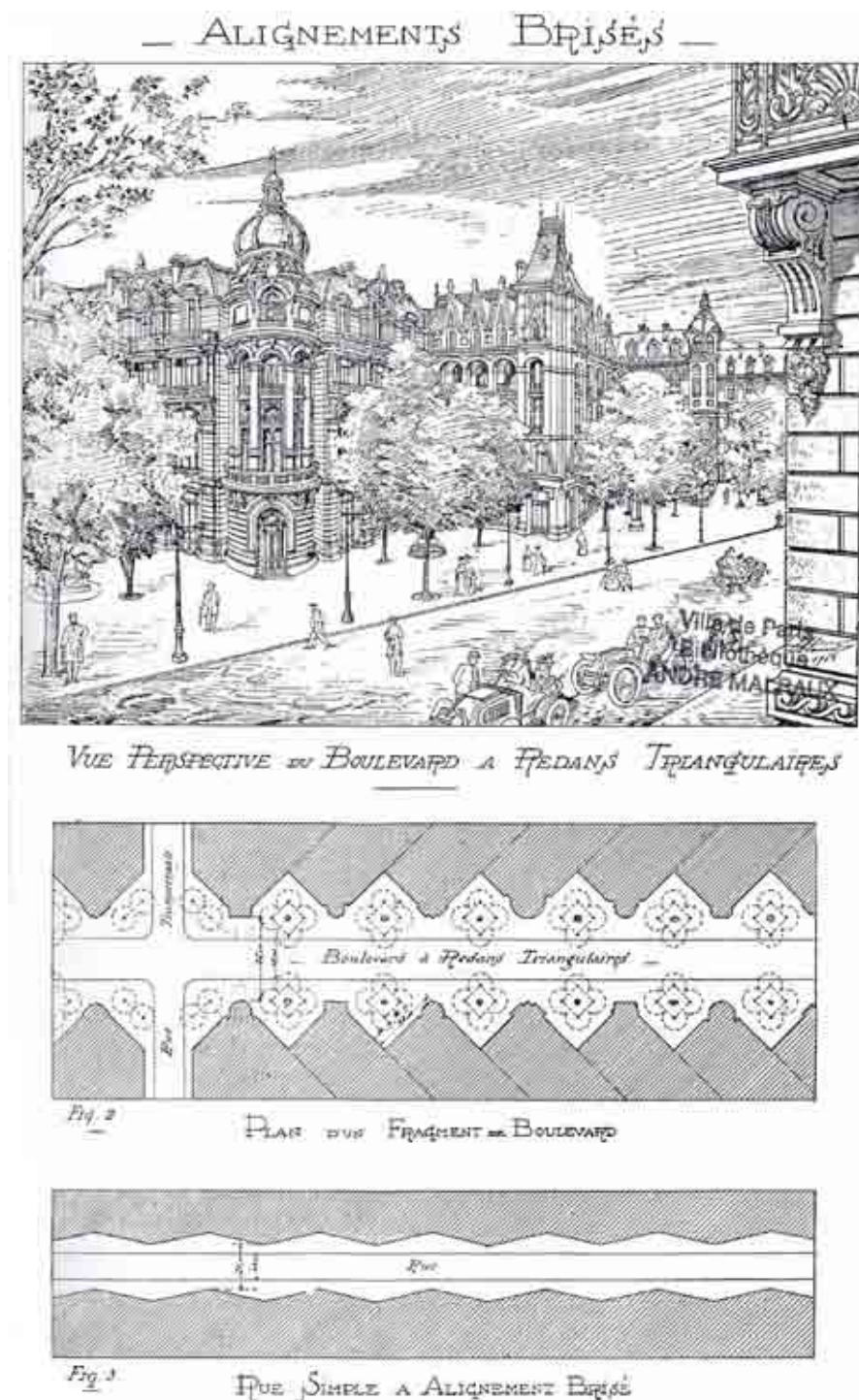


Fig 18. Other *redans* solutions do not add neither a speculative nor a spatial quality improvement.

2.3.4) The phenomenon interpreted: analysis of the sources and spread of themes

The architecture of engineers can be regarded as a limited and partial phenomenon in the dynamics of nineteenth-century urban design. One aspect should, however, be emphasized, which makes it possible to acknowledge the novelty of the positivist outlook as compared to the structural rationalism implicit in the most significant developments of the former phenomenon.

As we have already observed, architecture in wrought iron, cast iron

The architecture of engineers

and glass had to cope with rigid restrictions which had no significant historical precedents to provide guidance. When this happened, moreover, the problems they had to surmount were so substantial and complex that they could not be compared with traditional architecture. This explains the decision to take the spatial qualities of the baroque and late-baroque city as a model of reference, suitably rationalized within the new container buildings, endowing them with the character of a public hall. The traditional city was thereby introjected into the architectural dimension. The leap in scale was striking, especially when compared to earlier achievements.

The urban culture of positivism rejected the idea of imposing programmatic restrictions on the synthetic prefiguration of the significant form intended to contain it. By contrast scientism in the second half of the nineteenth century stressed the centrality of the programmatic phase, the preliminary definition of a functional standard or “*content*”, to which the form best able to satisfy it should correspond. In the architecture of engineers there is undoubtedly a significant relationship between form and content, the ritual that takes shape within it. But it is equally true that the difference lies in not trivializing the content to a simple statistical fact, as happens as a result of the culture of positivism. The content is delivered through a rituality expressed in the use of space made by the signifying form. Hence there is still a measure of “*classical*” space, which reveals the continuing correspondence between *urbs* and *civitas*, where the latter, especially, is not yet reduced to a simple statistical fact.

The application of the categories of positivist thinking to the organization of the city anticipated and to some extent fostered the principles of urban redevelopment subsequently applied systematically by the Modern Movement. Significantly Ildefonso Cerdà claimed to have invented a new scientific discipline, or Urbanism.

The Modern Movement

Its founding principles were the recognition of a rigorous analysis of the problems that the city has to solve; the breakdown of complex structural issues into functionally homogeneous undertakings, which are easier to analyze separately; the optimization of the technical responses given to individual problems identified by analysis; the reduction of the cultural datum to its statistical components so as to define a standard applicable to all situations where similar conditions occur. In particular, the positivist claim is to have introduced the concept of the “*social sciences*” as distinct from the natural sciences, while subjecting them to similar criteria of assessment, hence studying the behaviour of individuals with the same instruments as are used to interpret natural processes.

The formal, not substantive, assimilation of social, economic, political and cultural phenomena to natural phenomena was of enormous importance in the organization of the city. First of all it justified the interpretation of the city itself as a living organism (so anticipating the definition of it by the Moderns). This assumed a principle of development through tendentially linear successive stages and a logic of local changes that does not necessarily entail a general

transformation. Each organism cannot therefore be converted into another one substantially different from it. It can only change slowly so as to complete its life cycle. In this sense cities are born, grow and die in ways and times that depend on the rapidity of the processes of obsolescence of their basic components, which in turn are closely linked to the nature of the materials and technologies used. Moreover the foundations of positivist thought lie in scientific materialism and economic utilitarianism.

Bound up with the principle of the city as an organism is the division and specialization of the city into systems, to be understood as “*representations*” of functionally homogeneous activities. These are endowed with a relative degree of internal autonomy, leading to the identification of infrastructural networks, the system of green areas, services of a collective nature, places assigned to work and the volumes of housing, which constitute the major problems of the bourgeois industrial city. The organic metaphor unites the experience of positivism with the culture of the Modern and becomes translated into a process of progressive specialization.

Each single system is further divided internally into structures that are specific solutions to problems inherent in individual functional issues, while its components embody the latest material responses to contemporary technical culture. Intervening in the latter presupposes a modification of the whole system by a mechanism of a pyramidal nature, which permeates the various levels of urban organization through structures, systems and complex organisms.

It is important to observe the consequences of this approach. It is not the organism in its individuality and uniqueness which subordinates to its existence and its functioning the behaviour of the parts all the way down to their basic components. On the contrary, it is the basic components that determine, by reason of their character, bound up with advances in techniques and materials, the functioning of the structures all the way up to the systems and organisms, in keeping with the model imposed by mechanics. The same model whose laws govern the world of known physics, or visible macroscopic physics.

In this respect positivism anticipated Modernity and showed a greater degree of coherence, ironically due to a more direct correspondence between the evolution of scientific thought and the construction of the city, though less it was exaggerated in its resulting forms.

2.3.5) The role of architectural “*language*”

The partial identification between positivist utilitarianism and materialist rationalism helped supersede the principles of architectural and urban composition based on the lectures of Durand, the heir of Enlightenment culture through his teaching post at the Ecole Polytechnique. Durand’s reform, which achieved a synthesis that went beyond Baroque and late Baroque excess of spatiality, was articulated on the basis of certain principles that were very clearly expounded. Composition followed a process that was the reverse of the reading/

The syntactical revolution in the codes

interpretation of an architectural work that has already been built. Just as its comprehension starts from the identification of the simplest components and so arrives at the identification of the most complex ones, the project stems from a synthetic operation by defining the whole and then proceeding to a more detailed articulation of its parts. For this reason we can say that the process of composition is “*subtractive*” in nature. It follows that its syntax is hypotactic, or based on a process that identifies key elements and derives all the others from them through a principle of subordination. However it must be said that this hierarchy is present only on the syntactic level, i.e. in terms of the sequence of operations that has to be followed in the general process of formal articulation.

From a purely morphological point of view, Durand’s ideas are characterized by a substantial equivalence of solids and voids, public parts and private, serving spaces and served.

Grammatically speaking, the rules that govern the composition are dictated by the most rigorous economy of signs and “*actions*”, with symmetry in the layouts and correspondences in the alignments.

From a lexical point of view, the whole formal repertoire of the period can be used without distinction according to the convenience of the local customs and there is no relationship of stylistic necessity, determined by the rejection of history and the superseding of the concept of architecture as tectonics in order to enhance the city’s fundamental linguistic function.

The success of this teaching ran all through the nineteenth century and was undermined by rationalist organicism and positivist utilitarianism. We shall now examine its distinctive features, as they emerge from the general framework outlined in the chapter.

Syntax is completely transformed. The process of composition is of a largely “*additive*” kind, which justifies the establishment of paratactic articulation, characteristic of a process of construction of the form resulting from a simple juxtaposition of elements, which produces open and endless configurations. The substantial equivalence of voids and solids was replaced by a prevalence of solids, to which the voids are subordinated and treated as potential solids, although they are not endowed with any specific, recognizable character.

From the morphological point of view, all the constituent parts of the city, i.e. its architecture of solids (since the voids are regularly read as negatives, as the residual products of solids), are strongly distinctive and characteristic.

In grammatical terms, the criterion of asymmetry is at work: the unresolved juxtaposition of elements, the co-presence of discordant alignments.

In lexical terms we observe experiments with new forms, which tend to contrast with inherited forms. There is a first attempt to transcend the conditions of recognizability of forms and components. In this respect an important contribution comes from technological innovation in terms of networks.

This revolution in the codes is a result of the organic metaphor which runs through the entire output of the late nineteenth century. The idea of a process dictated by principles of economy fits in well with the clear

identification of the roles played by the various components in the definition of the architectural complex and the obsessively analytical attitude that informs composition itself. At the same time the idea of progress implicit in the culture of industrial production finds an effective tool of persuasion in the process of addition. At the same time, the break with the past on the lexical level is closely related to the shedding of all constraints on the emergence of thought, expressed in the form of a possible re-evocation of history.

2.3.6) The role of “*type*”

Clearly, among the many factors that contribute to the definition of the “*type*”, the one that receives the greatest emphasis is the semantic dimension, namely the question of significance. Positivism assimilates social rituals to natural phenomena, governed by the same principles of “*economy*” that are found in the analysis of natural phenomena. It thus seeks to relate the mechanism of the choices made by individuals, taken singly or recognized in their social diversity, to a set of operations substantially predictable because based on universally recognized rules. Behaviours and values are not conventional in nature, not derived from the signing of a pact, from a bargain. Having set the boundary conditions capable of eliminating injustices and inequities, which are a product of history, of men forced to abandon their state of necessity, they will occur “*naturally*” without the imposition of forces other than those of pure utilitarianism. Meanings, behaviours and urban rituals are therefore considered natural, spontaneous forms as opposed to the idea of the conventionality of values which characterized pre-industrial culture, still distant from the assimilation of social customs to objective phenomena.

Deterministic nature of the type

The growth of the city and its principles are seen as spontaneous, irreversible, even when a new kind of layout is proposed, as in the case of the Garden City. Howard himself had no doubt that cities are destined to grow, confident as he was in the liberating and utilitarian function of progress. Just as no one doubts that the criterion of economy should determine the architectural options. In this sense, positivist utilitarianism and materialist rationalism overlap.

Inevitably there is a tendency to undermine the conventionality of the “*type*”, hence the role that the history and memory of the constructional and organizational processes of the city have created over time. A clear expression of this is found in the manuals of the period, aseptic descriptions of urban components, intended as models for any situation which presents similar utilitarian conditions. But the urban rituals are also an exact transcript of them, profoundly subverted by the rationalization of the city and the new principles of economic and financial optimization. The cause, or at least ally, of all this was the rejection of all forms of conventionality in the meanings, the use of materials, the language and in the relationship with the context.

So it is no accident that the reaction to this attitude led to reassessment

of the significance of history, the value of acquired conventions, the legacy of memory as a guide for understanding innovation. We can therefore understand that the question of recognizability is linked to shared values, and that this acceptance is not at all “*natural*” but is always the result of a social pact, whose definition involves factors that are not strictly utilitarian. The perception of value, and therefore of meaning – hence also the capacity to identify oneself in the “*representation*” that the city gives of itself – is strongly influenced by the history of each of us and collectively by the experience that has accompanied us when we are called on to face an innovative event. This, though it may be salutary, always means a trauma, a break with the accustomed rituals.

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3) THE CULTURE OF MODERNITY

3.1) The recovery of tradition

3.1.1) The cultural context

The application of the categories of positivist thought to the construction of the city created the belief that the logic of the object should be sought in its own programmatic reasons and should therefore preclude any form of intentionality imputable to the critical judgment of the individual. This inevitably impoverished the concept of history through a slow semantic drift which replaced the original representative function with a purely evocative role (documented by the eclectic experiment).

Progress and history

Past experience was indeed an unacceptable a priori category in relation to the emergence of new problems, one that was capable of blurring a complete understanding of them, however objective it may have been. If the roots of the phenomenon lay in the culture of the Enlightenment, as has been broadly corroborated, in the last decades of the nineteenth century it encountered the first strong objections and reservations, expressed especially by those who could now see the effects of this modification of thought through the forms of built space and began to compare them with those of the pre-bourgeois tradition. It was precisely in the logic of confrontation between the established principles of the pre-industrial urban tradition and the one which developed in the second half of the nineteenth century that the first significant cracks emerged in positivist thought. Actuality was subjected to the test of history, and no longer to that of Reason, so demonstrating all its inherent weaknesses. In fact comparison of examples remote in space and history dramatically revealed a loss of unity of thought with the fragmentation of skills due to the excessive proliferation of categorizations and the inability to reconcile the

different spheres of competence within an organic discourse. At the same time it emphasized the coherence and cohesion of traditional urban representations, their capacity to form part of a sequential narrative.

The point of fracture of a lost unity, which had to be regained, was therefore sought in the interpretation that was given to new themes of the bourgeois tradition, not just to see how this innovation had been produced but even more to understand how it could be re-embedded in the continuous course of history. This objective could not be achieved by a simple return to the forms of the past, but through a rediscovery of the principles which produced them and then their application to the temporary condition.

The constructive approach with which history was beginning to be considered, in contrast with the banal stylistic mimicry fostered by the eclectic current, inevitably renewed a concern with the city and its architecture as human products that take shape in time, drawing on a range of artisan skills which only careful observation is capable of grasping fully.

Above all there emerged an awareness, at least among the most perceptive authors, that the force of tradition and the accumulation of its skills had fulfilled the role of the project as understood in contemporary terms, meaning the synthetic and impersonal prefiguration of emerging new needs. History thus became an object to be analysed with the same objectivity as the functional program had hitherto been investigated.

It was precisely in the care with which the production of objects, whether architectural or urban spaces, was systematically related in its sources to the earlier creation of objects of the same kind that a new approach to the city was developed. This adopted the instruments and skills of artisanal culture and replaced them with those by which the industrial production of the city was now being organized.

Arts, crafts and industrial technology

The artisanal spirit, which is also responsible for the analysis of reality case by case that characterizes the most significant theoretical works in the period, entailed a discovery of the possible ties between the themes of the contemporary city and the corresponding pre-industrial city, in a relationship that, as we have already seen, sought to connect the contemporary object and that inherited from the past in a continuous relationship of cause and effect, so recomposing, at least critically, the discontinuity in thought that the Enlightenment had subtly motivated by affirming new needs, values and expectations.

While Gottfried Semper intuited the point of disconnection through his analysis of technical development and documented it through experimental activity, Sitte was the first to illuminate it when he pointed to the impoverishment of the quality of urban spaces, meaning the loss of significance in the spaces between things, as a “*binder*” of the traditional city in bourgeois culture. But Sitte merely stated the fact, which could be intuitively accepted by his contemporaries – as shown by the resounding success immediately bestowed on his work through

The space of the city

multiple editions - as well as being corroborated by comparison with the illustrious examples of the past.

Comparison between objects of the same kind (buildings used for public events), but also objects of different kinds (buildings for public events compared with those associated with private functions), showed that the comparative criterion was no longer strictly functional so much as the relational significance, meaning an analysis of objects in relation to the role they played compared with others within the urban organization.

From the methodological point of view, Sitte's innovation was of the greatest importance because it enabled him to establish connections between needs that were not common to the different periods. The open space of the city is by definition the space of relationships, but the bourgeois city had gradually lost it and replaced it with architectural space. He reaches this conclusion by asking what places in the contemporary city had replaced the richness of the squares and streets of the past. The aim of planning therefore became to restore that correspondence which related public spaces to the richness of collective events in cities in the past.

The dialectic between open spaces and the corresponding moments of collective life and architectures as the ambiance for private relationships is the primary source of that narrative continuity which is so lacking in the contemporary city. The need for an urban fabric that binds together the different parts is present in both planned cities and cities that have grown up spontaneously. A different tactic, therefore, to deploy a single indissoluble strategy which seeks to recover a correspondence between the social system and the urban organization. Hence there exists no relationship between the quality of the urban space and its geometry.

Comparison with medieval cities in fact shows that though they seem irrational in the definition of their boundaries, in their respect for clearly defined orographic and hydrographic constraints they correspond to precise principles of enclosure and definition in the spaces they created. By contrast, many areas of the contemporary city, in the purity of their forms betray the abstraction of their founding principles, namely the fact that they have been produced without any reflection on the significance that they would acquire when they became a theatre of collective use.

Rule and spontaneity

Through a comparison with history, the bourgeois city acquired a full knowledge of the formal reasons for its origins. The process of strong typological specialization begun by the Enlightenment attributed an absolutely preponderant significance to the object seen in its formal, semantic, functional and structural autonomy from the city. Hence it was an object that tended to gradually replace the articulation of external relations with the rich permutations of the possible connections in its internal confines. Architecture evokes the traditional city through its forms, while the city appears increasingly as a disjointed juxtaposition of self-sufficient parts.

The New City and the legacy of the past

The idea of the traditional city was rather that of a continuous interior, which differs from an architectural interior only by the density/quality of its relations and not by its number. The goal therefore became to re-establish a spatial continuity between the different architectures so as to restore the lost dignity of the city by jeopardizing their material and perceptual independence. Just as the architectures and building blocks of the bourgeois city were located in the isotropic space of the city in their purity of form and language, the new projects tended to undermine the principle of internal cohesion by making them interact with the different areas of the city around them. Thus the very principles on which the bourgeois city had been designed and built were being replaced by new ones. The unity of the constructive and perceptive viewpoint was in fact being replaced by a multiplicity of approaches. This multiplicity unfolded in space and not through the simulation of time, as evoked by the eclectic divagations of style.

3.1.2) The ideas of authors: intentions and definitions

If thinking with a “*positivist*” stamp found its most fervent supporters in Stubben, Eberardt and Baumeinster, Camillo Sitte’s work merits particular study among the writings that sought to reassess the contribution of history to an understanding of urban phenomena through a comparative approach. It was published in 1889 in Vienna and soon became something of a cult book not only in Austria but also Britain and France, where it was published in translation in 1902.

Sitte saw the city as not only a response to technical problems, but as having an overriding aesthetic or communicative function. This meant that through the recognizability of its constituent parts and the relations between them, the expression of a definite urban code, it was possible to redefine those values that were its necessary premise. To achieve this Sitte attempted an empirical classification of the forms of urban space, seeking to identify a possible typological derivation from the structures of the forums in antiquity. Although he failed to grasp, except in rather intuitive terms, the substantial diachronicity of urban developments, he also offered a temporal perspective and his morphological analysis rested on an understanding of the structural changes that affected the city in the nineteenth century. This was because Sitte, as a man of his age, was better able than his contemporaries to grasp the grounds on which the logic of the urban organization was changing, though he attempted to introduce correctives by drawing on the principles from the past, which he knew well from direct experience. *Fig 1*

The ideal recipient of the text was in fact the technician. Sitte argued that the innovations introduced in technical planning were established principles and now it was time to concentrate on art. The modes of urban organization had changed profoundly since ancient times. The distinction between the plan and the building regulations, with the former establishing networks and the dimensions of the urban grid to be allocated to different uses, while the second determined the

City Planning According to Artistic Principles, Camillo Sitte, 1889

characteristics of the building lots and individual buildings in relation to the street-front, served the purposes of a real-estate market that had to sell land before the form of the city could be defined, hence in the absence of a complete urban project. To this was added the progressive loss of significance in the city's public space. Most of the collective functions that had once taken place out of doors now took place in specially built buildings closed to the outside. The forum, which Sitte identified as the model for the archetypal places which had developed from the Renaissance onwards with increasing intensity, had lost its traditional value. In the city of ancient tradition the idea of an open community space was so ingrained that the rooms of the house were arranged around a courtyard. The implosion of collective functions and reciprocal autonomy had led to the loss of the art of public space and above all of the relationship that existed between it and the buildings surrounding it.

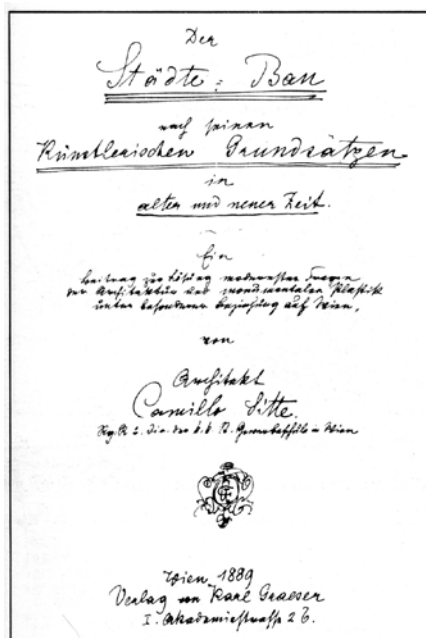
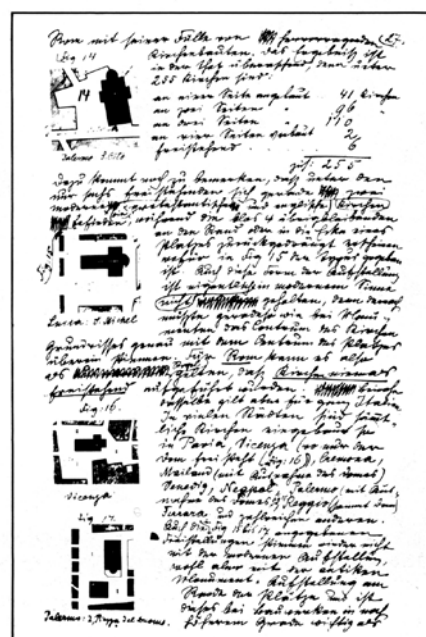
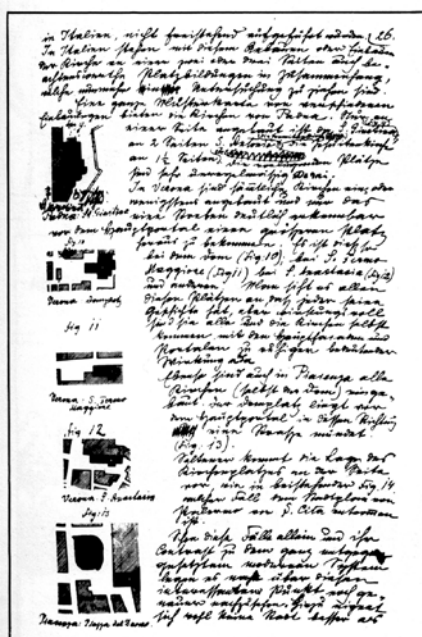


Fig 1. Some pages extracted from the original manuscript confirm Sitte's methodology: to demonstrate that the experience of the urban space corresponds to precise principles which the art of urban design puts into action to deploy societal set of value.



The consequences of these choices were under the eyes of contemporaries. The monuments of the bourgeois city were isolated from the fabric of the city and the blocks of buildings immersed in undifferentiated space as isotropic objects. Then statuary, which had always been seen as an integral part of the organization of open spaces, had been relegated to museums or isolated at the intersections of streets. In former times, by contrast, the custom was to place sculptures at the points where they would least disrupt movement, on the margins of the paths crossing the squares. Public buildings have become isolated from each other, indifferent to any form of dialogue, as public life has moved inside buildings. The spaces between monuments have therefore acquired the character of leftover areas, uncontrolled margins, having been abandoned by the collective rituals that previously took place out of doors. But the experience of history, admits Sitte, also shows that the square was perceptually an enclosed space, clearly designed to give form to all kinds of social events. The experience of the baroque squares was emblematic in this respect. The character of definiteness of the open spaces depended on a correct proportioning of the width and height of its building screens, which necessarily varied in relation to the characteristics of the monuments that were being framed and enhanced. Absolute dimensions were irrelevant. Only relative values mattered, and their effect did not depend on the geometry of the boundaries but the viewer's position and his ability to measure the space with his eyes. Further factors that qualified the characteristics of a square were the width of its streets and the way they ran into it. A rich range of examples enabled Sitte to demonstrate the rules of good urban practice by which the art of designing the city had developed continuously over time.

Systematic comparison revealed the limitations of modern squares and their causes. Their dimensions were far too great to be perceived as enclosed, because they had been laid out as purely technical responses to the need for intersections in the road system. There was no attempt to give them some sort of architectural character, because they were the marginal and irrelevant outcome of a design that focused on the blocks of buildings lining them and interpreted as isolated objects. To this were added the continued and often unjustified recourse to symmetry, which Sitte saw as a veritable disease of modern times.

Even in the parts of Europe where it was difficult to recognize the presence of the forum as a model for the articulation of urban space, the sense of closure of the squares was never contradicted, and even in cases where a monument stood in the middle of a public space, the different elevations contributed to articulate the space in accordance with ever-changing views. Moreover, these squares were not always the result of a single project; they were often the outcome of successive projects which accumulated over the years. Sitte does not question the plurality of styles of his time; his training was eclectic. Yet his criticisms of the traditional urban middle classes were severe: *"Early Christian basilicas were erected again, Greek propylaea and Gothic cathedrals were built, but what became of the plazas that belonged with them? Agora, forum, marketplace, Acropolis – nobody remembered them."* The problem is that, *"Today nobody is concerned with town planning as an art – only as a*

technical problem."⁽¹⁾

The author's energetic argument progressively brings out the "truth" of the bourgeois city compared to the traditional city, namely a symmetry of function between the public spaces of the latter and the monumental buildings of the former. Previously urban voids were enclosed and bounded; now this is a characteristic of buildings. Previously the differences of orientation and alignment were absorbed by the buildings; now every insignificant irregularity is transformed into an urban square. It is therefore apparent that works of architecture on an urban scale which still characterized the practice of design in the early nineteenth century were gradually replaced by a multiplicity of cities on an architectural scale. The buildings responsible for this transformation were covered markets, exhibition halls, department stores, museums, theatres and stock exchanges, which progressively absorbed the vitality of the spaces of relationship of the traditional city, as part of a process that had been slowly developing ever since the Enlightenment. Public life had gradually abandoned the city to occupy the space of architecture.

This process, not surprisingly, was triggered by those functions that had an architectural model of reference in earlier times. Thus Sitte gives us a fascinating interpretation of their genesis. The model of this architecture became the outdoor places where similar functions were first conducted, albeit with a lower level of specialization, namely the squares of the traditional city. For this reason, the buildings of the bourgeois city can be interpreted as covered squares. For the same reasons modern architecture has brought indoors traditional external elements such as flights of steps, galleries and porticoes. In addition, the modern city continues to grow in proportion to itself, thereby losing its scale of proportion to man. Green areas have also progressively suffered the same fate, becoming confined inside greenhouses and being used in absolutely uncontrolled and unprotected ways within the city.

Faced with this situation Sitte does not propose to imitate the forms of the past. "*But can the accidents of history over the course of centuries be invented or constructed ex novo in the plan?*"⁽²⁾ he asks rhetorically. The only possible answer is to incorporate the principles on which the traditional city rested and apply them to the modern city; to begin designing the city again in terms of systems of relations between objects unjustly isolated. Very few contemporary examples actually seem to escape this logic. They included Paris as an urban complex and Gottfried Semper's design for the Zwinger in Dresden. To achieve these results it was unthinkable to rely on a project spread over time. There was no longer a consistently acting tradition capable of guiding the transformation of space. The city should therefore be controlled by recourse to the project. From this point of view Sitte is adamant: "*We cannot, in terms of art, embark on a plan for a new district without having first a clear idea of its organization and the public buildings and squares that are to be constructed.*"⁽³⁾ The elements of the plan can be summed up as a forecast of the city's development over a period of some 50 years, with the definition of the essential public buildings and data relative to the physical context, recourse to public competitions for projects in order to ensure control over the urban form at key urban

1. Camillo Sitte, *The Birth of Modern City Planning: With a translation of the 1889 Austrian edition of his City Planning According to Artistic Principles*, Dover Publications, New York, 2006, pp. 221 and 223.

2. Camillo Sitte, *The Birth of Modern City Planning: With a translation of the 1889 Austrian edition of his City Planning According to Artistic Principles*, Dover Publications, New York, 2006 [1889], p.249.

3. Camillo Sitte, *The Birth of Modern City Planning: With a translation of the 1889 Austrian edition of his City Planning According to Artistic Principles*, Dover Publications, New York, 2006, p.159.

points and the built fabric connecting them. *Fig 2*

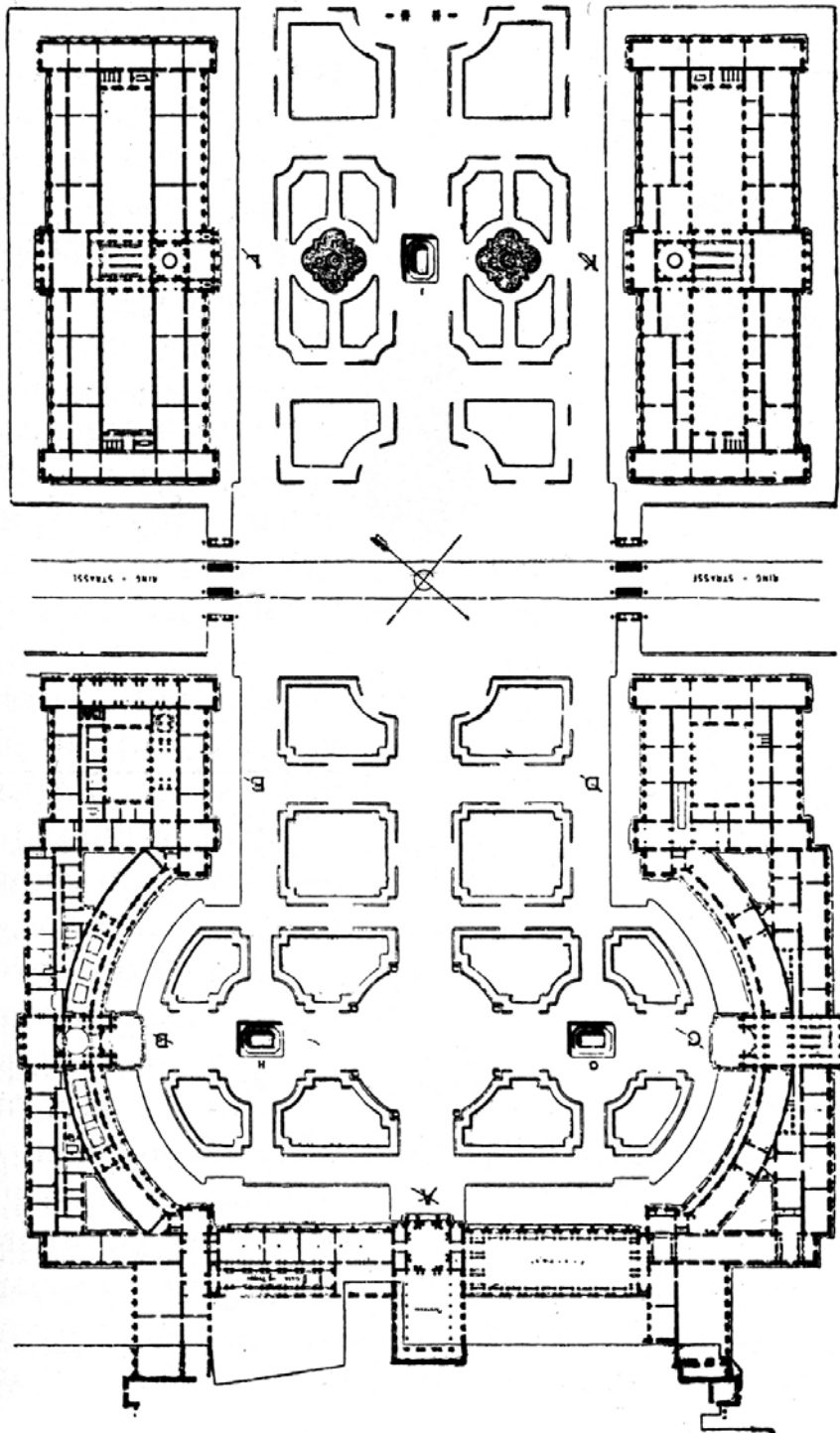


Fig 2. Semper's proposal for the Hofburg and the Court Museum at Vienna, 1869. It is clear the intention to design a royal Forum, which Camillo Sitte appreciated very much. In this case, by evoking the architectonic principles, one believes to also evoke its implicit values. The ambiguities lie in the direct correspondence between the architectural language and the corresponding significance. It presumes that history is responsible of that correspondence and not the society. The phantom of Historicism is still fluttering.



Fig 3. Camillo Sitte's proposal for the Votivkirche articulates the perception of the building by relating individual frames to each of its fronts. Architectural knowledge as a sequence of insights.

To validate his ideas Sitte suggested some model projects for a church, a city hall and a theatre. These buildings were no longer conceived in the tradition of the late Enlightenment as objects but as architectural complexes integrated with urban spaces. Sitte also suggested solutions for specific locations, such as the Votivkirche in Vienna *Fig 3*. At that time, quite fortuitously, the building had come to occupy the centre of a space created by the rotation of the grid of the Ringstrasse. It bore no relationship to the surrounding buildings. Sitte proposed the

creation of a series of squares with the different sides of the church forming one of the backdrops to each. The system of open spaces would relate the building variously to the spaces surrounding it. But Sitte took his ideas even further. The buildings that, together with the church, defined the settings of the squares were also treated differently to reflect the role of the street or square on which they stood. The buildings and surrounding urban fabric thus lost their stylistic unity and coherence and acquired, in keeping with the eclectic culture still prevailing, styles suited to the spaces they subtended. To justify his choices Sitte recurred to the phenomenological notation of space as a measure of depth of field: “*The same rule always holds true: whatever the eye can encompass at once should be harmonious and that which one cannot see is of no concern.*”⁽⁴⁾ The artifice of observation is clearly a further destabilization of the system of positivist thought.

In this way Sitte lucidly attacked the contemplative dimension of the bourgeois city, its inability to produce spaces, the isolation that distinguished it, legitimized by the desire for recognizability. The recovery of urban beauty necessarily entailed the restatement of that integration which was secured by the squares and streets of the past (not just classical antiquity) and was capable of overcoming bourgeois “*differentiation*” through the unifying dimension of collective spaces.

Sir Raymond Unwin published *Town Planning in Practice* in 1909, on the eve of the approval of a major planning law. This was the Housing and Town Planning Act, under which the state delegated significant powers to the local authorities for controlling urban development.

Unwin directly addressed local authorities, offering them useful information in the form of a manual for managing these processes. British cities in the nineteenth century were notable for the sprawling growth, fostered solely by the interests of the entrepreneurial classes. The effects of this situation led to an exponential increase in land values, forcing municipalities themselves to pay high prices for the small building plots they needed to meet the basic requirement of the public good. In addition, due to the absence of coordinated action by public institutions, the results lacked cohesion and coherence, to the detriment of the beauty of the landscape inherited from pre-industrial times.

The situation was partly restrained by the presence of an infrastructure system linking the original towns to the countryside, in some cases this was absorbed as an ordering element into the new developments, and by the dimensions of some large landed properties or estates, which in others ensured that the process of transformation was conducted on the basis of unified principles of design. The situation imposed recourse to plans designed as a unity, in the interest of the community, with the requirements of developers, in themselves legitimate, subordinated to them. In this respect Unwin drew on the important work of Ebenezer Howard in *Garden Cities of Tomorrow*, written in 1898, and the work of the German planners who, following the example of Camillo Sitte in *Die Stadtbau*, attempted to reconstruct a body of knowledge that would guide the development of urban design as a discipline essential

*The practice of urban design,
Sir Raymond Unwin, 1909*

4. Camillo Sitte, *The Birth of Modern City Planning: With a translation of the 1889 Austrian edition of his City Planning According to Artistic Principles*, Dover Publications, New York, 2006, p. 287.

to the orderly growth of modern cities.

Before the passing of the Housing, Town Planning Act, the only instrument of control available to local government was building regulations. The residential district bylaws undoubtedly improved standards of living in the cities, which had imploded as a result of the industrial revolution. They ensured the supply of water, electricity and gas to all homes, but the attainment of quantitative standards more appropriate to contemporary life was not always translated into quality in the results. Unwin, despite his technical training as an engineer, acknowledged the shortcomings of the modern city in its substantial lack of beauty and the loss of the skills by which it had been continuously transformed over time. Governments, he pointed out, ought not only to ensure the orderly growth of the city, but also shoulder an equally important responsibility, namely to “*represent*” in built forms its life in the making. The beauty of cities is therefore closely bound up with the problem of representation of roles and forces in dynamic and continuous interaction. “*Our immediate business is to lay a firm foundation*”⁵ wrote Unwin.

There were various causes of the massive immigration from the countryside to the cities, largely bound up with industrialization and the perception of the city as a place which offered people better opportunities for a higher standard of living. The task of those who managed the growth of cities was therefore to ensure that the people who settled there would find new ties so as to engender a sort of “*local patriotism*”.

The study of traditional cities, meaning pre-industrial cities, was therefore a way to ensure the recovery of the lost wisdom in the art of organizing urban space and bring it to the attention of the local authorities so they could learn from it. In the first part of his book Unwin presented an overview of different approaches to planning in different periods with the intention of assembling a sufficiently large range of models. He presented town plans from the origins of Western civilization down to the present, covering a considerable variety of types: cities without plans and with plans, including regular and irregular plans. The repertoire of schemes presented, drawing heavily on works then known, such as the studies by Sitte and Stubben, enabled him - despite the stated lack of time with which he undertook the work - to deal with important issues affecting the structure of the city, namely its modes of construction and modification, and the potential for managing the transformation of society on the basis of the certainty of the plan which organizes its spaces of action.

Among his many observations of interest, Unwin recalls how for many contemporaries town planning was synonymous with the regularity of the urban layout. To demonstrate the opposite he frequently cites Camillo Sitte’s studies of the medieval city.

However Sitte held that the beauty of medieval cities rested on a plan, and that the charm and order that were visible in those cities were not the result of a spontaneous and natural process, except in terms of spontaneous adhesion to a fund of experience which was widely shared on the basis of a broad common culture. Unwin did not attempt to deal with this point, but he felt that Sitte’s position was very interesting, and

5. Raymond Unwin, *Town Planning in Practice*, Princeton Architectural Press, Princeton, 1996 [1909], p. 8.

noticed how deeply influential it had been in those years on the new principles of German town planning.

Time has shown that Sitte's insights are grounded in fact and allegations of Romanticism should be reviewed in the light of the significant acquisitions of knowledge that have emerged from historical criticism in our century. The medieval city, in adhering to the course of contour lines and more generally in following the promptings of the natural setting, followed precise conventions that were codified and transmitted to future generations through the same practice. *Fig 4*

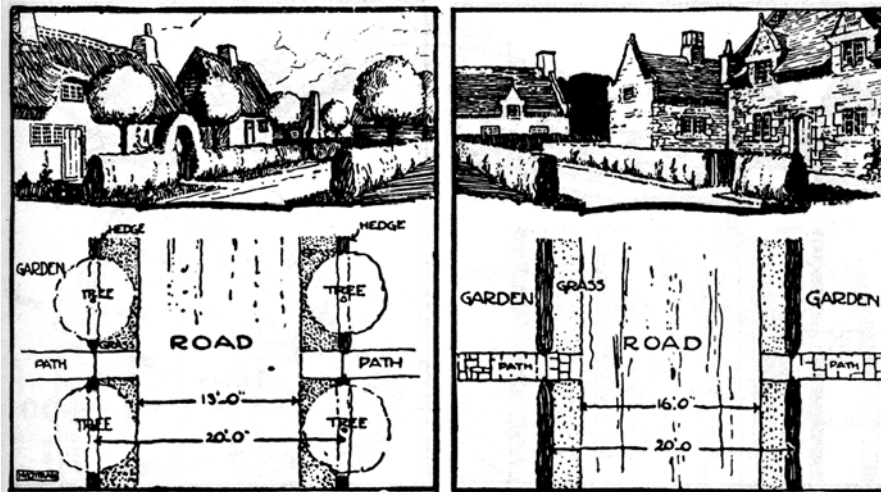


Fig 4. Unwin considered his text as an handbook of solutions conform to the values his urban design strategy was intended to meant. Being clear expressions of the new architecture of the Garden City, they acted as project proposals of street type, extracted from real case-history.

As an immediate consequence of the studies undertaken by Sitte and developed by German planners in the early years of the twentieth century (mainly through their support for the Garden City movement with its British origins) there spread the idea that irregularity was not synonymous with the lack of a plan, a key observation which did away with an association of ideas which is still recurrent in urban analysis. This conclusion was reached without deriving all the possible consequences from it for the eminently practical purpose of the studies in question. They sought to again engraft aesthetic values onto positivist cities which seemed to have lost them. In fact many of the studies in those years, especially by German scholars, were influenced by historicism, above all in the field of criticism.

Another observation that was particularly important for a “*structural*” interpretation of the city concerned the plan for rebuilding London after much of it had been destroyed in the Great Fire of 1666. Drafted by Sir Christopher Wren, unfortunately the plan was never realized. In order to obtain the desired formal result, and having to intervene in an system in which property ownership was firmly entrenched, Unwin proposed a temporary grant of ownership to the public authority. This would then return it in the form of building lots of equal value in a location as close as possible to the original one. The structure of ownership was thus recognized by Unwin as a key issue in the field of urban design, on a par with the urban plan which it was intended to realize.

The models of cities presented in the book are not meant to be revived wholesale, through a purely formal transcription, because it

was impossible to recreate the conditions which originally gave life to traditional cities. However, they were to be carefully analysed so as to study their principles and adapt them to cope with new needs. This, in essence, was the task facing local authorities and their planning staff.

The survey of town plans that the author presents to local authorities is intended to represent a broad range of strategies independently of the circumstances that fostered them. This survey produces, with a considerable degree of abstraction, the recognition of the existence of plans with a formal layout and plans with an informal layout, terms that simply indicate the presence or absence of regularity. Unwin establishes a correspondence between the supporters of the two approaches and designers of gardens that belong respectively to the Formal School and Landscape School. Both approaches still require a project, meaning a foreshadowing of the image that will be further developed in individual projects. But while the Formal School maintains that the formal element of nature can be brought out only by contrast, through its subordination to strictly geometric plans with a highly artificial character, the latter argue that the same natural element can emerge as a distinctive feature available only through a simulation of the arrangement in which we encounter the different species in nature, before it is anthropized.

A priori Unwin does not favour either of the schools. He confines himself to observing pointedly that, when the approaches are translated into the practice of urban design, one should avoid the ambiguous interpretation of the concepts of spontaneity and freedom implicit in many neo-medieval interpretations of the city. His references are explicitly directed at the German experience based on the teaching of Camillo Sitte. In fact the limitations of a reproduction of the beauty of the Gothic city created solely as an artifice in reality negates "*the sense of their free spontaneous growth, their gradual extension under changing influences ... much of which must be lacking in the case of a town built to order and according to a prearranged plan.*"⁽⁶⁾

Unwin therefore intuited that the degrees of freedom found in the medieval city responded to a clear strategy of spatial organization, in which the time factor and the changes it entailed were prevalent or implicit in the planning strategy itself. Freedom, in other words, was a requisite of the plan and not an end. He was not only interested in a structural analysis of the city, or its principles of construction and transformation, but also in its "*acceptance*" by the inhabitants. All decisions have to be based on the expectations of the users, hence in relation to the social, economic and cultural order within which we act, not just in relation to the physical context which is the object awaiting transformation. This is also why, when we develop hypotheses of modification of property boundaries to achieve a specific urban effect, we need to act with extreme caution.

The designer, therefore, on undertaking a development project, must collect all the available data concerning the setting and the inhabitants in order to preserve their identity. Unwin was aware of the changes in lifestyle introduced by the rapid advances in modern technology and their impact on the organization of space and the corresponding loss of uniformity, but this did not preclude the need to preserve a recognizable

6. Raymond Unwin, *Town Planning in Practice*, Princeton Architectural Press, Princeton, 1996 [1909], p. 110.

order to retain the distinction between one territorial reality and those adjoining it, which remains a major source of enrichment for the country. After establishing the lists of data to be made available to the planner, on the basis of the repertoire of plans from the past which Unwin briefly summarizes at the beginning of the text, he defines certain structural categories common to the pre-industrial city and erects them into principles to be applied to the contemporary city.

In this respect Unwin's interest in the urban tradition is instrumental to an understanding of its causes, and not to an imitation of its effects. One section of the text is devoted to each of these categories, according to a logic of an argumentative type which corroborates the author's opinions across a wide range of data collected and compared with respect to some general rules. These categories are summarized as follows: the boundaries of the city, approaches, centres and enclosed places with their public buildings, infrastructure, green areas and residential buildings. The innovative character of Unwin's approach to the problem of urban design is, for example, particularly clear in the definition of the approaches to the city. Unwin recognizes the role of the gates of pre-industrial cities and the design of the areas immediately adjacent to them to guarantee ease of orientation for strangers arriving at the city on foot or horseback. He then attributes the same role in coeval society to railway stations, because of the development of railways as systems of communication and the way they gradually replaced the traditional approaches to city. Stations are therefore the new city gates, and the application of this principle should guide planners in ensuring they fulfil the need for orientation in ways similar to those of city gates. Likewise the concept of "*places*", borrowed from Camillo Sitte's analysis of the pre-industrial city, provides useful source material to discuss issues related to the definition of town and neighbourhood centres. Here we need only recall Sitte's analyses of the relationship between monuments and backdrops, the proportions of spaces in relation to observers, the enclosure of entities in relation to approaches to infrastructure, the multiplication of points of view as a mode of enrichment compared to the mere satisfaction of technical-functional requirements.

It is also interesting to note that in dealing with traffic, one of the most widely discussed issues in the second half of the nineteenth century, Unwin never separates the technical aspects of movement from the perceptions of the landscape which the infrastructure itself produces. This explains his critical opposition between the solutions proposed by the German school of Camillo Sitte and the French school of Eugène Hénard. But in dealing with this same theme, he emphasizes the importance of differentiating the sections of roads in relation to the users and the urban context, not just in proportion to the height of the buildings lining the streets, as required by British building regulations, in order to monitor the effect resulting from the voids of the city and to define the appropriate use of greenery.

For each of the categories defined in general terms on the basis of a comparative analysis of traditional urban solutions, the author presents local authorities with a rich repertoire that demonstrates how the underlying rules are strictly aimed at achieving a specific

formal objective in each case recognized by Unwin. Not surprisingly, as mentioned at the beginning, the regulatory question is indeed one of Unwin's fundamental concerns. When dealing with planning, he expresses himself in terms of building regulations, just as we can speak of planning for Haussmann's Paris. The author was addressing local authorities on the eve of the approval of the law that would secure their independence in planning, urging the advisability of adapting the regulations to a specific project for the city. It is important to dwell on this point, since the project, according to Unwin, will not grow out of an abstract rule, as unfortunately happened in the English cities of his time, and this is what made so many of them tiresome and featureless. The project, on the contrary, should always devise and then test ways for matching the architecture to the context. At a subsequent stage the regulations should incorporate these suggestions and turn them into a set of guidelines that could be easily communicated. The planning and the project should therefore suggest the most appropriate criteria for action in any context.

The conventional features of the project recognized within the context of each building should be the guiding principle underlying intervention, not an abstract set of rules. Unwin laments the loss of certain harmonious relations that had always existed between regions and cities, especially as regards the use of materials. The huge reduction in transport costs in turn explained the use of certain materials in areas remote from their sources, and Unwin realized that this was due to a change in the concept of the "*territory*", which had become more abstract than the significance traditionally attributed to it. The transformation of the concept of the territory has simultaneously resulted in the spread of similar stylistic conventions concerning buildings in different cultural environments.

For all these reasons, Unwin maintains the need to verify, through the renewal of the building regulations, the adequacy and uniformity of design choices to a given "*place*" and thus to appropriate principles. Whenever the author makes these observations he is always thinking of the many villages typical of the British tradition, so revealing his "*cultural*" bias. This leads to an extremely interesting contribution, when assessed in its true perspective, that appears to anticipate many aspects of the contemporary zones of concerted urban development.

To this end the author introduces the fundamental distinction between "*Town Planner*" and "*Site Planner*". The task of the Town Planner is essentially to design the urban plan with respect for the territorial framework, i.e. the system of routes and areas to be subjected to the construction of public and private buildings, by defining in advance an outline of the relations between them. The Site Planner is interested in architectural development, the collocation of buildings of a public character, and the criteria adopted for subdividing land with planning permission, which should be subordinated to the architecture. Unwin was convinced that it is very difficult and damaging to adapt buildings to building lots of abstract shapes and sizes, as unfortunately happened with the Modern Movement. Both of these professional figures are required to define their decisions in relation to their field of competence, in a stable context, but they should also work closely together.

The centrality of the role of the building regulations in defining the character of the city was confirmed by specific examples, clearly attributable to the British experience. The practice of charging the costs of the construction of roads to developers and their maintenance to the local authorities is the reason, Unwin claims, for the very high cost of roads. This is also the reason for the orientation of buildings to face the short side of the building plot, in an effort to minimize infrastructure costs. The legislation therefore has a heavy burden of responsibility on the quality of urban settlements. Unwin's discussion moves rapidly from issues of a more general character to questions of detail, including to the characteristics of the lots, the orientation of buildings in relation to the prevailing winds and sunlight, the arrangement of buildings in the aggregate as opposed to their isolation, down to the definition of the character of fences. Each item has to be subject to a project, which gives rise to a coherent system of regulations and standards. Also in relation to matters of detail Unwin is well aware of the difficulty of achieving harmony in contemporary British cities. A single style, of the kind that could still be seen at the beginning of the century in most British villages, was gradually being replaced by a plurality of linguistic approaches. The ease of transporting building materials had substantially altered markets, spreading building customs encoded locally to very distant places from the areas where they originated. This had undoubtedly affected the quality of design. It was no longer possible in these circumstances to return to a feudal state of affairs and clearly subordinate design to unified principles again. Unwin instead considered it possible to devise fiscal and other incentives that would entail shouldering certain responsibilities when undertaking construction of the city. He was therefore aware that society in his day could not easily renounce the degrees of freedom that the market economy had gradually ensured. Yet the principles of good urban design that Unwin pursues, and which he recommends to the local authorities, involve some form of shared values and lifestyles, which the urban organization can express through a new-found coherence in its proposed solutions. To this end Unwin suggests a return to forms of cooperation in the construction of the city, so ensuring, in accordance with principles of modern economics, the essential conditions of unity and uniformity of properties of language recognizable in the best examples of British urban planning. Though never directly named, Unwin was probably thinking of the pattern of urban growth by "*estates*", or major single developments which are homogeneous and play the role of urban parts complete in themselves. *Fig 5*

Unwin's position was guided by a marked pragmatism. He believed that to ensure such harmony it was essential firstly to clarify the principles of management of urban land. The urban and building type had to meet these requirements, before any other kinds of considerations should be a criterion for land management. So Unwin experimented concretely on two occasions, in 1904 at Letchworth and in 1909 at Hampstead Garden Suburb with Parker, with a particular model called the "*garden city*" and which always took the English village as its frame of reference. Letchworth Garden City and the Hampstead Garden Suburb Trust were given the responsibility of laying out the

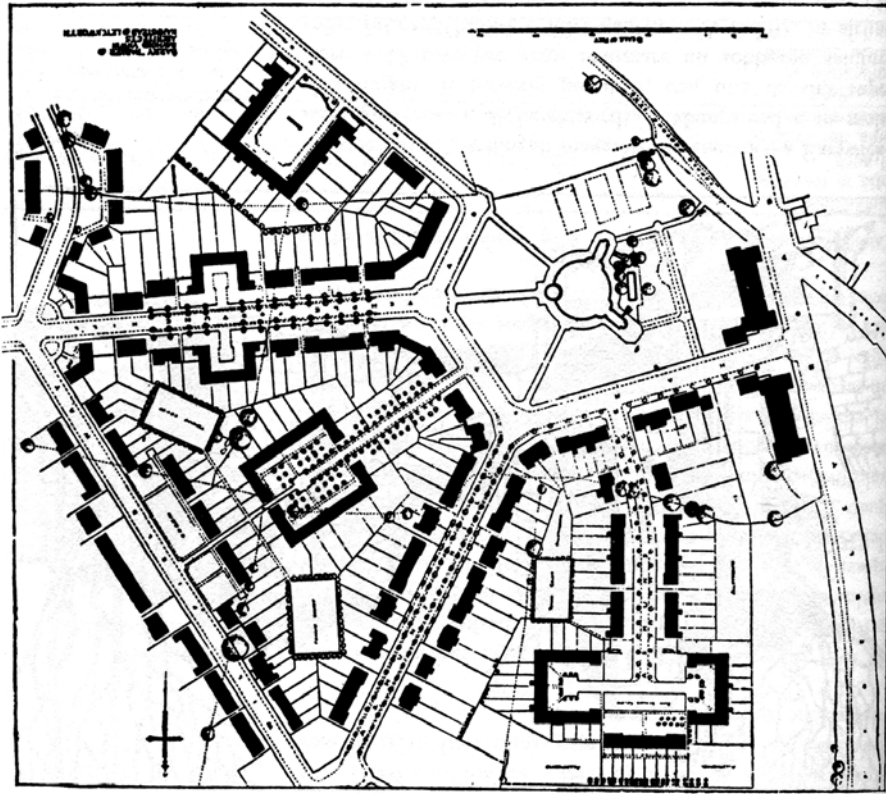


Fig 5. A sample of neighbour units at Hampstead Garden Suburb. The type of the “close” perfectly fits the intention to combine urban and countryside values. The streetscape continuity evokes the perimeter block whose core is partially parcelled out to increase density. The profusion of the green alongside the street and on the garden yards, together with the granted preference for the cottage building type, dilutes the city into the natural. The used language selects widely shared conventional solutions to attribute them new values by arranging them into a different system of relations. Tradition is to speak differently using existing words.

roads and planning the land, making it fit for urbanization, while the Co-Partnership Tenants’ Societies had the task of completing the building work on homogeneous, hence typological, principles. The first two organizations controlled ownership of the area, while the Tenants’ Societies were cooperatives which owned the buildings. The proposed model therefore made it possible to organize the urban space in keeping with standardized and homogeneous principles, opposing a new principle to that of speculative subdivision, which flourished amid the abstraction of the planning regulations.

In support of this thesis Unwin recalled the different attitude assumed by the “*site planner*” depending on whether his client was a private speculator or a cooperative. The availability of land and promotion of the city by coordinated initiatives thus made it possible to establish precise criteria for urban development, in order to propose a quality of space that could actually be a projection of a certain concept of the city, always present to British planners, without that image becoming a priori all-absorbing.

It is for this reason that Unwin assigned a key role to the careful study of the territory, its history and current potential, arguing the need for an up-to-date archive of maps. The dimension of the territory had changed, and Unwin attributed this to the spread of the rail networks and the changes they had brought into the receptive system of the territory, but this was not a good reason abandoning the idea of expressing an explicit linguistic area, embodied in the concept of the territory itself, in areas dimensionally more narrowly circumscribed. Already implicit in Unwin’s proposals was the idea of the garden city as a landscape in miniature, with a space-time acceleration of values that were perceived in a context of broader scope. The idea of the city of which Unwin

was a proponent, inevitably pluralist though within a system of shared rules, implies a profound rethinking of the structure of the building regulations themselves. No more abstract systems of rules which produce what the author calls “*bye-law architecture*”.⁽⁷⁾ By contrast it was essential for a system of rules to be based on a clear idea of the city, so that the buildings would respect the criteria set ahead of the process. The choice of urban type and building and architectural types should precede all other decisions and premiums could be introduced in terms of tax cuts for complying with them. The problem of the urban dimension as a projection of a concept of the territory now changed and complex emerges clearly also when Unwin, citing the German experiences at the turn of the century, argued for the importance of differentiating building regulations to suit the characteristics of individual districts, so as to ensure they are more appropriate and consistent. In this sense the definition of the regulations should entail public/private collaboration.

Unwin's text is thus a lucid criticism of the concept of the city, as emerges clearly from the positivist interpretation, based on maximizing the performance of different structural components that come into play in its construction, without this resulting in a precise image of the city. In this sense we can say that, although Unwin was fully aware of the changes taking place in society, his approach to the construction of the city remains embedded in an artisanal logic. This is confirmed by the changes to the local building codes at the time of the founding of the Hampstead Garden Suburb Trust, in which he was involved as a designer and ardent supporter of Howard's theories.

But even more clearly, this attitude is apparent in the title of his book. It deals with practice, not theory, hence with a revaluation of the skills that stem from competence acquired over time through experience with the city as an object, hence an implicit revaluation of the individual contributions that have converged in the formation of those experiences. It is therefore the richness and variety of solutions that becomes the guarantee of quality within a system of shared rules, of recognizable principles. The city thus becomes a collective work to the extent that each operator is involved in the limits of his or her competence and ability and within the terms in which each member becomes part of a communicative strategy of shared values. In this way Unwin responded to the problems of contemporary reality contemporary with the recovery of the secular British tradition of rural building which, precisely because it is uncontaminated by bourgeois corruption, can preserve within itself the seeds of a possible rebirth, the ability to rediscover, even in an urban dimension, however new, a unifying and regulatory capacity which is closely bound up with a definition of the type which is highly contextual and operational.

7. Raymond Unwin, *La pratica della progettazione urbana*, Il Saggiatore, Milano, 1995 [1909], p. 340.

When Tessenow wrote *Hausbau und dergleichen*, the debate on modern architecture and city planning had already reached an advanced stage through the experience of the Garden City and the discussion of the relations between art, craft and technology in industrial production, largely as a result of the activities of the Deutsche Werkbund. The author himself framed the cultural climate of his time in the introduction to his book on an unceasing process, which continually contradicts the acquisitions just reached, as a new value: “*If this is true we have reason to console ourselves, because our works in recent decades, contrary to the received wisdom, are precisely of the most convenient kind. And during this period we were concerned to learn everything, without limits, in a childlike way. We seized on everything and abandoned it again. Almost nothing is sacred to us. Even the most diligent child could not have done better: perhaps it was a good time.*”⁽⁸⁾

The critical assessment given of this clearly expresses the absence of a system of shared principles and prepares the reader for what Tessenow confirms only a few lines later in the text: “*But now we are trying to build a base and solid wide, which will underpin all our work so that it becomes great and helpful.*”⁽⁹⁾ This is the only way to begin a second phase of cultural growth in society at the start of the century, which follows on a phase of experimentation with groups in a reciprocal and ongoing conflict that, in the absence of a reassuring outcome, would soon result in a sterile contribution. So Tessenow sees the need to move from the phase of individual effort to the construction of an idea of architecture as a collective work, or as a shared building practice. Only when this additional effort is made can we raise the question of artistic work or tackle the individual contributions to a shared knowledge. But he was convinced of the distance that still separated his contemporaries from the achievement of that goal. From this point of view it is interesting to note that Tessenow’s text was rediscovered by critics in the early ‘80s, when architecture was seeking its own identity as an autonomous discipline, translatable into a shared and transmissible experience and endowed with a field of its own without overlapping that of any other specific field of knowledge.

In Tessenow the heritage of values to which objective responsibility is delegated for constituting a shared platform of principles and experiences on which to build a new model of society was implicit in the practice of building understood as craftsmanship and subject to subsequent refinements. This attitude was clear in contrast with the principles of industrial production. In other words, he sought through the pages of the text to define an unbiased and objective approach to the practice of building understood as a shared undertaking, a collective effort which laid the groundwork of Architecture, a consciously intentional product, which always presupposes a choice in relation to everything that has been achieved without “*thinking it over*”, meaning from respect for tradition.

The central problem therefore became to find the necessary convergences between the different forces that entered into play in building the city. “*Today our need is greater than ever to recognize the individual characters and the overall goals of our time,*” observed Tessenow, “*whose absence is so evident, while we have an over-abundance of individual*

Elementary Observations on Building, Heinrich Tessenow, 1916

8. Heinrich Tessenow, *Hausbau und dergleichen*, Weimar, edition m, 2011 [1916], p.14.

9. Heinrich Tessenow, *Hausbau und dergleichen*, Weimar, edition m, 2011 [1916], p.17.

characteristics and singular objectives. Today we need above all to establish what are the things that determine the great convergences or to recognize the essential elements of life, or those that are necessary in an elementary system of choice. This will be possible only by giving up all that is now secondary, that precisely renders it superfluous.”(10) Fig 6

Craft work, with its rules and values, must also acquire an intermediary role in society. This should be all the greater, the greater the complexity of relations between the social partners. And since it is the social fabric of the bourgeoisie that renders this knowledge transmissible, Tessenow holds that we all have to adopt an attitude of this kind as the basis of our work. Although Tessenow explicitly clarified his point of view, and urged his readers to adapt to the bourgeois attitude, the middle class hardly not seem the ideal reader for the text to address, namely the narratee. The “*we*” which Tessenow uses insistently in addressing the reader is undoubtedly intended to create a climate of complicity and shared values, so that the arguments presented in the text will be felt to be more persuasive and received more sympathetically. But the urgently apodictic tone with which his arguments are introduced at certain times seeks to create the conditions for a natural acceptance of the considerations adopted which effectively negates the possible refutation of the conjectures proposed.

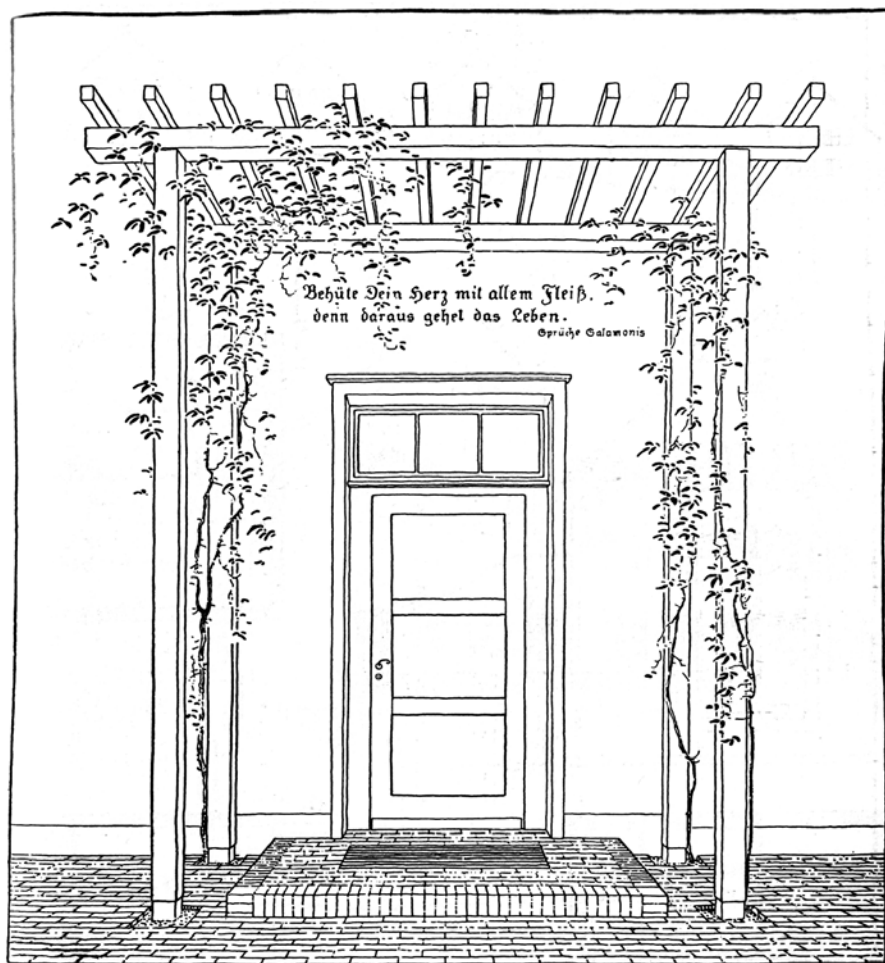


Fig 6. Tessenow's intention becomes immediately evident in his beautiful sketches: the architect's role is to ennoble the artisanal mastery of a bourgeoisie, he still considers a dynamic expression of the contemporary society, by filtering it through the categories and the catalogue of a revisited classical language, supposed coherent with that cultural project values. His is an attempt to claim for a leadership to cope with the rise of the mechanical industrialization.

10. Heinrich Tessenow, *Hausbau und dergleichen*, Weimar, edition m, 2011 [1916], pp. 24-25.

In other words, the recipient of the text is never made explicit, except indirectly when Tessenow states that “*it would seem that those in power will, at best, be the protectors or promoters of craftsmanship, but they can never represent its true root, which is in the keeping of bourgeois tradition.*”⁽¹¹⁾ If we judge by these statements we can clarify that the middle class mentioned by Tessenow is not the ruling class that had led European society to move beyond the old aristocratic-noble system, but rather that broad artisanal class which is the repository of technical knowledge at all levels.

Because they work spontaneously, without any critical awareness of what they are doing, the author addresses them, as well as all those who, without sharing those skills, will still have to embrace the values implicit in them.

That is the paradox of the text, which denotes a substantial underlying ambiguity: it seeks to explain the values of craft culture, which can be fully understood only by those who practice the trade and ensure these skills are passed on from generation to generation, to all those individuals whose homes “*contain, both indoors and out, an incredible quantity of useless things which we all, whether we are directly affected by them or not, in all conscience judge to be truly unnecessary.*”⁽¹²⁾ The impasse which Tessenow sees contemporary society as having reached is due to the fact that it has lost touch with the reason for things, the simple reason for making which forms the basis from which, once it has been established, to start off again to achieve true artistic expressiveness.

The “*truth*” of craft work is identified not only with truth of construction, in recognition of the identity and role that each part of craft work acquires in the whole, but also with the system of expectations of the users, so as not to disturb their specific certainties. This was perhaps one of Tessenow’s central reflections, in which he distanced himself from the idea of modernity as a value in itself. If innovation is not recognized as a positive contribution by society, it will inevitably disturb established expectations while also denying the ability of innovation to fulfil its function of vivifying the inherited legacy. The truth of craft work is therefore a compromise that has to be found continually between the intentions of the promoters and the receptiveness of the users. Innovating tradition therefore means working within conventions that are shared because they belong to the trade, the craft culture. What values does Tessenow see as emanating from craftsmanship? Order, uniformity and repetition. Order is to be understood simply as a logical sequence of actions dictated by the particular circumstances of individual trades, but also as self-evidence of the appropriate collocation of each component in space as a result of its role. But it is uniformity that is given the priority function. In a society in which dissonant diversity seems to have become an improper synonym for the misuse of innovation, to the point where no one is able any longer to recognize the correctness of decisions without the help of the explanation of a specialist, pursuing uniformity in the eternal dialectic between form and life means grasping innovation, individuality, in a nuance. Tessenow believed the culture of uniformity required experienced eyes, capable of focusing clearly on small points. Of course we must also take into account the economic benefits of uniformity, which can be achieved

11. Heinrich Tessenow, *Hausbau und dergleichen*, Weimar, edition m, 2011 [1916], p.23.

12. Heinrich Tessenow, *Hausbau und dergleichen*, Weimar, edition m, 2011 [1916], p. 26.

through repetition. Through repetition that we can investigate a given topic with greater depth and enhanced understanding so as it improve its specifications. This concept was especially dear to Tessenow, who never denied that he devoted his life to a single theme, the working-class single-family house, whether detached or terraced. The reference to the construction industry is clearly present in Tessenow's words. But this clarification also enables us to clarify certain aspects of the concept of the type. The concept was all too easily associated directly with the concept of uniformity, repetition and collective work, as if these concepts were intrinsic qualities and not just attributes of it. This determinism failed to do justice to the complexity of the type as a "*textual strategy*", and I intend to pursue this as a central idea of the present work. A strategy, in fact, through which those who work seek to establish a communicative function, a dialogue with the final users, a social group whose characteristics and expectations are only partially known. In other words, uniformity, repetition, order, etc., are values deployed through the articulation of the text so that the text itself is recognized and accepted by a particular group of users, and it has the specific aim of being convincing and accepted.

A completely different user might deem the same formal attributes to be restrictive and counterproductive, or even fail to recognize them. Tessenow, in other words, believed that uniformity and repetition were rhetorical topoi or "*places*" from which to draw compelling arguments that were relevant only to those who accepted the same premises. And since the users of Tessenow's work were those readers who were supposed at the very least to share the value that he set on craft skills, it is clear that the selection of his topics was aimed at them. In this sense, the "*textual strategy*" adopted in the text is a coherent translation of the choices made on the building level in the beautiful drawings and photographs accompanying the text. Only those who share the values implicit in the trade, in construction and its craft practice, made up of continuous and tireless commitment, can be struck by the strength of those constructions and those projects. Uniformity is thus embodied in recourse to coded building solutions, a tried and tested range of components, repetition in the continuous reiteration of the solutions, order in the care with which each element can be easily recognized by its geometry, materials, size and function. The self-evidence of the design solutions transcends, without a shadow of doubt, the argument presented in the written text, equivocally taken for granted. It also explains the significance of the reduction to the essential which Tessenow speaks of in the written text as the search for that minimum level of recognizability which makes it possible to confer a clear and unmistakable identity on each craft product, and above all a minimal level of recognizability in its components. Different parts and specific roles presuppose recourse to equally differentiated materials and colours. This assumption, which cannot be proved except by reference to a partial view that implies a choice at the point of origin, thus becomes the expression of a "*communicative strategy*" adopted by the author. *Fig 7*

This explains the emphasis placed on the criteria of dividing and composing as essential instruments for regaining unity after the

preliminary analytical work. The criticism to be made of Tessenow's text, and not of his works, rests on his choice of certain themes that verge on complete banality. His preference for windows surmounted by architraves rather than archivolts because of the contradiction in the order represented by the wall texture is given no explanation, above all in the light of those craft skills which were perfectly acquainted with the constructional sense of the different choices and which are not reducible to matters of perception alone. He maintained the superiority of flooring bonded parallel with the walls rather than diagonally, because of the lack of coherence between the parts and the whole, when the reasons for this choice (as Tessenow could hardly help knowing) stemmed from the desire to avoid showing up errors in the intermediate angles typical of handcrafted floors. Then there were his observations on ornament as a purely formal fact, not linked to the needs of construction, yet appropriate as introducing notes of humanity into the craftsman's rigorous and tireless work. In other words, the text does not explore the reasons underlying craft work to any depth. It lacks a structural approach to the reading of architecture, focusing solely on the formal results, and so essentially contradicting the very profound skills which underlies actual craft practices.

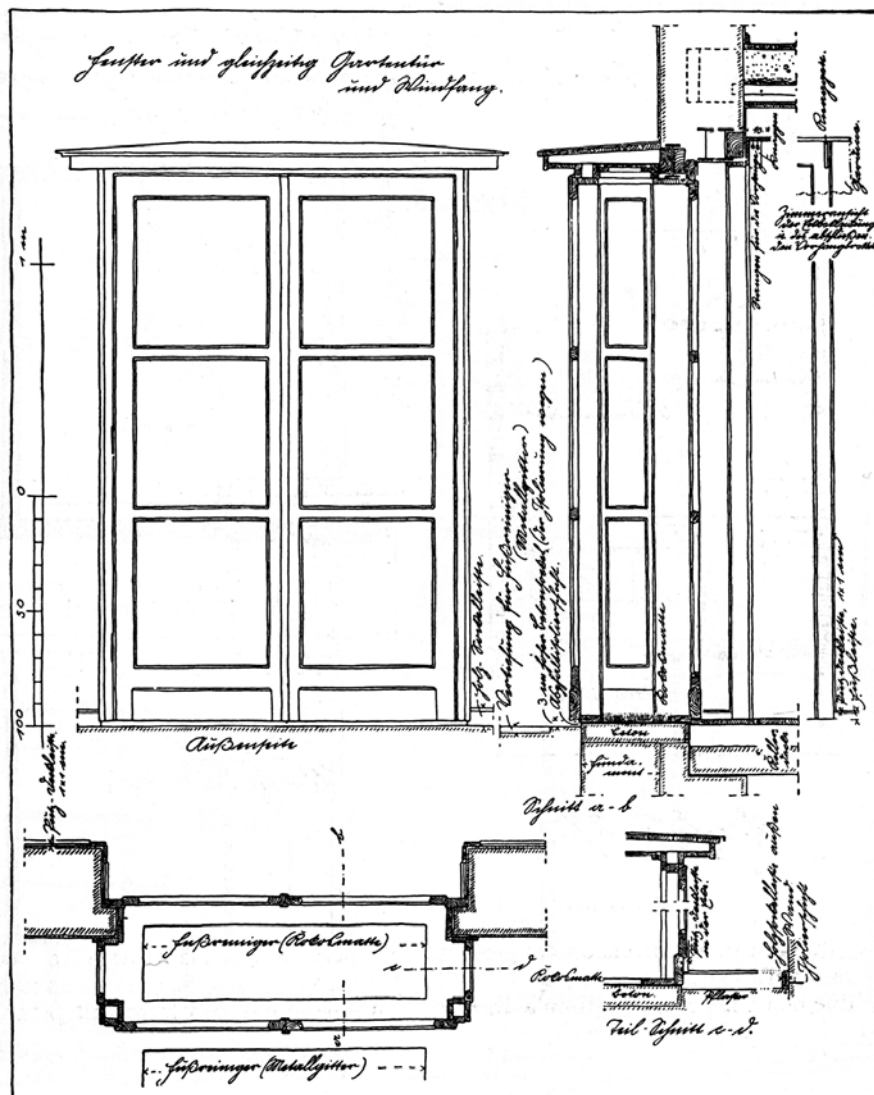


Fig 7. Tessenow's attitude is not nostalgic, if anything it is in the minority. The Werkbund experience will succeed to absorb it within a different and larger cultural project, however confirming its importance within the new production chain.

When Giovannoni published his text, the masters of modernism were pursuing their plans for superseding the principles that had underpinned the nineteenth-century city. These were ideas that clearly aimed to break with the principles of urban continuity and would surely have obliterated the traditional city, with a particular emphasis on the question of transport. In this regard Giovannoni suggested a kind of doubling up of the traffic system by creating a regional network of communications which would be distinct from the more intimate fabric of local streets and roads.

Giovannoni believed that a collective style with a universal value had vanished. Hence it was essential to find ways to enable tradition and innovation to coexist without necessarily aiming at a synthesis. The evident contradiction between the processuality of reality, which seems unstoppable, and the scope of history justifies his distinction between “*progressive*” cities, which are caught up in the course of events, and “*decadent*” cities, which tend to be excluded from them. For the former it will be necessary to activate the synergy between tradition and innovation mentioned above, while the others will basically necessitate small capillary changes of the existing heritage so as to adapt them to contemporary needs without traumatic intervention. The objective is therefore coexistence: “*old and new neighbourhoods, each with their own characteristics, will coexist harmoniously in a single greater system, a new and more complex organism.*”⁽¹³⁾ Further on he states: “*We have to transform the modern means of technology and mechanics from elements of clutter and congestion into elements of effective decentralization.*”⁽¹⁴⁾ The problem of how to intervene in established cities, therefore, becomes the theme that Giovannoni intends to examine with the greatest determination. He provides a clear definition of the objectives that will follow from the new practice of urban design: “*The environmental approach [ambientismo] treats buildings or landscapes as living things, from which cities draw their ineffaceable physiognomy ... studying the conditions for engrafting new districts onto the old trunk.*”⁽¹⁵⁾

Moreover, if one carefully observes what remains of the achievements of the past, it is clear that no cities are completely old or completely new. The normal state of affairs is the modernization of existing building systems through a process of assimilation of the innovative aspects that are compatible with them.

Moreover, only a minority of cities are planned and they are largely irreducible to case study. “*The theory arose after the practice to justify it and give it a rigid and seemingly scientific form, and it is of interest to us not so much as a decisive factor in the schematic layouts of the ancient city, but as the expression of a concept that is common in art and technology.*”⁽¹⁶⁾ Urban theories therefore have a merely relative value and a direct survey is much more important, in the form of archaeological excavations and analyses of urban districts. It is from the analysis of cities which actually exist we can infer highly interesting aspects of the rules of the formation and transformation of the city. Fig 8 “*Old cities frequently, if not always, exemplify the rule of ‘the permanence of the planimetric scheme’, and it is of great interest to us ... as giving us information about the actual type of those parts of the city where history is still the reality of its structure. The built-up areas of old neighbourhoods can, in other words, resemble the trees in a*

Old Cities and New Buildings
Gustavo Giovannoni, 1931

13. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.3.

14. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.4.

15. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.5.

16. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, pp.10/11.

forest. Some of them have sprouted freely and naturally while others were planted in rows or spaced widely in large areas of open ground, or clustered densely to create a green shade. They die of decrepitude or are felled with the axe, but new shoots will arise from the same stumps, reproducing the same patterns of growth as their parents. In the same way buildings are renewed, transformed and rebuilt, but their layout rarely varies from the earliest pattern of development, which has survived as the scheme of subsequent development and reveals their original style, whether of spontaneous birth or planting.”(17)

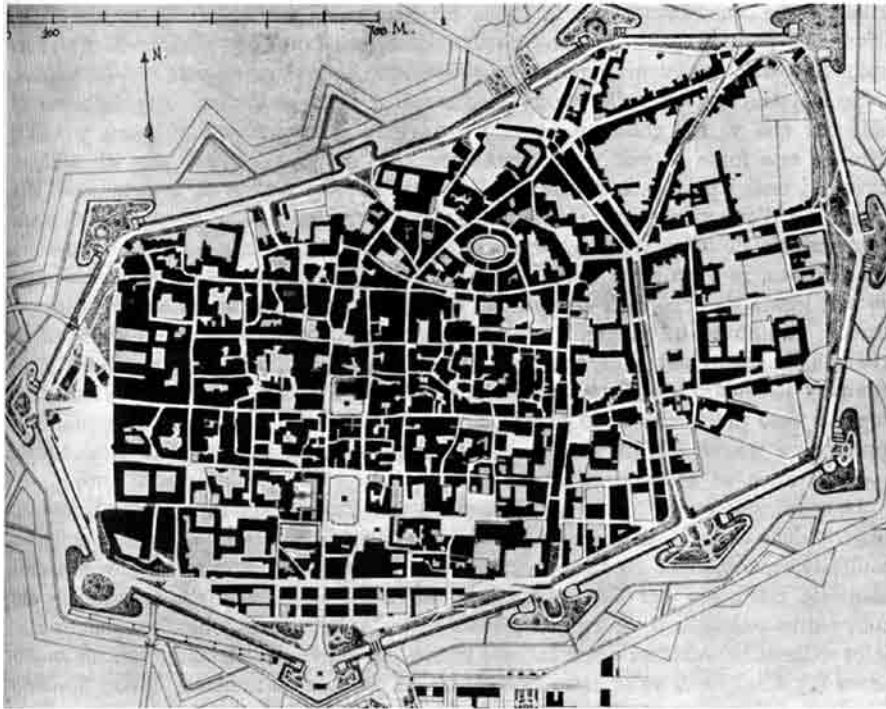


Fig 8 . Within the transformative process of the city, Giovannoni recognizes the precedents of what later on he will describe as the “*Graft Theory*”. Medieval Lucca developed according to building burgs originating from the main roman walled city gates. Showing a fundamental intuition, he demonstrates that acting according to Tradition implies the capacity to pull within a new structure, or set of values, what already exists, selecting what is worthy to survive and dooming to oblivion what rests. So doing, spatial pre-existences are deprived of their original significance, becoming part of a cultural different horizon. Giovannoni puts the basis of the study of the Renaissance Project of the Roman School: to mirror the medieval city strategy, shifting the point of its application from the periphery, where the religious order Cloisters are positioned, to the reconquered roman core.

These reflections, which were already published in an essay dating from 1913, enable us to recognize Giovannoni as a clear precursor of Lavedan, on the one hand, and Saverio Muratori on the other. In these statements Giovannoni brings out two key factors which still underlie the typomorphological approach to the city. The first is that the understanding of the city must begin with prior analysis of its built structures, which constitute the “*text*” that is richest in information about its history, of which the theory of the city can only be a retrospective arrangement. The second is the claim that the city grows on itself and on the existing building structures, appropriately renewed, and it is binding for the future form that the city will acquire as a result of the processes of transformation. The plan of the city reveals its history, therefore, better than any other instrument. On the basis of these assumptions Giovannoni undertakes his analysis of the history of the city, seeking to identify the most significant aspects of the built permanences which are still recognizable and to derive from them the principles that have informed its construction and continuous development.

There are frequent references to the work of Camillo Sitte in Giovannoni’s study of places and the arrangements necessary to maintain the traditional sense of closure within them. Giovannoni frequently mentions his debt of gratitude to the Austrian scholar. Another

17. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.15.

issue of particular concern, also shared through the quotation of statements from Sitte, is the relationship that should be established between architecture and buildings within the open spaces of cities: *"The conditions mentioned above, which relate the major monuments closely to the minute congeries of minor buildings and combine Architecture and Building in a single manifestation, guided by a logical and compact concept, represent the essential extrinsic element for appreciating monuments. They are expressions of the monument-environment, if we care to call it that, and highly typical of the collective architecture of the city. Altering this complex is far more serious than tampering with a monument."*(18) Giovannoni therefore introduces the question of safeguarding "environmental" issues - in this regard anticipating some of the ideas advanced in the '50s by Ernesto Nathan Rogers about the concept of "environmental persistences" - which are still of paramount importance today. In addition, the issue of the setting is not only related to the question of the relationship between the minor buildings and monumental buildings, but also comes into play in the composition of urban space as an entity with architecturally accomplished quality. In this sense we can say that Giovannoni has the merit of having indirectly raised the question of the birth of the urban project, retracing its origins in Renaissance architecture and its systematic application in the Baroque, when he speaks of *"the principle of the great architectural unity in the built composition."*(19)

The attitude with which Giovannoni deals with permanences in the inherited city is also innovative in another way. He first addresses the issue of building styles as they are manifested in their totality and integrity, and then states: *"It is of equal interest to consider how these styles have developed, not distinguished into different manifestations but intersecting and interfering with each other on the same site."*(20) He again confirms the importance of a conception of history as living, "progressive" matter, and the continuity of language in the city's history. The complexity of the urban "text" is made such by the persistence of different traces that have accumulated to form a dense urban palimpsest, as in the emblematic case of Rome. In these cases, the complexity of the analysis is certainly greater and it is more difficult to control the modes of intervention. However this makes his research all the more stimulating.

The contrast with the principles on which the modern city has been unified is certainly striking. The limits of the utilitarian approach to planning with its "positivist" matrix are evident in the disappearance of all unity of style. Technical progress is so great that Giovannoni believes it is not possible to foresee the future of cities. What is certain is that the systems of long-distance communications enable us to assume that we can work and play without leaving home. This proved to be an extremely far-sighted intuition if compared with the current situation. If this forecast were to prove accurate, the city would tend to be seen as a polycentric system in which the mother city would have a predominantly industrial character with ample space for storing supplies to be sent to neighbouring areas. But the planning instruments available to date are certainly not adapted to the nature of the problems we face. For the moment, therefore, nothing remains but to frame the

18. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.26.

19. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.44.

20. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.48.

problems of the city within the master plan. As with the traditional city, Giovannoni intends first to analyse the new city as if it had arisen all at once, without any constraints binding it to the system of existing structures, and then relates it to the old city and assesses the possible synergies between them. The city as a unified organism is irretrievably lost; the demands of contemporaneity are not acting in continuity with history and therefore it is necessary to adopt a sensitive methodology. The loss of stylistic unity therefore has to be matched with a reading by systems with a high degree of internal specialization. For this reason Giovannoni distinguishes between the city as a social, kinematic and aesthetic organism. Each of these systems is able to find in itself a degree of internal cohesion lost on the general level.

In social terms, Giovannoni sees the issue of housing as a priority. Voicing the policy of the regime, Giovannoni opposed massive urbanization, which entailed high levels of rural migration and depopulation. He endorsed a policy of return to the countryside, while being well aware of the lengthy time-scale involved in the process. It firstly required finding a solution to the problem of extra-urban communications. It should be noted in this regard that Giovannoni's support for a return to the countryside had nothing to do with Howard's ideas, being inspired by a philosophy which was completely different and an economic concern irreducible to the expectations of Fascism. They share only the conviction that this would make it possible to decongest the established cities by taking advantage of the opportunities offered by new technologies.

The distinction between "*progressive*" cities and "*decadent*" cities is instrumental to the recognition of the realities which were seen as having a central role in the reorganization of the territory, as compared with those which ought to be excluded, because they were not involved in the strategies of productive investment. In the first case, the innovations were to be engrafted onto the traditional urban fabric; in the second the process of innovation could be confined to local redevelopment projects without traumatically affecting the existing fabric.

Examining more closely the general issues of the modern city, Giovannoni noted the dangers caused by the extreme functional specialization systematically promoted by Le Corbusier, the suspect prophet of modernity. Business districts should be planned to include residential areas, so reducing transport costs. Additionally, housing, through the instrument of the master plan, could be structured so that certain building types would be requisite within each zone. Patterns of development should not disregard the natural configuration of the landforms and should take into account relief and hydrography, integrating these factors with the more general problems of composition. Giovannoni however, was not contrary to zoning as a planning principle. In fact he considered it indispensable to rational land use. He also observed that indiscriminate construction can be harmful to health, and as such should be opposed.

Giovannoni further raised the question of the costs of development. He declared it was no longer tolerable, as had happened in cities in the second half of the nineteenth century, for the public finances to have

to bear the whole burden of the construction costs of communications networks and the expropriation and demolition of obsolete buildings. It was essential for the private sector to contribute to the costs of community facilities.

For similar reasons, it was necessary to ensure the maximum exploitation of high value zones. Municipalities should also be given their legitimate share of the surplus value conferred on land when it received planning permission. Great care therefore had to be paid to the mechanisms of land rent. Housing, because of its extent and importance in the construction of the modern city, should also be one of the many services provided by the city.

From the social point of view the modern city had to avoid two fundamentally contrasting “*pathologies*”, both products of forces currently at work: skyscrapers and shacks, respectively the expression of individualism and anarchy. However Giovannoni acknowledges that the phenomenon of shacks, if regulated, could acquire positive aspects as the spontaneous expression of engagement with a collective social custom. He opposes these excesses with the practice of Latin culture, which suggests an average height for buildings of no more than 5 storeys.

From the kinematic point of view, the modern city presents extremely innovative situations. The network of roads has to make allowance for the tendency of built-up areas to grow rapidly. Hence they should avoid imposing dimensions on them which are restricted to excessively limited temporal horizons. The road network should be planned by using the system of isochrones. The orderly flow of traffic, by analogy with the principles of hydrodynamics, is more important than the width of roads: in this respect it is useful to distinguish through traffic from local traffic.

Giovannoni presents an accurate analysis of kinematic systems: the “*cobweb*” pattern increasingly tends to centralize the density of development, while the checkerboard system is ill-fitted to articulate cities on the basis of sequences of nodes and poles of concentration. The ideal, from this point of view, is a mixed polycentric scheme where the roads are able to quickly and efficiently link the sequential multiplication of concentrations. Great attention must be devoted to intersections.

However the city also has an aesthetic dimension. Giovannoni excoriates technical materialism, which has reduced the nature of the city to a mere instrument. Giovannoni believes that the art of the city is “*a priori synthetic*”, a non-determinate but “*amoral*” form of knowledge. In this sense Giovannoni is close to certain positions of Croce’s idealism, but without sharing his excesses.

Giovannoni distances himself from Taylorism and the distortions produced by its application to the urban organization. In this respect Sitte’s role was broadly appreciated and upheld. There are many aspects of the new city that merit attention capable of mediating the relationship between tradition and innovation, starting from the road network. Here it is necessary to reconcile a romantic, picturesque vision of space with the serial vision typical of modernity. The utmost importance should be attributed to local styles: “*How much more beautiful are ... the fresh and natural local events that are still held on*

lonely piazzas and widespread in the countryside! This beautiful, simple, modern and at the same time traditional architecture, which still flourishes, for example, in the towns of Tuscany and Umbria, on the Amalfi coast, in the villages of Trentino, Cadore and Valle d'Aosta, is the work not so much of architects as of the local craft workers, who should be assisted in every way and defended from the encroachments of a vulgarity that seeks to unify everything and make it equally bad.”(21)

The romantic qualities of the landscape are therefore bound up with that uniqueness of character, role and position that only artisanal skills are capable of securing, and opposed to the anonymous repetition of the logic of industrial production. Within the aesthetic dimension, there is a recurrent opposition between two languages, artisanal and industrial. Giovannoni tends to see them as having the same right to exist, provided that serial logic does not seek to align every manifestation of reality with itself in an inappropriate and unjustified way. The prospect is therefore that of harmonious coexistence, where the vivifying and distinctive aspects of the artisanal approach to the construction of cities can coexist and live with those of production efficiency, inspired by a calculated “anonymity”.

Giovannoni sometimes betrayed his membership of a culture - one that reacted vehemently to the dissolution of the traditional city - limited by a purely “aesthetic” vision of the city, hence the idea of the city as an object of perception, not as a process of spatial organization, which in its development “reveals” its origins, a manifestation of the current language that informs all of reality with itself. This attitude had already been the subject of heated polemics with the De Stijl movement through claims of the “death of art”. That slogan, often distorted in its content, was intended to contrast the idea of art as a specialized domain and a code separate from reality with that of life as a manifestation of the ever-changing language of an era, which is embodied in different ways depending on the instruments used. The persistent use of the term aesthetic seems therefore to underscore the issue. The foundations of processuality can only lie in its linguistic dimension.

Giovannoni considered that in large cities the romantic aesthetic of the traditional city could co-exist with the serial aesthetic of modernity. For example, in dealing with the system of transport, the former - with a calculated accentuation of curvilinear patterns - could be used for the local network, which is basically static and closely bound up with regional characteristics, while the latter, by its nature dynamic and rectilinear, could be used to connect different districts and being notable for its beauty could acquire the features of a modern scenario. The aesthetic dimension of the city does not involve it as a simple object but introduces the interaction between object and subject. The latter is unable to perceive images beyond a certain boundary. It is therefore appropriate to control the proportion between the sides of squares, for example, in relation to the objectives of perception. This is a lesson that stems from observation of traditional cities, and had been introduced earlier by Sitte: “*Almost always a single energy, with a single program, created space and buildings, and their adaptation to the setting [ambientismo] was almost instinctive.*”(22) The difficulty of reintroducing

21. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.120.

22. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.130.

this attitude in the present was due to the frequent impossibility of reconciling the different interests of private developments with the aim of having a pre-established architectural design. We must therefore act on public housing, making it a mandatory factor around which to organize the housing market. The issue of ambientismo returns in the sense of control in architectural terms over urban space, hence over the architecture of the home. Tenement housing and single-family detached homes, in their reciprocal limitations, bring out the need for control at the level of the built fabric if it is to become operational. Giovannoni takes row housing as an example, and says we should avoid the opposed errors of excessive individualism - attributable to the desire to differentiate it at all costs - and that of obsessive repetition characteristic of serial logic with its inherent monotony. The most acute problem, according to Giovannoni, is urban design, or architectural control of the city through a precise set of rules to be inserted in the planning instruments. *"How is it practically possible, starting from these desiderata of coordination and extension of architectural composition, to achieve a true urban realization?"*(23) In this respect, German town plans introduce many rules that, though harmful in terms of a unified conception of the city, could prove very useful as a way of characterizing individual districts.

Giovannoni also recognizes that the modern city, compared to the traditional one, is characterized by the role of green areas as a system for connecting different urban elements and as such calls for special attention.

Giovannoni was, however, well aware of the need to relate ambitions to transform the city to the powers of intervention made available by the planning instruments. And these, unfortunately, were antiquated. In fact they dated back to Italian legislation of 1865 and 1885, and were responsible for the distinction between the Piani Regolatori or master plans in the strict sense (which covered the redevelopment of existing towns) and Piani di Ampliamento or development plans which dealt with the new urban development. These planning instruments were based on very different standards, though without any justification, since in fact they dealt with the same urban organism. The regulations for development plans were particularly restrictive. These plans were valid for only twenty-five years and had to cover an area commensurate with the increase of population expected in the given time span. Within the circumscribed area they laid down all aspects of the road network, right down to the definition of the changes admissible in individual building plots. In addition to not permitting the flexibility of intervention needed in an instrument of this kind, especially in relation to the time span, there were no powers to ban construction outside the development areas. Hence there existed a state of complete deregulation. The master plan should therefore be completely redrafted in its contents and its forms.

Giovannoni proposes a first stage in which the regional framework would be analysed in order to understand the connections between the new towns to be built and their productive territory. This study should be followed by a general outline of the individual districts, whose design would be revised as desired to meet specific needs. This would

23. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.139.

conclude the “*static*” part of the plan, namely its principal guidelines, the clarification of its objectives, its overall “*strategy*”. Equally important was the phase which defined the “*tactics*” necessary to achieve the objectives set, namely to determine the exact sequence of operations required. To achieve this the planning office should draft a “*dynamic*” plan. In plain terms, this plan would be identified in a program of works “*hidden*” in the plan of the project, and which this would be unable to articulate directly.

So what content should a new master plan have in order to meet the needs of modernity? The working method devised by Giovannoni is very precise.

The plan itself should be preceded by a series of surveys of a general kind aimed to verify the population density and the social, economic and hygienic conditions. At the same time the planners would start collecting data about the current population and the expected future increases, the state of local industries, existing traffic intensity, established patterns of housing and land use and tendency towards expansion. Obviously together with purely quantitative parameters, there should also be qualitative assessments, which are unprecedented in practice, concerning the importance of inherited conventions which reveal the importance of always starting from the recognition of precise historical constraints. Then follows the phase of surveying the existing city, explored in its built structures, areas of environmental value to be protected, the landscape and above all an investigation of the vicissitudes of building in the city and the so-called “*laws of permanence*”. This data reveals, in its importance, the role that Giovannoni, particularly at the operational level, accords to the inherited morphology of the city as a guide to future changes. Then follows the survey of production facilities, the assessment of the city’s economic system, the assessment of needs related to public buildings and a survey of the existing rail and transport systems.

Only at this point that the plan proper or the definition of the project strategy begin. As noted above, the plan proceeds from the outside towards the inside, or from the recognition of the relations which it is intended to establish with the outlying towns in order to make the structure of the city commensurate to them. This framework comprises the study of intermodal transport and the forecasts of satellite systems. This is followed by the identification of the nodes of the city, where new life will be grafted onto the old, and the definition of the network of nodes in relation to first-category circulation, namely that connecting neighbourhoods. This is followed by the zoning of the plan by functions and types of buildings. Another key issue which has to be dealt with in the plan is the establishment of public facilities which, without having the value of nodes, help to initiate the transformation of the city. Then follows the study of the plan of the lots into which the city will be subdivided, extended to particular areas of the city. This is essential to determine the rates of compensation in advance. Other instruments needed are technical projects for roads, facilities and public transport.

This phase is followed by the “*dynamic*” plan, which establishes the sequence of works to be carried out and the time frame necessary in

order to start work. It has to be accompanied by the building regulations, a master plan for ordering monuments and an architectural study of the parts of the city which has to be endowed with harmony while respecting the aesthetic qualities of the city.

Once the issues to be addressed by the plan have been clearly established, Giovannoni returns to the most sensitive issue, namely the nature of historical inner city areas and the problems that have to be dealt with by “*progressive*” cities in order to engraft innovative elements onto their traditional fabric. Critically, the author points out that the dominant orientation among the followers of Modernity is to transform city centres into business districts. In this regard, Le Corbusier proposed to demolish the old built fabric with its horizontal development and replace it with skyscrapers, while returning urban land to its original state as parkland. This did not solve the problem of congestion, given the high density of the skyscrapers, but simply transferred it from the horizontal plane to the vertical. Giovannoni’s proposal, by contrast, was to replace the idea of a single town centre with multiple interconnected centres. Fig 9

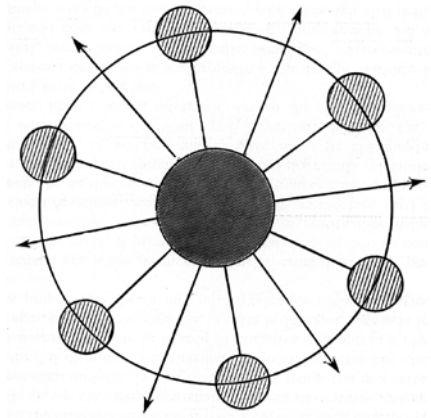


Fig 9. Giovannoni’s retroactive manifesto. Modern infrastructures are grafted into the old city core. The real intentions are subtly dissimulated: here lie the premises of the process of progressive consumption of the historical values by Modernity, still acting according to a traditional approach.

The ancient city is in fact suppressed by the results of technological progress. “*A surviving old town is almost always poorly suited to become the centre of a new city.*”(24) This is not to suggest the demolition of neighbourhoods that are in themselves true collective works of art. In contrast, the centre will become a district of the new city through a process of adapting existing buildings to contemporary needs without distorting their character. Giovannoni again emphasizes the need to start from recognition of the specific nature of the reality that we intend to update by assimilating it to the customs of contemporary life. In particular it is important to solve the problem of health conditions in central areas. “*Decentralizing and building; directing towards the countryside in accordance with the legitimate program of the Fascist government.*”(25) Redevelopment projects that further stifle the old urban districts should be abolished. Giovannoni attaches a primary significance to economic questions, being fully aware of the enormous costs of major urban redevelopment projects. The mechanism of expropriation needs to be revised in order to correct the injustices of the mechanisms introduced by the Act of 1885.

A particularly sensitive issue in the contemporary city is circulation. “*The organs of circulation in a modern city, as we have seen, correspond precisely, in dimensions, layout, positioning of passages and waste disposal and the many other elements of street furniture, to the concrete and precise function assigned to them, just as much as the mechanical devices in a workshop.*”(26) This “*mechanistic*” vision is conceived by Giovannoni in terms of its distinction from the inherited city, hence as entailing a problem of compatibility between the principles underlying the organization of space that have to be properly controlled. For this reason he declares that the movement of vehicles should be diverted from the old town centres. By contrast, the new principles can be applied without any problems to the new town centres. “*The regulation of traffic can be called the Taylorism of this great human activity: small parallel roads can be more useful if they are made one-way streets or divided between slow-moving traffic and fast.*”(27) Giovannoni shows he is a man of his time without

24. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.156.

25. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.168.

26. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.172.

27. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.174.

wishing to reduce the complexity of the real logic of the present.

Aesthetic issues always acquire a special significance in Rationalist urban planning. The logic of ambientismo, a concern for the physical setting, is thus wedded to the historicist attitude. This passage is exemplary of the text: *"This therefore leads us into the thick of the issue of ambientismo: that is, on the one hand, of the correlation between a work and the minor works that surround it and create the conditions extrinsic to it, and on the other of the artistic harmony between the secondary works which, taken as a whole, constitute an expression of the art of building that has its own style and its colouring and which, in the topographic conformation, in the place names, in the memories of past events, represents the tradition of the city. Just we have to trace the political, moral and economic conditions of the age in a proper understanding of historical events, so an appreciation of individual monuments stems from a full understanding of the value they have in their given, original environmental conditions, or at least those that have replaced them without making essential changes. And just as in recomposing the full conception of the life and civilization of a people, the modern historical disciplines tend to replace the study of prominent events, such as the vicissitudes of royal families or battles and revolts, with the study in depth of the economic conditions of the populace, their ethnographic features and the civil and demographic landscape that frames the political scene, so for an understanding and evaluation of that great historical record that has been translated into stone in the old city centres, study of the congeries of tiny houses is often more valuable than major monuments, and they possess a living value that interests not so much our culture as our artistic sense."*(28)

Giovannoni combines the study of building, the connective tissue of the city, with the social, political, economic and cultural history of a people, attributing to it that unifying significance which only language, in the form of the style of an era, can claim. This collective dimension was also the only one capable of illuminating the significance of outstanding works, later termed *"specialized"* by Muratori to distinguish them - because of the strong component of intentionality behind them - from the social significance found in all shared experiences. From these words emerges a total adherence to the principles of post-Romantic literary Historicism.

Giovannoni reviews the most significant ways of engrafting the new city onto the old and assesses their strengths and weaknesses. The first example is the ring method, with the Ring of Vienna taken as a model. This method works provided no new districts have already built outside the city and so it need not to be cut out of the new development. Another possibility is to move the centre of the city. This occurs in exceptional circumstances, such as the presence of a railway station located on the margins of the existing city which serves as a pole of attraction for new functions. Giovannoni regards this scheme as unsuited to strongly monocentric town plans. To this is added a substantial inertia to change among the existing owners of real estate, together with the substantial inadequacy of the component parts of the city to serve different functions from their original ones. It is therefore necessary to study hybrid systems in order to verify his theory of *"engrafting"*. Apart from the provisions of the project, which acquire a form in the plan, we have to consider how to move from the

28. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.176.

static dimension to the temporal, dynamic dimension. This explains urban sprawl and the expansion of the city by the growth of satellite towns. The terrain vague that surrounds the old walled city, forming an intermediate zone between city and countryside, is thus progressively occupied in accordance with a tactic that, in order to be effective, has to be properly controlled.

The model proposed by Giovannoni, in continuity with Fascism's ruralist policy, was that of satellite towns, built from scratch or integrated with existing ones, close enough to permit the mother city to be reached in fifteen minutes at most, and with at least 20,000 inhabitants in order to justify the establishment of the essential services. Hence it has a certain analogy with Howard's scheme, and it also shares the difficulty of enabling initiatives of this kind to get under way by ensuring conditions similar to those found in the city. Because of the Italian situation, Giovannoni considered the idea of isolated districts not too far from the centre as a more appropriate solution, so revealing a critical awareness of the historical constraints that limit the applicability of general models to specific contexts.

The satellite town model entails the creation of a suitably extensive municipal domain, an effective law of expropriation and, above all, an organ collateral to the city council to manage the financial and industrial questions, which Giovannoni termed the Istituto per il Piano Regolatore (Institute for the Master Plan).

Giovannoni then reviewed the planning methods adopted in historical city centres to adapt them to the needs of modern life, on the basis of the old zoning regulations: Rome, Milan, Naples, Genoa, Bologna, Florence, Turin, Bari, Padua, cities stricken by earthquakes, Cagliari and Pisa. Systematic use was made of redevelopment routes and this prompted the author to offer a number of important observations. First of all they should never be subjected to an excessive burden of traffic, avoiding tortuous routes as far as possible, finding the path of least resistance within the city (where possible privileging the layout of a city block so as to obtain original appurtenances such as new street frontages); streets should be adequately differentiated in relation to their use and should follow the "*grain*" of the neighbourhood, the prevalent lie of its building fabric, as effectively expressed by the construction of Corso Vittorio Emanuele in Rome. In this respect Bologna is a good example of the errors that are sometimes made. From the aesthetic point of view, the planner must be careful not to alter the interplay of the existing volumes.

After defining the characteristics of the new routes and identifying areas of existing cities subject to change, the planner should act in accordance with what is called "*la teoria di diradamento*" ("*theory of reducing density*"), hence to act precisely and pervasively on the built fabric of the city so as to restore the regulatory health conditions, without this producing distortions in the nature of the urban fabric involved. Above all, from Giovannoni's aesthetic perspective, the planner needs as far as possible to preserve the picturesque character of places. Confirming the post-idealistic attitude which is repeatedly emphasized in his discussion, he believes it is possible to influence material culture in ways that innovate its significance, as opposed to the approach which seeks to reconstruct

the relations between signifiers and signifieds. This is an approach to reality that still enjoys substantial credit. The effort at consolidation is mainly conducted within the city blocks rather than outside them.

The objective of reducing density in the city is to restore the buildings to their original settings. *"Since the original scheme of things is usually much healthier and more rational than it has now become after centuries of poor adjustments, restoring the old type of layout is already a big step towards systematic rehabilitation, and sometimes also improves its practical functioning in relation to the altered conditions."*(29) Here again Giovannoni anticipates the ideas of Muratori. When reclaiming old town centres they need to be repopulated through the introduction of medium-density activities bound up with the trades traditionally followed in them. Giovannoni also supported the need for financial allowances to encourage property-owners to make improvements to old buildings. Giovannoni also returns to the need to set up a non-profit Institute to assist the public authority in managing development and the expropriations they entail. As examples of successful projects, from this point of view, Giovannoni mentions the Salicetti district in Siena, Santa Croce in Florence and the Rinascimento quarter in Rome. To optimize the costs of intervention in the existing city, Giovannoni was once again ahead of his time in suggesting consolidating property in sectors, which would facilitate the mechanism of granting planning permission. The city block, in particular, should be considered as a single building unit on which to create a compulsory consortium of owners. In no event should the intervention should be limited only to the facades regardless of what happens behind them.

Giovannoni's last observations were devoted to the issue of a new Planning Act. It was absolutely essential to move beyond the distinction between the Plan of internal layout and the development Plan by removing its restriction to 10,000 inhabitants. The preliminary master plan should be distinguished from the implementation and detailed plans, because they belonged to two distinct phases of the realization of the plan. It was essential to revise the rules for expropriation, and indispensable to create an institute to manage the development of the city. It was also advisable to introduce differentiated building regulations for different parts of the city, subject to certain architectural principles that would guarantee the identity of its zones. It was important to promote the work of thinning out the city so as to lighten the burden of development in historic town centres with the activation of compulsory building consortia. Finally, with regard to the drafting of these plans, it was essential to streamline the procedures for the approval and implementation of planning offices in each municipality. The text of Giovannoni, while sharing the principles and rules of urban design theorized by Sitte, demonstrates a greater critical capability in recognizing the importance of the urban palimpsest as a guide to intervention in keeping with the continuity of history. This does not detract from the technical development of the town plan. Rather the plan is greatly expanded as a function of the need for a balanced modification of the city's existing structures, in clear opposition to the distortions due to *"positivist"* practices.

29. Gustavo Giovannoni, *Vecchie città ed edilizia nuova*, UTET, Turin, 1931, p.256.

3.1.3) Projects and works

The first international competition for the new premises of the Amsterdam Commodities Exchange, made necessary by the increased volume of trading due to the new industrial capitalism, was launched in 1884. Berlage took part, but was only listed fourth. In 1896 he was invited by the city to develop a second project, which was built without appreciable modifications between 1898 and 1903.

Amsterdam Commodities Exchange, H.P. Berlage, 1898-1903

The site is located in the Nieuwe Zijde, adjoining the Oude Zijde, the core of the medieval merchant city and its most ancient part. Originally the houses here were built largely of wood, but after a disastrous fire in 1452 they were rebuilt in brick. The project site was trapezoidal in form with the shorter side overlooking the small square in front of the Beurs and the longer side facing onto the wharf of a navigable canal for the transport and lading of goods by sea. The geometry of the base is on the Damrak commercial artery, which links the central square of the city's central station to Dam, built in neo-Gothic style by Josephus Hubertus Cuypers in 1882-98. The Beuersstraat, adjacent to the oldest district of the city overlooking the harbour, runs along the diagonal side. *Fig 10*

Berlage's intentions were to create a continuity between his work and the local building tradition, embedding it in a process of formal innovation without creating significant disruptions in the city. The built context clearly expresses the linguistic unity he propounded. Through the typological process, the new building varied and innovated a fabric consisting of load-bearing walls extending in depth and gabled infill facades, gradually reduced to the simple frames of large windows intended to bring as much light as possible into the interiors. While the areas of appurtenance decreased, the buildings developed over time within the Gothic lots, combining horizontal and vertical growth and attaining an average height of four or five storeys. The load-bearing or infill walls are all built of brick, while the floors, whose span determines the strict modularity of the street fronts, are made of wood, as are the window frames. In the façade, the presence of a winch under the gabled roof always evokes the origin of these merchant houses, which were used both as places of business and for storing goods.

The celebrated linguistic continuity of the buildings in Amsterdam is such that it is difficult to distinguish their various functional kinds. This is true to such a degree that we can consider linguistic innovations as more closely related to the assimilation of individual "words" (the windows, stairs, doors, dormer windows, etc.), revealing that a project belongs to a particular period, than as depending on substantial syntactic, grammatical or morphological changes. Even in its aggregative logic, the context reveals the profound linguistic continuity on the site. The configuration of the Gothic street blocks, with a clear distinction between the original matrix, planned and connecting roads, was clearly preserved even in the large developments which took place both in the seventeenth century (the famous city "of the three canals") and the eighteenth. The sense of profound coherence and the explicitly collective character of the buildings is also justified

pragmatically by the need for continuous collaboration to reclaim land that is predominantly marshy from the water, which could never have been achieved by separate uncoordinated projects.



Fig 10. The aerial view of the Beurs confirms at a first glance Berlage's traditional approach. The referent of the design strategy is the vibrant building fabric of the historical centre, explicitly assumed as an endless originating process. However, its main characters are accurately filtered, i.e. selected and reciprocally combined, within a completely brand new structural arrangement, which subverts the originating sense. Looking backward, the ultimate result reaches a composition quality which is a unitarian articulation of three covered urban block.

The obsessively serial and paratactic plan, the elementary morphology of the project, the principles of repetition and juxtaposition used to organize the building "*materials*" - framed within recursive solutions, although they are regularly modernized, over time determine the substantial acceptability and recognizability of the choices. In addition, the continuous, pervasive transformations of the fabric of the building over time gradually came to give Amsterdam's street blocks that picturesque character that has made them so famous, and which makes each building unrepeatable in its basic configuration within a shared and unifying built language.

Berlage accepted the pragmatic limitations of the context and bent compliance with the constraints of his brief to them. The model for the proposed project was therefore the Gothic street block, on which he made a series of calculated transformations which reveal his sensibility. The block confirmed the hierarchy of the urban fronts, with the square of the Beurs acting as a matrix pole, the Damrak and Beursstraat as structural axes and the front on the navigable canal as a link. The span of the traditional facades is evoked through the specular repetition of a standard module in the windows, marked off at regular intervals by the downpipes, which repeats the measurements and proportions of the basic surrounding buildings. (This effect was even clearer in the first draft of the project, in which the tripartite

division of the apertures adopted the motif typical of all seventeenth-century buildings.) At the same time the treatment of the corners is highlighted by the replacement of the basic modules with tower elements. Moreover, to further emphasize the rotations of street fronts characteristic of medieval city blocks, the stairwells are used to fill the spaces that were once left by the entrances to the common parts of the city blocks.

But dependence on the model of the Gothic city blocks is even more marked by the design choices that affect the articulation of the interior. All the offices are arranged along the street fronts, to reproduce the depth characteristic of the basic building, while the three trading floors (devoted respectively to the commodity exchange, corn exchange and stock exchange) occupy the core of the complex, as if assuming the character of collective spaces onto which face the individual homes/offices through the mediation of large loggias rhythmically inflected like *matronea*. The interior thus reveals a certain affinity with an urban scene having a vaguely medieval form. In reality, if we think of the character of the context in which it is set, the Dutch tradition had already experimented extensively with opening to the public the spaces in the interiors of the city blocks in the Begijnhof, which is quite close to Berlage's Exchange, and where still today you can visit the oldest wooden houses in the city. Berlage therefore interpreted a conventional theme, giving it a new significance by its function. Tradition remained a paradigm against which to recognize, by distinction, the contribution of innovation and the full meaning of its revitalizing action. *Fig 11*

Yet, as already mentioned, the project's frame of reference underwent a significant change of scale. In fact, the complex embodies the fullness of an architecture on an urban scale, while addressing the question of the urban street block as an architectural problem and renouncing the variations on the theme of housing that can be seen in every block that has developed over time. This variation of scale was to be systematically worked out in all its possible manifestations in the project for Amsterdam South. Numerous factors reveal this intention: the lack of differentiation in the modules that inflect the façade rhythmically by their repetition; the standardization of the fenestration and the entrances; the sense of closure of the urban fronts compared with the open and paratactic character of the building along the street front. In this respect, the work also reveals the influence of Camillo Sitte, who had already observed that the new institutions of bourgeois culture, not having a direct programmatic reference, sprang up out of an architectural translation of established urban spaces. In fact the very spatial continuity which unites the various rooms of the Exchange internally recalls the squares of the city, but here covered and reduced to an architectural measure.

Instead, in dealing with Berlage's work, the emphasis has fallen on the clear definition of the volumes with its Romanesque origins, reducing the problem to a purely architectural articulation of smooth surfaces, with the intention of rediscovering in the master's work the foundations of a neo-plastic disarticulation, which strikes me as on the whole injudicious.

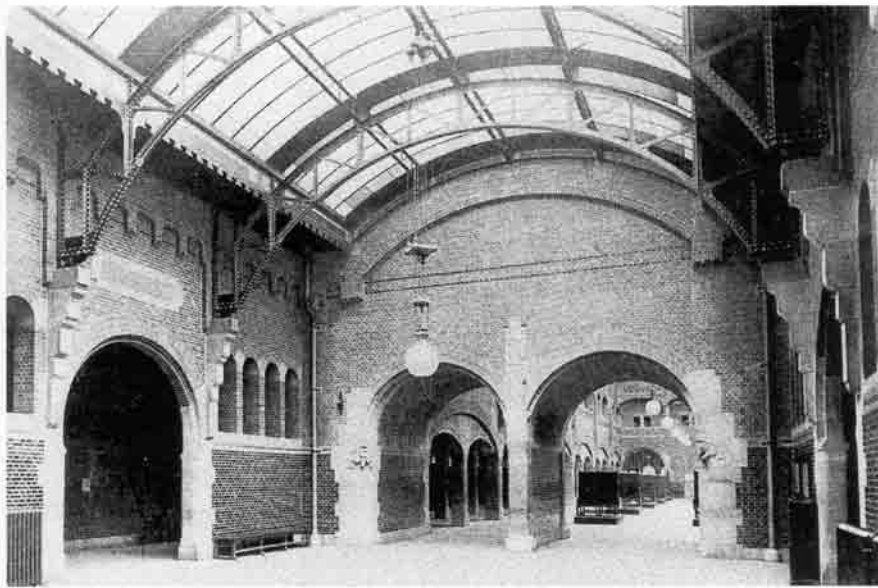
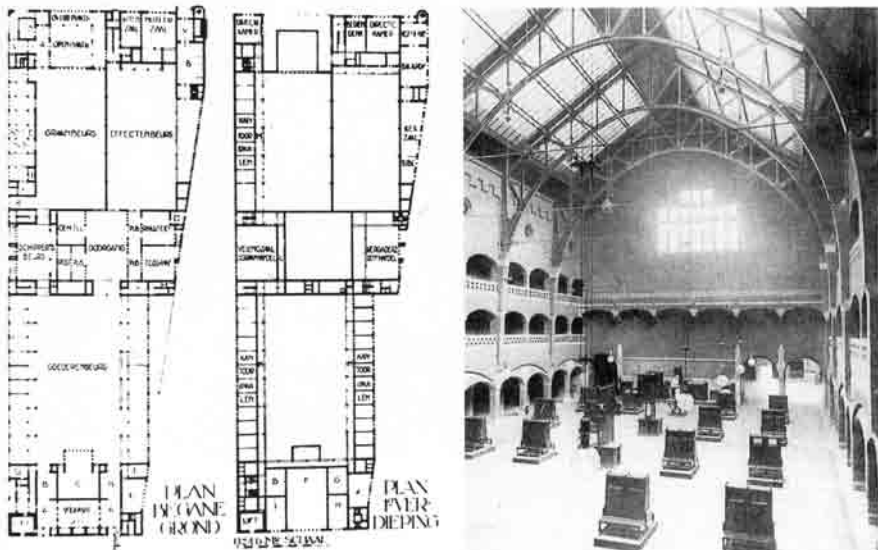


Fig 11. Due to the author's subtle shifting in perspective, the maximum degree of publicness is now inside. The power of the Institution is unfolded through a balanced combination of a respectful homage to the artisanal competence of the local driving forces, which is still highly widespread, and the humble appearance of the new industrial materials. Railway stations, in this respect, are a strategic precedent. The overall direction is carefully made by the Social-Democratic paternalism, which is still capable of gluing the different interests and solving potential conflicts.



In fact, if you look carefully at the lexical choices he adopted, you immediately perceive a sensibility which uses a formal repertoire that is an alternative to Gothic, typical of the city, precisely to bring out that sense of unity imposed by the change of scale from the dimension of the serial fabric to that of architecture accomplished as a unity. But what most strikes the observer, and relates Berlage's research towards that of others in the same period (Guimard, Horta, Perret) is the passion by which, through the use of materials richly diversified in their tactile qualities and colouring, he differentiated the role that each component acquires in the overall composition. Berlage's architecture thus expresses without reservations its "*constructivism*", whose language is, before everything else, a manifestation of its development in the full spirit of the pre-industrial architectural tradition. This attitude is also evident in the way he composes the whole complex by taking the conformation of the city block as a model of reference and systematically showing its phased temporal development. The way in which the parts mutually contribute to determining the interplay of stresses and the distribution of loads is therefore a clear metaphor for the values of mutual cooperation without which a modern society, in the spirit

of Berlage's socialism, could never attain an essential cohesion, and the entire building takes on the character of an allegory or a story in "tectonic" images, of these values themselves. Thus the load-bearing walls in solid brick perpendicular to the facades transfer the weight of the floors elegantly worked with girders and vaults, while the inner facades, structurally and figuratively independent of the former, reveal the building's relations of equilibrium in the treatment of the abutments and capitals faced with granite. At the same time elegantly tapering brick corbels, placed so as to mark the rhythm of the inner wall with bays that are twice those of the offices, support the weight of the overlying roof with skylights, transferring to the ground the weight received from the riveted steel trusses by means of substantial granite supports. The elegance of the emphasis on the nodes of transition between the various elements, structural, distributional and plastic-volumetric, prompt one to speak of this work as a particularly striking example of structural rationalism (30). If this term is used to acknowledge concern for a sincere use of materials and their techniques, as appears to be stressed by the constant reference to the teachings of Viollet-le-Duc, the judgment strikes me as reductive. In fact it tends to see as an end what is actually an instrument (however refined and difficult to control), which has essentially a twofold purpose: to enhance the artisanal ability to control the architecture and to once again "*represent*" the shared values of contemporary society in a conventional way through the construction of the building. Architecture is thus transformed into a "*society*" of materials. In this we find the purest significance of the work of Berlage and of those who shared the same historical project.

We have seen that during the second half of the nineteenth century there were far-reaching changes in the values of community, closely connected to the new relationships in production, social organization and politics, on a scale that ranged far beyond the traditional administrative spheres of the management of the territory. The effects of these processes appeared immediately in the new organization of the city, causing an upheaval in the functioning of the models inherited from the pre-industrial tradition. The most significant effects were the divorce between the plan and building regulations (which acted on separate levels in the construction of urban space), in the marked specialization of the city by functions, in the concentration of forms of production, and above all in the problem of housing for the nascent working class.

The distortions produced by the new turn of events in the inherited city did not take long to be registered, both technically and aesthetically. These two points of view at first appeared as alternative approaches for dealing with the problems that were emerging, though they were soon to be interlaced as complementary phases of the same question. What concerns us, however, is to bring out the emergence of a new way of conceiving the city. From this point of view, the most important positions are the "*culturalist*" and the "*rationalist*." Regardless of the methods pursued and the results attained, these positions are united by a shared assumption: the compact structure of the city needs to

*Welwyn Garden City, Welwyn,
Louis De Soissons, 1920*

30. Kenneth Frampton, *Modern Architecture. A Critical History*, London, Thames and Hudson, 1980, p. 71.

be changed radically to be embodied in a diffused metropolitan organization. The metropolis makes the time factor all-important, as it determines the limitations and the structures of the various urban plans. The most significant differences between these plans is therefore manifest in the choice of instruments considered most appropriate to make the intentions underpinning the new hypotheses recognizable.

In general, the recognizability of the intervention stems from the need to “*represent*”, i.e. communicate, the values of society that have to take possession of it. As we have repeatedly emphasized in the course of this treatment, the project is the representation of the new community structure and its rituals, made legible by a series of conventions understood by the community. But at the same time it is also a representation of a more general system of values to be understood as a prerequisite of that process of transformation.

The city becomes an effective instrument of communication by being translated into significant form, associated with a ritual significance which is its true content on the practical, structural and plastic-volumetric level. But this is possible if the constituent parts of the city are related in ways that are not random but combined in a recognizable system. This condition is dependent on the possibility of naming the elements of the system and recognizing the nature of the relations between them. (This issue underlies all the literature on planning in this century. Kevin Lynch’s figurability is the equivalent of significant form, while identity and structure are the qualities that derive from the recognizability of the elements and the connected between them. Likewise Charles Moore’s names and actions stem from the need to recognize elements and their relations of connection. Muratori’s conception of the type brings together the same terms.) Therefore, the logical structure of the project is recognizable if it is manifested in acts whose existence is known, through the conventions of the language of architecture and urban planning.

The problem of the conventionality of building choices was intuited (though not in such clear terms) by the first scholars to study planning in the late nineteenth century, as they dealt with problems caused by the growth of the urban agglomerations of industrial civilization and the corresponding metropolitan areas.

The projects by Le Corbusier for the “*Rationalist*” open city, with late Baroque Paris as their model, were set the task of giving stable and sustainable form to the process of transforming the territory and finding a match between form and instruments, concretely required to manage the processes of transformation of the territory through architectural design. Le Corbusier thus recognized the scope of the processes involved and sought to translate them into a coherent urban organization. His efforts failed largely due to his use of a language that was only comprehensible with difficulty to his contemporaries. This limitation was soon to prove crucial because of the far from secondary need to communicate the changes under way through the project.

In this respect, the planners described above as “*culturalists*” adopted a different approach. They confronted the problem of the new city in history not only through a preliminary verification of the existence of conventional codes by which to communicate value systems in their time

but also of established solutions and relationships acquired between life models and their significance. By selecting urban elements from the traditional material repertoire, but combining them in unusual ways, they formed an alternative to Le Corbusier and all the others who are termed "*Rationalists*".

Their work sought to recover arguments already known, hence established, in order to persuade the prospective residents of these cities to embrace the new metropolitan values. For these reasons, their attitude was essentially rhetorical.

The most significant developments were in Britain. The country was at the forefront of urban issues with in 1848 the Public Health Act (centralized control of urban planning), in 1851 the Common Lodging Houses Act and the Labouring Classes Lodging Houses Act (the first legislation on subsidized housing), and in 1890 the Housing of the Working Classes Act. To this cultural climate should be added the wide circulation of manuals, divided by types and dealing with cheap and popular housing with a supranational character. Howard played a fundamental part in winning recognition, in complete terms, for the idea of a new way of organizing the city, and his contribution, as we have seen, was presented in *Garden Cities of Tomorrow*.

The argument Howard presented was clear. The mechanisms of land rent had reduced the urban organism to a consumer commodity, justifying the decisions made by speculators who operated in these contexts. The high cost of land called for major investments in the urban fabric. In the absence of some form of public financing, this investment could be promoted either by philanthropic societies or private interests. The latter were the operators who actually decided the fate of cities.

The profitability of the investment was thus ensured by two alternative solutions: to build houses for the wealthier social classes, which offer significant returns on the initial investment, or to build homes for working people and rely on population density and the lack of acceptable standards to recover the costs incurred. The middle classes could use the British rail system together with the formula of the suburbs, so enabling the lower cost of land to make up for the general quality of the buildings. The dramatic situation of the housing market was aggravated by the realization that the average level of the quality of life in the city had fallen substantially due to the blighted state of the existing buildings caused by overcrowding and pollution caused by machinery and factories.

From the theory of the "*three magnets*", which contrasted the city and the countryside seen separately with the image of the city-countryside, capable of embodying the best features of both situations, Howard derived the model of the satellite city, intended to be self-sufficient as a productive unit. Howard took as his frame of reference the dimensions of the small English town of some 32,000 inhabitants, so again ensuring the project's administration would be self-sufficient. The city was sized on a theoretical surface area of 1000 acres of building land and 5000 of farmland (1 acre = about 4046 square meters).

In 1899 he founded the Garden City Association, but the first experiment to be carried out was at Letchworth in 1904, to a plan

drafted by Unwin and Parker. Then in 1909 work began on Hampstead Garden Suburb, made possible by the existence of the London Underground since 1863.

These early experiments developed the lexical and iconological repertoire necessary to make recognizable and sharable the values of which the garden city is the embodiment. Significantly the aggregative references of the planners replaced the compact urban image of the city block with the more rarefied image of the close, or neighbourhood unit, and the street, namely the models recurrent in the built-up areas of rural England. However, compared to the original models, they were to be reciprocally compacted and multiplied in number so as to define an entirely new organism, the "*urbanized countryside*". A similar process is adopted in the housing, where the model of the traditional detached house in the countryside, the "cottage", is changed through a "densification" of its relations with external space within the neighbourhood unit mentioned above. *Fig 12*

In 1919 Louis de Soissons had a chance to review Howard's theories in Welwyn, at the same time recovering the theoretical and practical legacy of the previous experiments by Unwin and Parker. The land was purchased by Howard and his associates in 1918 through the promotion of the New City Group. The city covered an area of approximately 2377 acres. The Northern Railway provided a convenient link between Welwyn City and King's Cross station in London, and only 22 km separated the two. Louis de Soissons accepted the metropolitan logic implicit in Howard's theories and organized the city so that it was grafted onto the rail system. In analysing more closely the characteristics of the development, one notes that Louis de Soissons also showed he had assimilated the lesson of Unwin, who was very skilful in drawing out the potential of the topos. Welwyn is a very fine "*page*" of interpretation of the territory conducted with the instruments of urban analysis available at the time. *Fig 13*

The existing structures consisted of the railway, with branch lines serving two major promontories running away to east and west respectively and a path running along a ridge. The railway divided the city into four zones, two earmarked for housing, a third for industry and the fourth for the city centre with amenities of a collective kind. The existing road system defined a territorial whole, made up of a system of natural ridges coming from opposite directions and the valleys between them. The coexistence of heterogeneous elements together with a highly distinctive procedure in the formation of the land before the foundation of the city was taken as a condition of enrichment and representation, architecturally manageable, of a real situation in which the culture of the valley bottom, characteristic of the processes of industrial development, appropriated the signs left by the earlier culture. In this way the signs of modern machine civilization, represented by the railway lines, coexisted in close proximity with those of a countryside worked and traversed in the traditional ways and with respect for a traditional wisdom that was still alive. Louis De Soissons grasped the opportunity to integrate the picturesque soul of the countryside with the more serial spirit of industrial civilization in the design of the new city.

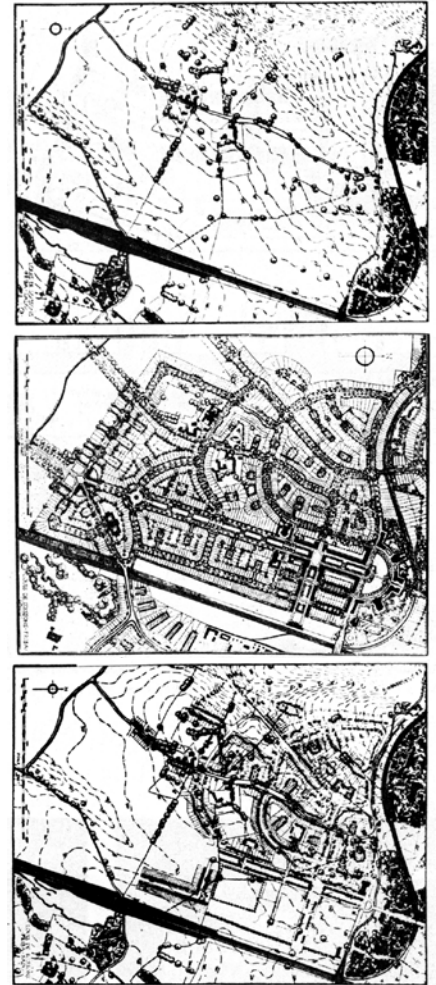
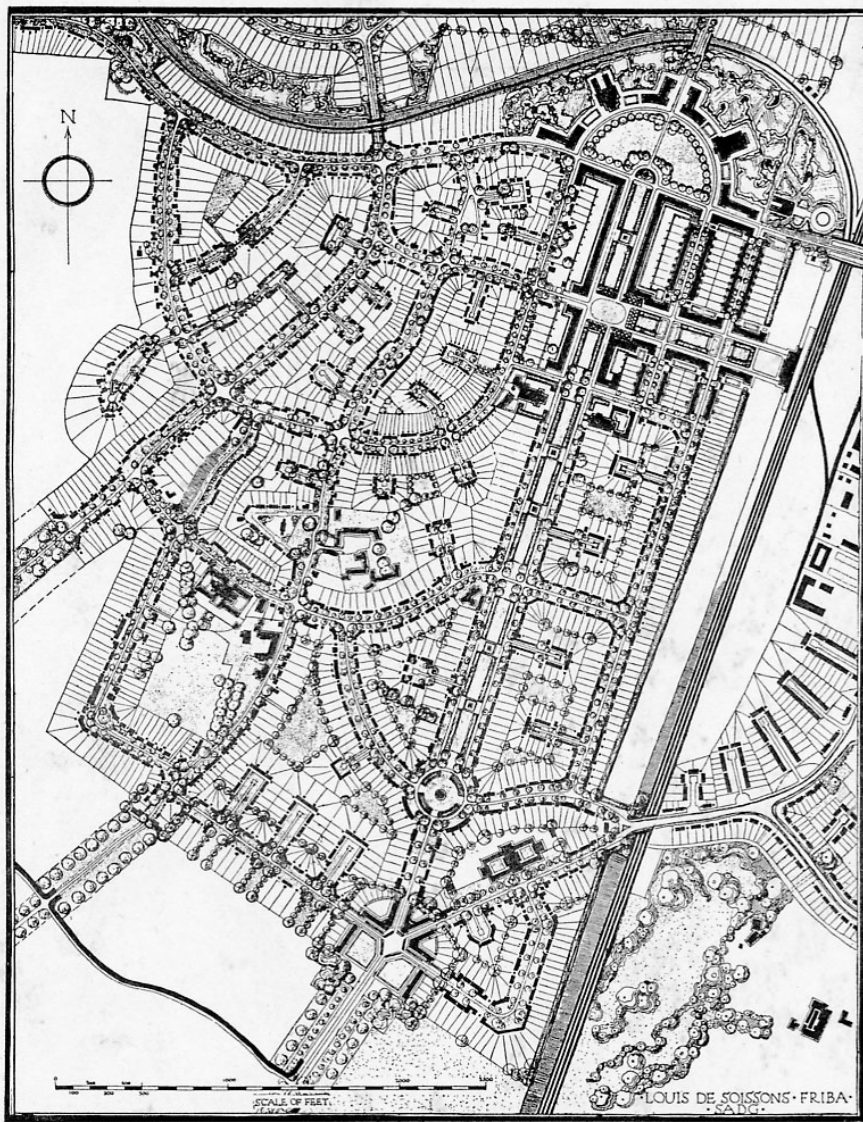


Fig 13

Fig 12

If we ignore this typological admixture, we are unable to account for the uniqueness of the pattern of closes and streets characteristic of the British rural tradition - memories of the picturesque - with the Grand Parkway, the emblem of a machinist urbanity insinuated into the countryside. The coexistence of these elements is what constitutes the typological invention of Louis de Soissons' plan.

Shopping areas were planned along the Parkway, with a hemicycle at each end. In addition to closing off the scenic prospect of the urban axis (the road section measures 60 meters), it was intended to be lined with the most important public buildings. The production areas were to be set close to the railway, while the housing, configuring in various ways the models of the neighbourhood unit and embodying the patterns of the rural roads as the matrix of the urban project, slope down from the gently rolling natural bluffs rising on either side above the railway. *"This view of the site, considered as a framework that has the necessary to structure urban growth, is clearly noticeable in Welwyn. First of all, there is use of existing routes, as Handside Lane or Bridge Road, which at the beginning were only stony rural paths, along which the first constructions were built in an extension of the historical growth pattern."*

Fig 12. Welwyn Masterplan shows a striking difference between two street pattern, one lining the railway tracks and heavily regular in its close sequence; the other apparently "cosy" in its development and opened to the countryside. The careful combination of both urban and rural values is therefore reached at all scales, from the landscape to the building language through the building tissue.

Fig 13. The comparison with the contour line map of the area immediately shows how much the masterplan paid attention to the natural landscape. The underlying medievalism of the overall arrangement was therefore not a nostalgic homage to visual romantic aestheticism, but the rational consciousness of a never-ending practice which was still considered a value to follow.

Then there is the use of existing trees, like the two that block the axis of Guessen Walk, where there is a magnificent chestnut tree, around which gravitates the Quadrangle (designed by Louis de Soissons). There is also the overall study of the terrain, which determined the location of residential and industrial areas and, finally, there is the bend of the railways, which made possible Louis de Soissons' brilliant axial composition.”(31) Fig 14

The neighbourhood units introduced semi-public spaces as the necessary filter between the intimacy of the home and the collective dimension of the street. In that sense they contributed decisively to enhance the new patterns of life the Garden City was meant to foster. In addition, the deliberately low-density building and the emphasis on the role of nature reduced to the garden, were clearly opposed to the image of the traditional city. The sense of artisanal control of space was not limited to the design of the hedges, the entrances to the homes and the neighbourhood fences, but clearly expressed in the characters expressed by the terraced houses or detached houses. The whole lexical repertoire of the English rural tradition was skilfully used, showing that the new city could clearly grow out of a reinterpretation of the character of the existing construction system. At any event, it entailed reworking a formal heritage and making it independent of the reasons that promoted it by endowing it with a new significance.

In reality the project did not attain the hoped-for results (in 1946 the city only had 19000 inhabitants). This was because the productive activities that were meant to guarantee the autonomy of the development were never installed. This does not undermine the significance and success of the attempt, in a historicist key, to reappropriate the existing vocabulary of building and updating it.

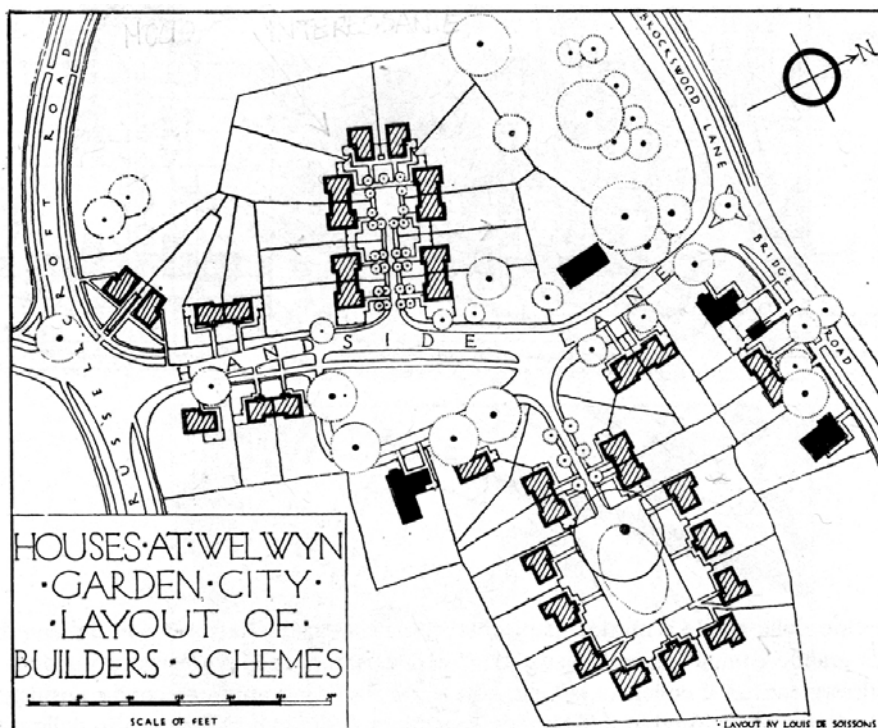


Fig 14. The cottage atmosphere of the building language is preserved notwithstanding the necessitating density increase. Its value is not contradicted by the lane and the “close” aggregation, also because of a careful control over the green public and private areas, which flow one into the other, avoiding any opposition, unknown to the Anglo-Saxon attitude. The collective is therefore the crucial mediating scale, and the neighborhood size the most appropriate to express it.

31. P. Panerai, J. Castex, J. Depaule, *Urban Forms: The Death and Life of the Urban Block*, Oxford, Architectural Press, 2004, p. 46.

The Deutsche Gartenstadt-Gesellschaft (German Garden City Association) was founded in 1902. By analogy with what was being done in Britain, it was clearly stimulated by Howard's ideas, promoting a cultural campaign against the Groszstadt, as it was being shaped by Wilhelmine culture. In a vein more explicitly Romantic than the contemporary experiments in the English-speaking world, which were always concerned to combine social aspirations with economic feasibility, and more closely connected to a recovery of the roots of culture in relation to the spread of the populist values of the industrial society by the Heimat-Kunst, the small town became a paradigm against which to measure the distance from the metropolis and its alienations as well from the rural village with its irreversible state of cultural isolation.

Tessenow's action took place fully within this semantic framework. His was a cultural struggle even more than a political one. The figure of the bourgeoisie, as he defined it, was not simplistically identified with the holders of the new levers of power, but with those who had the social responsibility in relation to the new working class, to lead it towards a condition of new urbanity with respect for that shared craft culture that united the best of the urban pre-industrial tradition and the rural tradition. This explains the strongly "*representative*" quality, in the traditional sense of the word, which flows from his works. In the garden suburb of Hellerau, Tessenow was assisted by Herman Muthesius and Richard Riemerschmid. The subject was housing for the workers employed by the Deutsche Werkstätten. The pragmatic limitations of the theme of housing were combined with the symbolic restrictions of the ritual of work for employees, creating a sense of unity that would be difficult to repeat, and which made the achievement at Hellerau a paradigm for the German culture of the garden city.

We can analyse some of Tessenow's terraced houses and detached villas for workers, so as to clearly infer his attitude. The rows of housing are arrayed on either side of the same street. Because of the different solar orientation, those on the south side have their principal fronts laid out as vegetable gardens, while in those facing north he did not encourage this arrangement. In these choices of layout we note his concern with those contributions of innovation that alter it, as far as compatible with the local building traditions. In fact, the medieval city, on which this layout is clearly based, would never have considered it advisable to differentiate the street fronts as a function of orientation. "*Rationalism*", though explicitly criticized by Tessenow, penetrates into tradition where it can be adapted to the demands of contemporary life to improve it. *Fig 15*

*Workers' housing in Hellerau
Garden City E. Tessenow,
1909-17*

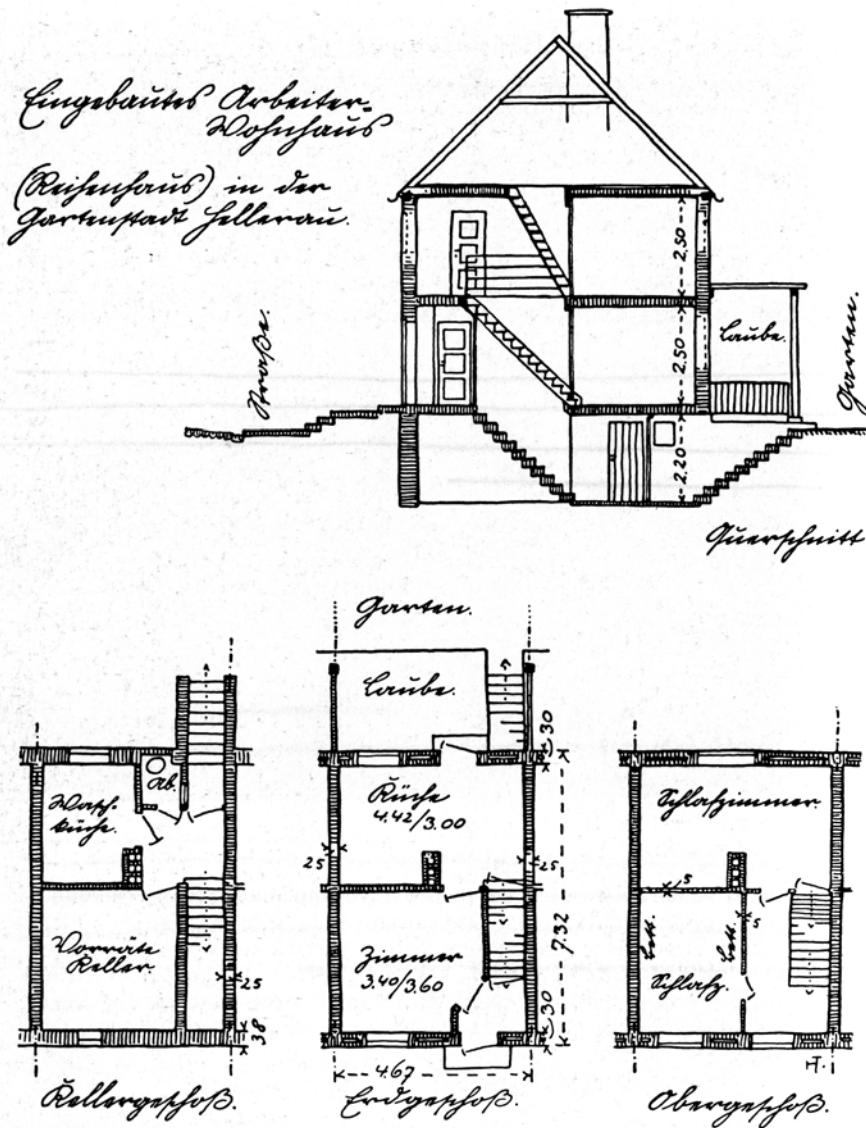


Fig 15. The drawing quality and the detailing expressively reveal craftsmanship as a value sublimated by simplification over a building tradition which confirms a long-lasting legacy.

The character of greater urbanity than found in the rural context is emphasized by the aggregative choice, with single dwellings arranged linearly in a row to create a single united front, where the rural village would have adopted a discontinuous character. In addition, the picturesque dimension of the village, attributable to the small-scale and individual modification of single buildings, at Hellerau becomes a serial logic, a paratactic syntax in which all the buildings facing the street have the same morphology. The home in itself is immediately connected to the small residential city, which in some ways incorporates aspects of the rural tradition, but engrafts them onto a systematic logic, as we have already noted, that is explicitly urban and clearly recognizable as such.

The row housing without gardens on its principal street-front is characterized by the repetition of a module with an evident classical measure, framed by two successive downpipes. Within this aggregative composition, the individual parts are derived by "hollowing out" the basic module. Morphologically speaking, the design acknowledges the traditional tripartite division into the base, emphasized with the creation of a large plinth consisting of three steps consisting of bricks

laid edge on, elevation emphasized by the pure panel of plaster in the facade, and elevation emphasized by the presence of the double gables. The plinth itself acquires, “classically” and “traditionally”, the significance of the threshold, a space of transit between the private dimension of the dwelling and the public dimension of the street.

The grammar of the facade is controlled by the use of axes against which to align the apertures, both in relation to the individual modules and between different modules. The vocabulary used is traditional, with each element clearly recognizable by its form and position. So Tessenow reveals in the façade the presence of the daytime quarters with a window of six modules as compared with the sleeping quarters, with the windows reduced to four modules each.

The simultaneously classical and traditional measure of the design is evident in the typological plan with the staircase set perpendicular to the street front, the living quarters on the ground floor linked with its outdoor extensions on both fronts, the sleeping quarters upstairs, and the attic used for storage, as in medieval cities, while the cellarage is inserted in continuity with the gardens. The care with which every constructive detail is designed heightens the values of craft culture as a point of equilibrium between the rural and small-scale urbanity, meaning the true dimension of contemporaneity, in opposition to the ruptures advocated by Rationalism. The same solutions are adopted on the opposite front, where a pergola serves as a tectonically expressive transitional zone between the public and private spaces. *Fig 16*

In the isolated detached house, Tessenow recovered the idea of the rural dwelling, using the same artisanal care as before. Here the fence acquired a special role as an element that bounds the property and filters the transition from the dimension of the home to that of the street. The presence of the gabled front of the facade, windowed in the attic, reveals the modified hierarchical relations, also stressed by the decentred and much less emphatic position of the front entrance to the house itself.

Even the expressive qualities of the individual components, in the use of the materials of the craft building tradition, allude metaphorically to the recovery of values that the Grozstadt was completely obliterating. Finally it should be recalled that the contribution of innovation in Tessenow’s architecture is always present, albeit dissimulated. It is expressed in small episodes, in functional details through which he modernized the current standard of housing, in the designs of the distribution and technological solutions in order to maximize and improve the use of the inherited patrimony. Tradition, in other words, is translated into “*seeing small*” among things, leaving a sign of its presence that is as discreet as possible. Moreover, the love with which Tessenow designs every part of the home expresses the sense of architecture as a *Gesamtkunstwerk* and its significant forms are perfectly suited to the rituals of daily life to which they so clearly allude, “*presences*” waiting to be occupied and are enlivened by the actions of men and women.

In conclusion we can say that Tessenow’s research into single-family homes and the process of reduction to which he subjects the archetypal examples of tradition and the attention he lavishes on the



Fig 16. The sober and essential classicism of the main façade seems to better deploy the tectonic awareness embodied within the residential building and conveys its social, economic, cultural and political values.

relation between housing and architecture of the institution are all directed towards the recovery of material culture, its modernization and the reintroduction of a unified perspective for housing. In this way the “*type*” appears as the result of an experiment related to the long phases of history and the accumulation of knowledge in different fields of knowledge, capable of absorbing within itself the character of innovation in coeval society.

3.1.4) The phenomenon interpreted: analysis of the sources and spread of themes

The theme of constructional sincerity, on both the urban level and the architectural, has in its substance adumbrated the real sense of the recovery of traditional tectonics, to be understood as an explicit metaphor for society, in the sense of the continuity of history. If anything, the teaching of Viollet-le-Duc should be understood in instrumental terms, or as a necessary step to get free from the encrustations of idealism and to rediscover the correspondence between structure, space and volume.

Traditional architecture, namely the great work of a collective nature which has always furnished the backdrop for intentional architecture, has yet always been linked to it through calculated interpretations, and therefore became a cultural paradigm in the late nineteenth and early twentieth centuries. This explains the interest in the city which actually emerges from surveys of masonry and scientifically grounded observation of the dense stratification of the urban palimpsest read as “*texts*”, to which to relate the sense of the contemporary work. In particular, the connection between basic building and specialist construction was recuperated, after progressively being lost during the nineteenth century, not only through the theory of the new city but above all in built works and design intentions.

Also rediscovered was the significance of architectural language as a logical and conventional figurative code, one widely shared by the community. Without this form of identification it does not seem possible to recognize by “*difference*” the contribution of innovation to local tradition. Language itself takes on an areal specificity that contrasts with, or at least filters, the spread of logics and techniques that transcend territorial boundaries.

The architecture of tradition

The architecture of the engineers experimented systematically for the first time with the idea of the architectural control of urban space in bourgeois culture. The new functional issues hardly ever had a standard frame of reference in the building tradition on which they could draw in a logic of continuity. There remained to them only Durand’s abstract “*compositional*” teaching. Though sharing their axioms, the city, in its built manifestations, always remained a term of reference.

In particular, it was the city’s open spaces – the squares with all their

The architecture of the engineers

possible varied forms and the streets understood as places for walking - that suggest the models for new social rituals. Hence the department stores, exhibition spaces, markets, shopping malls, greenhouses and conservatories, public libraries and banks are fragments of cities introjected into the covered dimension of architecture, open spaces that become vaulted interiors of striking size. This change of scale reveals the contribution of an ancient practice by which the spaces of the city can be seen, conversely, as outdoor rooms. But in the culture of engineers, the spaces of the city are ideal models; they do not refer to specific circumstances. Architectural historicism retrieves this practice but embeds it in the reality of local conditions. The sources of inspiration are thus sought in the built environment itself, so that relationship of derivation is more evident and direct. In this sense the teaching of Camillo Sitte remained a point of reference for the whole culture of the period.

The question of the use of materials and construction techniques is more complex. Even the architecture of the engineers emphasizes the sense of the relationship between the parts, enhancing the value of all the constructional nodes. But it does so by using the new materials without creating improper hybrids with traditional culture, thus placing itself outside history. The idea of an shared and shared architectural language replaces that of architecture understood as a universal language of a new tectonics, replacing craft skills, rigour and accuracy by industrial standardization. It matters little, in this respect, if there are often detectable concessions to conventionality which it was difficult to repress (cast iron pillars that reproduce features of classical columns, balustrades that evoke the virtuoso forms of wrought iron, and so forth). In reality this kind construction is remote from the recovery of craft skills and the symbolic meanings associated with them.

A sincere concern for the city as an artefact, i.e. as a craft product that develops in historical time and has to be analysed in its constructive logic, links the experiences of historicism with those neo-historicist claims that acquired greater strength from the late 1950's on. The city was assimilated to a dense palimpsest whose progressive meanings have to be recovered through a delicate labour of successive scrapings and recompositions of fragments obtained by comparisons and distinctions. This is the significance of the hermeneutic process, which in restoring the authentic value of a text works deductively on the language of the period and inductively on the remaining fragments of text, in the first case seeking to establish a framework to which to relate the unity of the meaning, and in the second case to determine the impact that each specific contribution could make to the collective work of construction of the language, by altering it in ways more or less sensitive to the meaning.

The interpretation of a text would lose internal coherence without reference to a presumed common code. It would risk being imposed from above if it was not the product of a set of individual and unique contributions of their material substance. Langue and parole thus

The neo-historicists

become the two terms of a dialectic that unites the experiences of the early and mid-century. Research work on the details and “*localisms*” does not exclude the possibility that, through a detailed comparative analysis of nature, there exist clear similarities that enable language to evoke the existence of linguistic universals in the field of architecture and urban design. This justifies some “*Rationalist*” derivatives within neo-historicism, which are less evident in the culture of the beginning of the century.

3.1.5) The role of architectural “*language*”

The experiences analyzed show that the recovery of the concept of history was achieved by polemically deviating from the positions of Idealism, which had substantially established the framework of legitimacy of eclectic and revivalist culture. No longer a spirit of the age expressed in a fragmented and discontinuous way by amplifying some of its “*manifestations*” as better than the others representing the fullness of the absolute values of which history itself becomes the vehicle, but a continuous history, made up of successive adjustments, which assumed a precise meaning only inasmuch as it was embedded in a special and unrepeatable spatial-temporal context.

In this respect the importance of the system of the existent was justified as guiding the development of cities and their components. History was relativized and multiplied, becoming the context that pragmatically limited and specified the intentions of individuals and peoples.

For this reason it becomes impossible to define general criteria to which to retrace reflection on architectural language, since Historicism seeks as many “*codes*” as there are real constraints which limit the form of the city and its architecture. This explains the renewed interest in “*regionalism*” and craft culture, the result of skills accumulated in time without traumatic ruptures, capable of absorbing within themselves the quantity of innovation that proves to be compatible with received ideas and the related material culture.

It also motivated a certain kind of “*constructivism*” which characterized this production, a form of complacency in highlighting the modes, techniques and materials by which form is constructed, being strongly conditioned by it. Materials acquired that importance, that role, which had been denied them firstly by the Enlightenment culture of reason and then by revivalist idealism. It should, however, be acknowledged that the historicist interest in the appropriate use of materials was not an end in itself, as suggested by the definition of structural Rationalism often attributed to many of its exponents. In reality, the concern for since “*constructivism*” in architecture was justified by the recovery of tectonics with eminently representative purposes. The idea of architecture as a “*society of materials*” expresses better than any other the desire to communicate immediately the values of a society through the tectonic metaphor: the buildings and parts of the city were transformed into allegories of the society that dwelt in them with its rituals. In this

History as “code”

respect tradition was not merely mentioned, but even more evoked in its constituent principles. From this point of view it is important to remember the pioneering contributions of Semper, who developed original research in which, going back to the archetypes of tectonics (see *Der Stil in den technischen und tektonischen Künsten oder Praktische Ästhetik*, 1861 and 1863), it seems possible, in part through including innovation in technology, to rediscover the principles, the centrality, of housing and the derivation of all kinds of buildings from a single unifying matrix. This perspective was already present in his project for Vienna.

The limits of this historicist outlook, however, can perhaps be found in its urge to subordinate the existence of language to that of history, in the admission of the implicit impossibility of modifying history by acting on the structures of a language that could disregard it, in a way that was necessarily traumatic yet not for this reason absolute. In this sense the contribution of Modernity was to prove decisive, and the process of liberation from the constraints of history, quite unsurprisingly, was to be accomplished through the instrument of a linguistic revolution.

The experiences reviewed in this chapter reveal describe the role played, with a greater or lesser degree of awareness on the part of its protagonists, by historical materialism. In fact there is a widespread belief that by acting directly on the material culture of a people, modifying it to adapt it to changed conditions of use (expressed by new rituals), it is possible to innovate its meanings and the values corresponding to them. This is in clear opposition to the idealist and rationalist attitude that variously seeks to restore the foundations of the relation between signifiers and signifieds so as to avoid acknowledging the authority of history as a guide or accepts the substantial rupture in continuity and the eternal recommencement.

3.1.6) The role of “*type*”

The appeal to regional specifics, to building skills accumulated over time in a specific context through artisanal development, testifies to a desire to validate the thesis of the architectural and urban environment as a continuous operation of modification of the existing and replacement of the established patrimony in the light of whatever innovation can be reasonably assimilated without irreversibly destabilizing the equilibrium of society.

In terms of types, this means attributing new meanings or new rituals to significant forms without changing their existing constituent principles on the spatial, volumetric and structural levels, i.e. it means modifying without deforming, acting by widespread but small-scale mutations, by calibrated shifts in sense that can be justified within the contextual relationships. But, even more deeply, it means recognizing as the foundation of the type its correspondence to structure, space and volume, reciprocally integrated and rationally expressed in its methods of construction and interconnection.

The syntax, morphology, grammar and vocabulary of the modern city, in

Tradition as a guide

the historicist sense, evoke with a certain immediacy the corresponding building structures of the traditional city, establishing a dialogue with them by “*differences*”, especially at the level of expression, hence in the use of materials. History therefore becomes a recognizable paradigm sometimes submerged and recognizable under the guises of new organisms, sometimes simply evoked through the quotation of an ever-present image, from which it partially and silently takes its leave through a series of detailed transformations. The best works from this period have the ability to prelude their intentions by their immediate evocation of a sense of belonging, by their reference to a language - wholly within the process of construction of the city and architecture - that informs constructional and urban reality, acting on it by carefully calculated differences.

Significant forms never arise in open opposition to the visual, semantic and constructive conventions acquired by the local community (of fundamental importance in this respect are the variations on the theme of housing, symbolically expressed, for example, by Tessenow), and they regularly acquire new attributions of meaning, i.e. they embody innovations in rituals now absorbed by current practice, even in cases where they are expressly produced by established bourgeois culture. Tradition becomes a living material that gains in value within a specific historical context rich in significance.

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3.2) The role of the architectural avant-gardes: Rationalism, Functionalism, Neoplasticism, Constructivism

3.2.1) The cultural context

Economics, ethics and aesthetics have always been profoundly integrated aspects of the culture of a people, though their phases of maturation are not necessarily in synchrony. The history of the Modern Movement is strongly characterized by the imbalance constituted by factors of an economic nature compared to the other factors. All the architects active in the early twentieth century observe a marked divergence between practices in the workplace, organized on the basis of the new principles of industrial production, and in the other sectors, which had difficulty seeing the former as the first stirrings of a new social organization and new rituals. The very sense of dissatisfaction that arises from the widespread recognition of a rift within society created the deepest impulses to a radical renewal of society. The criticisms were especially directed towards the makers of the bourgeois revolution, which, after freeing itself from the abuses of the aristocracy and from outworn ceremonial, now seemed to want almost to simulate their substance.

Art, ethics and industry

The industrial revolution, which came to full maturity during the second half of the nineteenth century, contained within itself principles that were to unhinge society as a whole. In the foreground was the organization of labour, involving the subdivision of functions that had formerly been carried out by a single person, the artisan, between a number of people, each of whom was responsible for a single aspect of the overall operation. The industrial product in its generality was the result of a work of coordination of a number of elementary operations notable for a high degree of specialization.

The division of labour and its recomposition through the work of coordination was the end result that gave coherence to the different stages and the method of assembly. The object as a whole was functional, hence instrumental to the tasks assigned it, provided all the parties involved contributed, as far as was within their competence, to a unified purpose.

This logic, applied to social organization, led to a strong class structure, with all its members were aware of their different roles and saw in the fulfilment of the expectations that society had vested in them as the priority to be pursued, the redemption of their condition.

The same approach applied to the world of architecture and urbanism entailed giving every aspect a specific role, instrumental to a clear understanding of the functioning of the whole. If we except Neoplasticism, which interpreted the industrial revolution in ideal and non-practical terms, all the avant-garde movements expressed the purpose of clearly identifying the parts that characterize the composition so as to make this condition of relative isolation into value, hence assigning it a precise significance. The formula "*form follows function*" should not be interpreted as a failure to detect the autonomy of formal values compared to other aspects of architecture, but as an awareness that every aspect of architecture must be recognized for the function it has to perform, hence be sufficiently independent to immediately reveal its significance, while contributing to the solution of a single problem. Specification, namability and individuality are all attributes that derive from the world of industrial production and are immediately translated into architecture. We are first faced with a semantic revolution. This revolution is significantly accompanied by a sort of rejection of history, understood as the acceptance of inherited behaviours. Abstraction becomes a necessity, to prevent the words used by the new language of industry from being unduly confused with expressions by that time outworn and compromised, rich in values and meanings whose presence would obscure the sense of the new society growing up. Compared to inherited behaviours, abstraction becomes a necessity when one is seeking to find new words to express univocal meanings.

If the new order was identified as a classification of the purposes which had to be matched by the individual parts of the whole - the industrial product - had to correspond, then the resultant form had to be clearly recognizable and necessary. The form therefore had to make the meaning/role of each operation and each component manifest and legible. Constructivism clearly expressed this need through a continuous parallel between the nature of the elementary operations that are performed on the production line in assembling the different components of a product, by specifying the lexis, grammar and syntax of mechanics, and the language of architecture understood as the assembly of formal components by equally elementary operations.

Purity and necessity of form overlapped to reduce the infinite and indefinite architectural continuum to a series of separate operations on basic components. Only in this way was it possible to guarantee that

Necessity and purity of form

univocal significance of the parts which would associate architecture with the principles of industrial production. This expectation was also associated with the need to reduce form to its necessary aspects in order to adapt it to the processes of industrial production which necessitated economy not only of materials but above all of operations. A pure, spare form would be synonymous with an equally simple condition of reproducibility.

Type and standard are concepts which are often confused in the debate, creating difficulties in understanding the phenomena taking place. In very general terms one can say that the notion of the type criticized by the Modern Movement was that produced by the stylistic eclecticism of the second half of the nineteenth century, namely an a priori codification – idealist in its outlook – through the establishment of models of general validity, of the features that a space assigned to a particular function ought to have, to the extent that it is possible in advance to associate a choice of a stylistic kind with a given theme. In this eclectic definition of the problem there still remained the legacy of a culture whose design methodology stemmed from the architectural object and adapted it to new needs. Indeed, although the typological conception of the late nineteenth century had lost the relationship between the project and the local cultural tradition in favour of a continued migration of ideas from one region to another, through a process of mutual influences, the treatises of the time did not present methods of organization of work, but integral solutions to the problem from which the most appropriate could be chosen, at most adapting it to circumstances in the choice of the technologies and materials to be used or, at worst, by citing one stylistic acceptance rather than another. The idea of the standard on the contrary presupposes a different organization of work, including design, which starts not from objects but functional programs, the practical demands to be fulfilled, in order to adapt them to the principles of mass production. By its very nature the industrial model of production requires prior identification of the functional parameters (so revealing its debt to Comtian philosophy) which will have to be met by individual products. In other words, we have to assume that the needs and corresponding opportunities to satisfy them are stable, non-modifiable and clearly identifiable from the beginning of the process. Of course this means that for a given theme there is a tendency to emphasize the features common to all situations, and not those that are distinctive or related to the attitudes of individual users but reproducible in large numbers.

Mass production involves selecting the materials, technologies and dimensions of components and their formal and mechanical properties, simplifying the operations of the assembly of the parts in a way that is alien to the craft worker. It also involves breaking down building into a number of elementary operations conducted by unskilled labour using simplified components. It therefore changes the language of building, but also the very concept of architecture. If building is increasingly directed towards the design of components with a specific valence, that are assembled in keeping with coded operations, architecture becomes

The type and the standard

more and more a problem of the composition of elements, designed independently, of an overall idea of what is to be ultimately built. Planning by types requires a synthetic foreshadowing of the object of study; design by standards requires the specifications for individual components which will have a specific function within a building whose substance no one knows in advance.

The profound difference between type and standard can be understood only if it is examined against this conceptual background. The standard, a functional requirement, becomes the starting point for a design that is independent of final construction but must respond to a specific function, within a system of design on an industrial scale. The type, by contrast, as the foreshadowing of the project becomes the starting point of an itinerary that takes as its premise an object or a building with predefined characteristics and seeks to modify it to meet new needs.

Low-cost working-class housing was regarded as the central issue by the masters of the Modern Movement. It lends itself to effective treatment on the principles of mass production, because of the economies of scale it is able to guarantee. For this purpose, it is necessary to make a clear distinction between collective spaces and private spaces. The former can be pooled, resulting in substantial economies in overheads and maintenance work, significantly reducing the surface area which would be necessary if allotted to each family. The remaining space is then subjected to a process of standardization, of optimization in its functional and technical parameters on the basis of industrial production. This area is considered the indispensable minimum so that each family as a whole can “*isolate*” itself from other families, hence a kind of residual sphere compared to that considered fundamental, namely the collective space.

From a semantic point of view the choices of method have a precise significance: the emphasis is placed on the common spaces, which in the compositions are always given a more markedly plastic character, with a decrease in the strictly individual portion by treating the whole family as an individual unit. This result fits perfectly into the expectations of the industrial system, but also of the social-democratic and/or dictatorial systems which adopted this logic in their pluriennial plans.

Existenzminimum

The theme of workers' housing was framed within the big city, the modern industrial metropolis. The process of breaking down the components and operations that we have already recognized on the architectural level found its confirmation in the organization of the city. It was no longer an integrated system of routes, building screens, open spaces (public or private), and activities, all constantly interacting. The nineteenth-century city underwent a breakdown and subsequent regrouping by homogeneous kinds in terms of functions. Order understood as a classification of purposes can be found within each morphological class: the system of routes (subdivided internally

The metropolis and zoning

according to the users and speed of transit), the building system (diversified internally as a function of activities), the system of open spaces (structured on the basis of use and ownership). Zoning is the result of applying the principles of division of labour in accordance with industrial criteria to the construction of the city. The different constituent parts of the urban organism are reciprocally juxtaposed so as to emphasize their relative autonomy. The morphology of the contemporary city is reduced to the definition of essential, necessary, roles, and its syntax is paratactic, meaning that it presents itself as the coexistence of equivalent systems within which a minimum level of hierarchy is re-established.

Though the decomposition of the traditional city into its component systems and their subsequent juxtaposition produces an image of a substantial equivalence, hence an apparent lack of order. In a hierarchy of functions, the whole city is not interpreted as an undifferentiated continuum. In contrast with the theories, despite the specificity of the guidelines and interpretations, they confirm the image of a system made up of entities differentiated by scales and reciprocally integrated by means of the quality of the services for which they represent the potential catchment area of users and their corresponding relations. The housing cell is the basic unit of the system. A number of units sharing common services constitute an apartment building. Several such buildings gravitating around primary services form the neighbourhood units. Several neighbourhood units each with their own elementary school form a district, and so forth up to the dimension of the city. On the level of the complete “*text*” the city seems to restore that complex image that appears to have been lost in the integration of systems.

Planning as a process of linear growth and hierarchization

3.2.2) The ideas of authors: intentions and definitions

This text can legitimately be considered a treatise-manifesto by its systematic character and its apodictic claims. It is also an attempt to transfer to architecture, and to a lesser extent to urban planning, the results of the researches that had already been carried out within the sphere of the *Esprit Nouveau* in relation to painting and sculpture, through the definition of Purism.

The housing problem is central to industrial society. The primary objective is to conceive and realize the type house or home for the common man, capable of meeting basic needs and expectations. Le Corbusier speaks of the home as an *outil*, a tool. This is the result of the rational, scientific approach to the housing problem: to clearly define a problem and immediately identify the instrument capable of solving it. In this sense, housing in twentieth-century society was the tool that was intended to solve the problem of “*dwelling*” in the industrial condition. But Le Corbusier also speaks of the house as a machine for living in. In this sense we can understand the statement as an attempt to

Vers une architecture, Le Corbusier, 1923

legitimize the idea of the home as a cleverly devised assemblage, within which each part, like a machine, has a specific function, serving its harmonious integration with the others in the economy of the whole. Architects were still struggling to acknowledge the innovative stirrings in contemporary society and to translate them into finished forms. In this respect the engineer, being guided by precision calculations and putting the properties of the new materials to the best use, is closer to the idea of accuracy and rigour that characterizes the modern age.

The architect struggled to free himself from the weight of accepted ideas, the cumbersome presence of past styles, and sought to observe everything around him with new eyes. Le Corbusier's architecture had not only to satisfy needs of a technical order, which the engineers were already perfectly capable of doing, but had to move the viewer through the composition of forms: "*Architecture is the masterful, correct and magnificent play of volumes assembled under light.*"⁽¹⁾ This definition conceals a principle destined to revolutionize the history of architecture: abstraction, namely the reduction of architecture to an interplay of primary forms: cubes, cylinders, spheres, pyramids, as can be seen in the most wonderful examples of industrial architecture collected in the initial pages of the text. This explains Le Corbusier's difficulty in understanding Gothic architecture, which actually attains the definition of a volumetric definition through the serial repetition of components that prevail in their individuality over the image of the whole.

This aspiration towards abstract architecture, a pure assemblage of volumes in keeping with the rules of composition, was an innovation of major importance, which has not been sufficiently examined. It introduced the question of the "*referent*." By that time painting and sculpture had abandoned it; they were no longer representations of reality, for the sake of achieving a pure plastic language, as Walter Gropius also acknowledged. From this standpoint, Modernity is a revolution in the field of the visual arts, as it subverts the principle that art is "*measured*" against the subject it is to transform, and its significance emerges from the dialectic between its capacity as a "*craft*" and the reality it seeks to render. Architecture could hardly follow this path, abandoning its need to be house, theatre, market, church and its also to be immediately recognizable as such, although this problem does not involve the question of significance. In Le Corbusier's eyes late nineteenth-century historicism stood for the inertia which constrains architecture and fails to permit it to attain the results already achieved in other fields. For these reasons, Le Corbusier cannot be considered strictly a "*Functionalist*", except in the sense that all forms have to be "*instrumental*" to attaining the overall result to be attained.

The role of abstraction is such that the treatment of the surfaces should never betray the simplicity of the underlying volumes. Since Le Corbusier was aware that surfaces have to be incised for purely functional reasons (architecture cannot be reduced to sculpture alone), it would be necessary to use the generating lines that highlight the simplicity of the volumes. In this sense it is sufficient to learn from the ordering grid of industrial buildings. But the architects refused. To therefore set the function as the referent of architecture and seek

1. Le Corbusier, *Toward An Architecture*, London, Frances Lincoln, 2008, p. 22.

to establish a direct connection between the language used and the function could be a serious mistake, because architecture appeals to the spirit by its very abstraction. Volumes and surfaces are still subject to decisions concerning the plan, which represents the highest degree of abstraction possible in architecture. The plan determines the whole of architecture. Hence the overriding need to establish a new plan of the city. The pilotis-city (1915) and the tower-city (1920) are the earliest compositions of the city of a modern kind. The first introduced the idea of a city elevated above ground level, which is used for networks of utilities and slow-moving traffic, so allowing pedestrian and rapid mechanical mobility to be located on the level above, together with commercial, residential and production activities. The second applies the principle of the American skyscraper to the European city. By concentrating the building potential of an area in mainly vertical buildings it succeeds in leaving a significant proportion of the land free and restoring it to its original purpose by creating great urban parks in which to find those healthful conditions that were lost in the nineteenth-century city, which was a continuous mass cut out of the streets which coexist with all the activities in a state of deleterious promiscuity. The *à redens buildings* reflect to the same idea, with the specific purpose of freeing the built volumes from the constraints of roads and restoring natural greenery.

Recognizing the need to reduce architecture to its primary components, pure volumes, surfaces, plan and light, presupposes that there exists a capacity to govern reciprocal organization, to create order in the composition. To this end it is necessary to endow the whole with a unified measure by establishing a module which will make it possible to relate the various components to the human scale of perception. Once this has been done, geometry will make it possible to control the forms, while to establish the correct distances (relations) between objects, we have to invent rhythms. Just as the module “*measures*” and unifies the composition, the regulatory route constructs and establishes the relations between the parts. Architecture is not, however, inserted in the design process from the outset, just as the contribution of the engineer anticipates that of the architect.

To understand this point we have to look at everyday life and learn the lesson of steamships, aircraft and automobiles. These formal inventions show that if the problem is clearly stated, its solution stems from this accordingly. This is possible if one understands the logic that preceded the statement of the problem and led to its creation. As Le Corbusier shrewdly pointed out, the problem of flight was solved only when the plane was no longer conceived as a bird but simply as a machine for flying with. In general terms this means that to formulate a problem properly, we have first to establish the logic with which to address it, hence its standard. The architectural problem will only be solved if the criteria have been previously established to which it has to respond functionally. The problem of housing thus entails the definition of a standard, meaning compliance with specifications deemed to conform to the function assigned to it. A solution is possible in modern times only by respecting the principles of the efficiency of the production processes on an industrial scale, or the logic of the machine. The

standard is therefore a problem of a technical and practical nature, the result of a process of selection of the baseline data needed to achieve the necessary quantification. Form stems from the functional standard once the logical principles by which it is to be satisfied have been recognized and the compositional instrument, or architecture, has been applied to it, as the capacity to transcend the mere quantitative datum and translate it into an emotional “*standard*”. Fig 1



PAESTUM, 600-550 a.C.

Il Partenone è un prodotto di selezione applicato a uno standard stabilito. Da un secolo, ormai, il tempio greco era organizzato in tutti i suoi elementi.

Stabilito lo standard, si scatena il gioco della concorrenza immediata e violenta: un vero match. Per vincere bisogna far meglio



Cliche Albert Morance

PARTHENON, 447-434 a.C.

dell'avversario, nell'insieme e in tutti i particolari. Da qui viene lo studio accurato delle parti. Progresso.

Lo standard è una necessità di ordine portato nel lavoro dell'uomo.

Lo standard viene stabilito a partire da basi certe non in modo arbitrario, con la sicurezza delle cose motivate e con una logica controllata dall'analisi e dalla sperimentazione.



Cliche della Via Automobile

HUMBERT, 1907



DEYAG, Grand Sport 1921

In these terms Le Corbusier anticipates some central issues of his theory. Machine logic and the principles that inform it on the level of the organization of work, technologies and quality of materials, is an a priori that illuminates the standard and translates it into a preliminary configuration, which architecture will raise permanently to the rank of form. By respecting this sequence we can understand Le Corbusier's production and the definition of the house as a “*machine for living in*”. The type is deprived of its role and reduced to a pure “*functional program*” or standard.

Architecture is created beyond construction; there is nothing practical about it. The language of architecture is a visual language that is based on the definition of a plan, volumes, and their reciprocal correspondence and in accordance with harmonic relationships that the eye is capable of grasping. It is in fact the gaze that measures space, and nothing is comprehensible that the eye is unable to perceive. The lesson of Camillo Sitte is clearly present in Le Corbusier. But the pupil surpassed his mentor with regard to the human sensory and perceptual capacities to

Fig 1. The Parthenon and the industrial object. The former is interpreted in *Verse une architecture* as a work of selection based on an already established and stable standard. The standard has been reached after a long lasting process of trials and errors. Le Corbusier's artisanal background still prevails. However the author argues the new standard of the machine is grounded on a definite basis and not on arbitrary values. Le Corbusier's sudden *détournement*: scientism automatically translate phenomena into concepts and concepts into products.

which he related the logic of architectural language. Rome is taken as the city in which, from antiquity to the Renaissance, the most significant works of architecture have successively embodied those plastic values invoked by Le Corbusier. It is the city where architectural forms and their relations have become intelligible at a single glance.

If the eye measures space, the materials on which it has to work are walls, light and shade. The need to control its effects will entail recourse to geometry, but the harmonic whole presupposes that every component should be perceptually related to the others in a significant sequence. For this reason the plan, organized on the basis of visual axes, is the fundamental act in architecture. The order will therefore be the hierarchy of the axes, and since each axis leads to an end, whether it is a wall, a zone of light and/or shadow, the order will be defined as a hierarchy of objectives, of purposes. Le Corbusier therefore rejects the value of the type as an element in the organization of space, because his is an attempt to completely refound the architectural space through a grammar of vision. The architectural space is the space of vision which interacts with time in the perception of motion. Space and time become integral parts of our understanding of architectural space only if man is regarded as the driving force of space. The architectural space is a text, a silent object, which begins to unfold only through the experience/reading of the observer. The illusion of plans, against which Le Corbusier shot his arrows, stems from the recognition of periods, like the Baroque and late Baroque, which organized spaces from a bird's eye view and not in proportion to the height of the average man, so reducing his significance to marks made on paper that prove to be fragmentary and insignificant in reality.

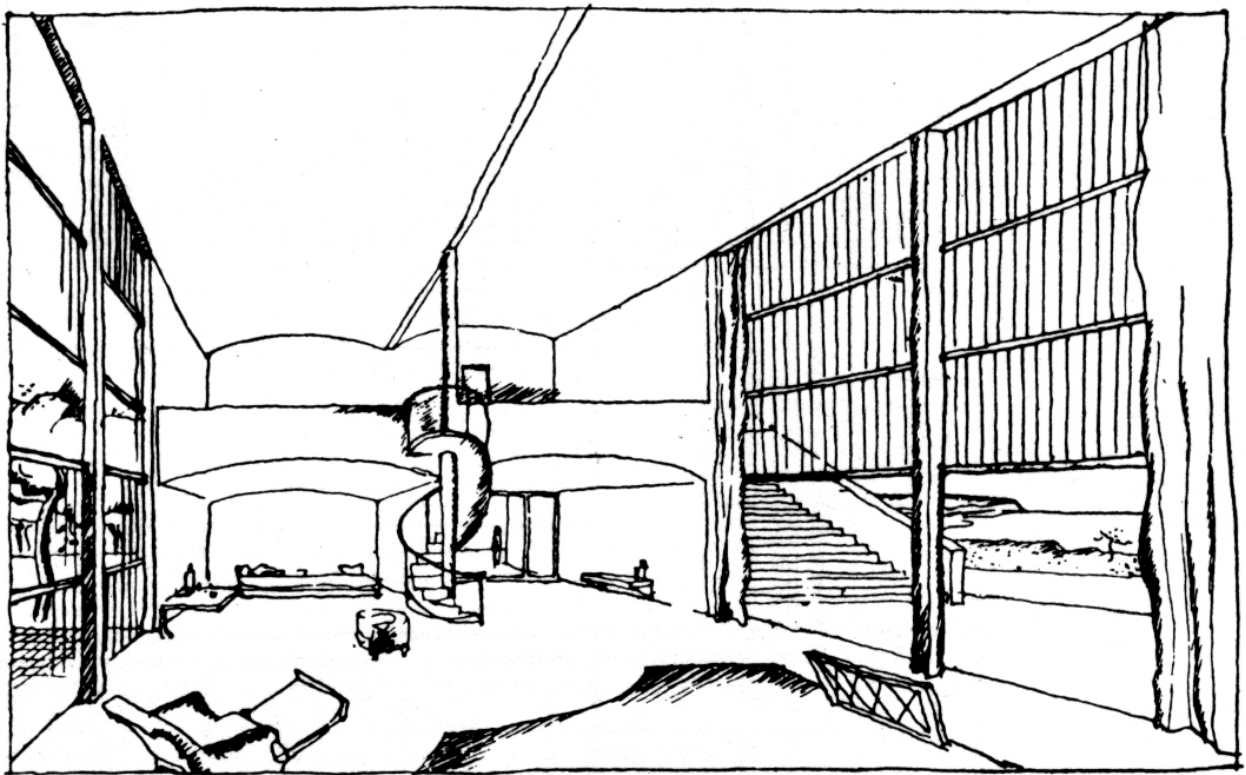
Although Le Corbusier reduced architecture to a plastic language he was a keen observer of the processes of industrialization that had by then replaced the traditional manufacturing methods in all sectors. His fascination with steamships, aircraft and cars stemmed above all from the fact that they were serial products, the result of a process of gradual selection of a given problem until the identification of a necessary standard, made possible by principles of industrial production not because of their uniqueness but rather their repetitiveness. The series was therefore a value, as it compelled recognition of the relevant factors within a problem and nothing more. The series makes calculation, accuracy and precision into an art, the art of repetition. The logic of Taylorism applied to the construction industry and the new materials suggests new technologies, capable of adapting to the world the principles of construction of optimization of performance required by industrial production. Above all it involves dividing a complex problem into a series of simpler problems so as to solve them separately, independently, before recovering the unity of the whole when production is complete.

The breakdown of the whole into its component parts and the study of the conditions that would best solve simple individual problems meant that production was specialized strongly by components, each with a specific role in the whole. Therefore the series entailed a high degree of specialization, a rigid hierarchy of roles and the resultant forms that had to comply with them. Production was no longer an integrated

process. Le Corbusier intended to find an answer to the problem of the mass production of housing. As with Gropius, this did not mean producing the house as a whole as if it were an industrial object, but breaking it down into component parts homogeneous in performance that could be subjected to a process of standardization, or selection, so as to make the functional requirements to be achieved comply with the principles of industrial production.

This meant first of all verifying the greatest number of operations that could be carried out by industry, so reducing the need for labour on the building site to a minimum. This made it was necessary to prefabricate the building components, not the house, and reduce the work on the building site to assembly, which does not require skilled labour. Even the organization of the work had changed. Humanity's tools have always ensured direct control over what he makes, while machinery tends to escape from the worker's control. The worker himself now sees only a part of the task, having no overview of the work in its development, as the artisan previously had. But mass producing housing entails not just a revolution in the conception of work, on and off the building site, or subjecting new technologies to optimization of performance in relation to the needs of industry. It suggests a new way of understanding architecture itself. The house in its entirety is subjected to a similar breakdown into simple, homogeneous functions, for which an appropriate constructional solution is immediately sought in terms of industrial production. *Fig 2*

Fig 2. A villas facing onto the sea intended as an industrial product. It interprets the *Maison Citrohan* standard. The standard itself is one of the industrialization process developments. Who translate the process of industrialization, based on trials and errors, into the standard? Le Corbusier with pride says the architect does it. What are his devices? We say the language. All the standard Le Corbusier defines implies a Language, his Five Points of Architecture and the relative variations.



Sala della villa in riva al mare. I pali a sezione costante, le volte piatte dei soffitti, gli elementi standard delle finestre, i pieni e i vuoti costituiscono gli elementi architettonici della costruzione

Also for housing, therefore, mass production involves an elevated specialization and distinction of roles. Hence the structure, the mechanisms of distribution and the plastic-volumetric articulation of spaces, which in traditional buildings had always been characterized by a high degree of reciprocal integration, were broken down and rendered independent. The structure had only the function of transferring the loads to the foundations, the routes of connecting useful spaces in architecturally controlled sequences, the volumes of defining space as an articulation of walls that are illuminated and in shadow, opaque and transparent, continuous and discontinuous. It undermined one of the principles on which architecture had always been based, whether noble or vernacular: the reciprocal combination of the parts in sharing the burden of the whole. It is important to emphasize that this revolution did not concern specifically a typology of building, although the experience of industrial architecture had undoubtedly been a “*writing*” capable of constructing new categories of thought, even when the times were not sufficiently mature. The revolution affected every aspect of architecture, hence it was a transformation of its language. Le Corbusier was aware of this fact, yet his emphasis on architecture as a plastic language at times seeks to conceal the risks inherent in the new organization of space, hence the emphasis on the reasons of geometry, order and proportions, as these would be conceptions common to all ages. In other words, regulatory layouts would guarantee that a revolution, in itself simply constructional, could be translated into poetry. Instead Le Corbusier’s projects are more honest, more direct, than his writings suggest, being often too bombastic in the choice of vocabulary and syntax. The Domino House, the Citrohan House, the Monol House and the Immeuble-villas in their didacticism bore witness to a revolution under way which seemed unstoppable in its consequences and which was implicit in all the projects not written but only suggested. The construction processes variously adopted made it possible to operate to arrange the surfaces with great freedom, and thus seek a real architecture made up of a magnificent interplay of volumes struck by light. Each work conceived or built in fact revealed one aspect, and was therefore a partial contribution. Only the whole, in the variety of responses it could offer to a given problem, redeemed the uniformity of detail required by industrial methods of production. The language of the machine was not synonymous with uniformity; on the contrary, it was the best guarantee against the levelling down of housing to a mere standard.

The Athens Charter, a true manifesto of the Modern Movement, was drafted at the Fourth International Congress of Modern Architecture in Athens, and can be considered a collective work, though it was published anonymously in 1943 by Le Corbusier.

In this version it consists of three parts: General Observations, The Current State of the City, Criticisms and Remedies, Conclusions. The second part, the thematic core of its structure, is divided into chapters. For each of these the text first develops the observations, followed by matters which, in the opinion of the authors, need to be guaranteed by

*The Athens Charter,
Le Corbusier (ed.), 1943*

an urbanism which can be regarded legitimately modern.

The General Observations all turn on the theme of The City and its Region. It recognizes the conventional, and therefore arbitrary, value of the administrative boundaries of cities: "*An urban agglomeration forms the vital nucleus of a geographical extension whose limits are determined only by the zone of influence of another agglomeration.*"⁽²⁾ It is therefore essential to recover the regional dimension as the effective frame of reference for all urban planning, the region being identified with the city's economic space. It is essential to balance the demands of individual freedom with the constraints of civilized life, the only kind able to ensure the intellectual growth of the individual. But the region does not constitute only the economic support for an urban core. "*Plains, hills, and mountains likewise intermediate, to shape a sensibility and to give rise to a mentality.*"⁽³⁾ The environment, in a deterministic vision, subtly determines the mentality of its inhabitants. If recognition is given to the impact of the region, understood as the natural setting, on the character of the local economy, the possibility is still accepted that these values can be challenged at any time by unforeseen events. The same can be said of the political system. Presumed "*natural*" circumstances can be subverted by what, in its unplanned character, may inadvertently happen. The reasons leading to the construction of the city are among the most diverse, but one thing is definitely certain: the age of "*machinism*" has drastically changed the system of the measure of the city, its scale of ratios: man's steps have been replaced by the speed of motor vehicles. This new condition, not predictable in principle, has to be taken into account. There are numerous reasons for urban change. Among the many it is interesting to note the recognition of the role played by existing structures: "*The simplest buildings have taken on an eternal value insofar as they symbolize the collective soul; they are the armature of a tradition which, without meaning to limit the magnitude of future progress, conditions the formation of the individual just as climate, geographical region, race, and custom do.*"⁽⁴⁾ The use of the machine has altered ancient balances in the use of the city, causing immense hardships due to urban overcrowding.

In the chapter on The Prevailing Conditions of Cities the principal problem is identified as housing. In this respect, it points out that urban population lives in conditions of excessive density. Because of this problem, the standard of quality housing is drastically reduced, causing conditions of permanent disease. The situation in housing can no longer be tolerated: "*A butcher would be condemned for the sale of rotten meat, but the building codes allow rotten dwellings to be forced on the poor.*"⁽⁵⁾ The lack of green areas is also dramatic. The city is growing continuously and consuming all the available open areas, an indispensable physiological and psychological resource. The city must return to conditions of existence which the Charter describes as "*natural*": sun, space and trees are necessary "*materials*". Light has a hygienic function in relation to living environments. Clean air must be guaranteed. Green areas should be made widely available. Sun, greenery and open spaces should become the new standards by which to judge the modern city, and as such they were recognized by the fourth CIAM. The city also reflects a total disregard for the relationship

2. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 45

3. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 46

4. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 52

5. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 55

between residential habitat and the quality of the natural environment in which it is placed. The most valuable locations are occupied by luxury housing. It is zoning that guarantees the association of a given model of housing with a specific part of the city, and it legitimizes imbalances and inequalities. The new building regulations should be capable of providing every family, regardless of income, with adequate conditions of light and space. Housing has to be moved away from roads, where the presence of vehicles are a continuous source of noise, dust and harmful gases. The roads, once freed from the cumbersome presence of the buildings aligned on them, can be appropriately dimensioned depending on use. The alignment of buildings on roads, which has always constituted the policy of exploitation of urban land under the traditional city block model, creates very unequal conditions of ventilation and lighting. For a single street-front that has, in theory, optimal conditions, there are at least three that are in a critical situation. But housing is not the only problem of the contemporary city. It needs collective institutions which constitute its natural extension. Schools are generally poorly distributed in the organization of the city and fail to provide any form of safety for children. When one actually examines the status of the city one realizes that its reclamation is made difficult by the conditions of the urban periphery: *"The age of machinism is characterized by the suburb, a stretch of ground with no particular plan where all the dregs of society are dumped, where all the risky ventures are tried out."*(6) This form of uncontrolled growth, which historically grew up beyond the administrative boundaries of the cities, with the beginning of industrial development without any kind of planning and control, will seriously compromise the potential for development of the contemporary city. Attempts have been made to transform the suburbs into a *"garden city"*, absorbing them into the administrative territory of the city, retrospectively offering very costly infrastructural facilities which are a heavy burden on the public administration in areas that were originally developed in complete autonomy. Instead it is necessary to prevent the growth of the suburbs so as to ensure orderly development. The recovery of these suburbs, once abandoned to the forces of chance, is a cost that the government is unable to afford.

In this situation there are some basic needs which have to be met. The machinist era has dealt a blow to the traditional model of the city. Housing is a priority and it must be guaranteed the best zones in the city. For reasons of hygiene, many neighbourhoods will have to be demolished, but others should be respected for their historical value. The issue of density should become the subject of studies and stringent regulations. Sunlight has a recognized therapeutic function. All accommodation must benefit from it. To achieve this, planning will ensure that at the winter solstice the sun penetrates into every home for at least two hours a day. Routes for pedestrians and vehicles must be clearly distinguished and buildings should not face directly onto the street. Housing should be mainly built upwards, exploiting the opportunities offered by steel and concrete construction technologies. The number of floors will be determined on the basis of specific circumstances. Building height will ensure the recovery of the *"natural"* conditions of dwelling: open views, pure air secured by setting housing

6. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 60

at a distance from roads, and more light. But tall buildings will have to be spaced at appropriate distances from one another, to avoid the inconvenience of shadows, hence the exact opposite of what was actually being done in America. The master plan will have the responsibility for determining the density of housing sufficient to ensure a proper allocation of services and a balanced relationship between built and green areas. It is interesting to note the strictly sequential process through which the Charter of Athens establishes the criteria for the redefinition of the city. Having recognized that the high-rise building is the type that best guarantees compliance with the parameters of the organization of modern housing – air, light and green areas – in relation to travelling times judged to be acceptable, it follows that buildings should be suitably isolated so as not to interfere with each other. The void thus acquires the precise significance of the “*critical distance*”, meaning the passive registering of a relatively unpassable boundary, which guarantees non-overlapping radii of influence. As an institutionalized “*clearance zone*” separating the solids, it can be used for the needs of leisure and circulation. In the priority given to the problem of housing, considered as the cornerstone of modern urban planning, we can recognize the echo of Cerda’s reflections in his *General Theory of Urbanization*.

The second issue addressed is Leisure. The analysis of thirty-three case studies set in Athens confirmed that the reserves of green spaces are gradually diminishing. When open spaces are available, they are located on the outskirts of the city, thus becoming difficult of access by the residents, or else they are the exclusive preserve of luxury residential neighbourhoods. Again the reference to the studies by Eugene Hénard of the European capitals is evident. The areas freed by a thoughtful planning policy, as expressed in the Charter of Athens, could be directed towards well-earned rest amid nature. Green areas have to be analysed not only in relation to their extension, but also their use. Thus it is proposed that they should be available for use daily, weekly and annually. For this reason they need to be provided close to housing, in the region and in the countryside. The need to reach these areas entail the provision of a highly efficient transport system.

Also with regard to leisure, in the light of the analysis conducted, certain results must be required. Firstly, a balanced calculation of the density of housing: “*The population density, for instance, or the percentage of open area and built-up area may be varied, depending on functions, locales, and climates.*”⁽⁷⁾ Agglomerations will tend to be transformed into green areas. The green areas will not be subdivided, but must constitute great lungs for public use. Subdivision will be reserved for allotments for raising vegetables. Instead of unhealthy slums parks will be built. Moreover, the green areas will be occupied by facilities for collective use. They will constitute an extension of the home. The means of mechanical transport will make it possible to reach the woods and rivers every week. They should also ensure diverse recreational areas, relying on the efficiency of transport systems.

The third theme is work. Machinism has broken up the ancient equilibrium of integration between home and work. Industry needs efficient facilities for the supply of raw materials and disposal of waste.

7. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 70

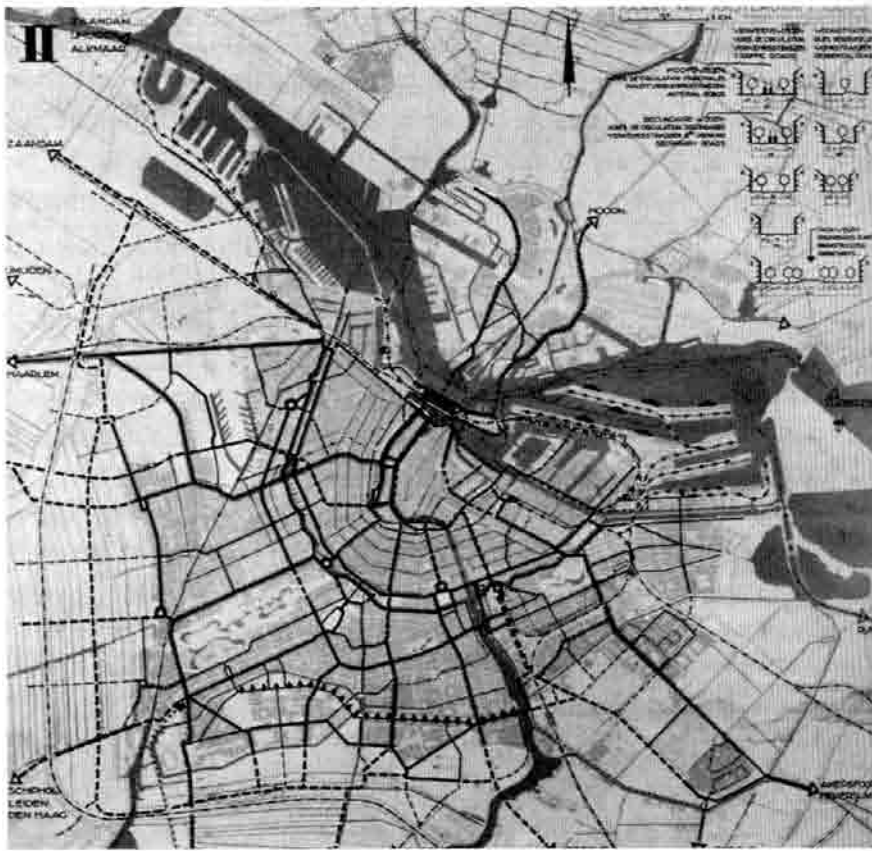
This initially justified the location of factories close to railways and rivers and near the residential areas of towns. This has led to pollution. Their removal to peripheral locations has forced workers to commute daily. This is a serious problem for the functioning of the city. When the cities were no longer able to accommodate within their traditional boundaries the crowds of new town-dwellers who had moved from the countryside, whole residential suburbs had to be built solely for the industrial workforce. This created another form of commuting that was translated into a source of stress, added to that work. Thus the cost of transport has placed a very high burden on the public. The distribution of work in the territory must be programmed. In addition to the increase of industrial activities it results in a corresponding demand for offices. Concentrating these activities can help to optimize administrative costs.

With regard to this point, we have to demand that manufacturing activities are distributed in a linear fashion along the major transit routes for raw materials. The residential areas will be laid out parallel with them, but separated by adequate green areas. This will make it possible to reconstruct the original balance between home and work, which has been destroyed by machine civilization. It will be possible for housing to take the form of individual homes with gardens, with small rural activities and collective buildings. New transport links will be created, adapted to the new methods of travel. Industrial activities will be relocated outside the city but craft activities will remain in the densely built up urban area. Business centres will be located at the confluence of the major transport axes, which will serve industries, craft producers, hotels and stations.

The fourth theme is Circulation. If we except newly founded cities, based on regular infrastructure networks with connections to the surrounding region, many cities have arisen spontaneously, or without any clear overall plan, at the intersections of major routes across the country. Along these roads historically cluster the first houses, from which also develop the secondary arteries. When the city was fortified, there was a limit to its scope for expansion, and it became imperative to aim at maximum density. This led to the creation of "*city blocks*" which received light from the streets and courtyards. When the city walls were demolished, the streets were gradually extended with tree-lined avenues, though retaining the same principle of city blocks. The road network that supports this growth is no longer suitable for motorized systems. The road sections are not proportioned to the new means of transport and overcrowding becomes dangerous for pedestrians and cars. The distances between successive intersections are too close and thus they become dangerous to mechanized transport. They should be set at intervals of between 200 and 400 metres. Widening the existing road sections for major arteries is not always convenient. To this consideration should be added the fact that every activity requires a specific location. Of these, processional routes should not be used by mechanized traffic. In addition it is essential to review the network of rail transport, because their routes impede the natural expansion of the city. *Fig 3*



Fig 3. The Dutch delegation proposal for Amsterdam, IV CIAM. Two of the three standard table presented at the exhibition. The architecture of the city is not anymore unfolding the societal driving force power into the materiality of the built environment. This role is now claimed by the Masterplan. Strictly functional zoning and circulation system are considered sufficient aspect. While architecture, beyond the slogan, is still understandable in terms of precise categories and related catalogue, urbanism progressively derives to abstraction and generality. The city blurs into life partitioning (zoning) and flows (circulation). The Diagram supersedes the Structure.



To this purpose, it is essential for each location to be assigned a specific function and that, precise physical characteristics should be defined in relation to this function. The subdivision of paths according to their functional nature should introduce an efficient and rational use of the

infrastructural network. To facilitate the use of the network, it is also essential to reduce the number of stops at intersections by introducing changes of level. The distinction between cars and pedestrians is essential. Streets should also be differentiated and mutually distinct on the basis of the degree of accessibility. Roads of pleasure should also be provided which can be used indifferently by pedestrians and cars travelling at reduced speeds. The roads there will also be lined at appropriate points with screens of vegetation.

The distinction of routes in relation to their uses and the level of relative accessibility effectively expresses the sense of the process of rationalization applied to the component systems of the city. Each of them is reduced to its basic materials or structures; each elementary component structure is characterized with respect to a preferred and totalizing objective, through an analytical process pushed to an extreme. Having defined the form of each component structure as appropriate to its function, and specified the corresponding basic materials, all the parts are then reassembled into an urban “*organism*” so as optimize its functioning.

The constituent parts of the “*urban machine*” are thus subjected to a process of extreme specialization and connected to one another through a relation of exclusion and association in accordance with complementary functions. Inevitably the process of their articulation is additive in nature, but each addendum has a specific function and role within the general assemblage.

A chapter apart deals with The Historic Heritage of Cities. The historic heritage should be preserved. However: “*The whole of the past is not, by definition, entitled to last forever; it is advisable to choose wisely that which must be respected.*”⁽⁸⁾ Repeated elements may be partially demolished. In exceptional cases it may even be decided to transfer a monument elsewhere. In no case should a love of the picturesque impair the salubriousness of housing. In some cases the exceptional beauty of a town may lead to the decision to move traffic away from it. In other circumstances, the monument could be freed from the presence of slums, restoring appropriate green areas around it. In all cases it is unacceptable to build in historic city centres by resorting to past styles. One must always draw on the resources of the present time: “*To imitate the past slavishly is to condemn ourselves to delusion, to institute the ‘false’ as a principle, since the working conditions of former times cannot be recreated and since the application of modern techniques to an outdated ideal can never lead to anything but a simulacrum devoid of all vitality.*”⁽⁹⁾ The Conclusions explicitly recognize that all the thirty-three cases presented at the fourth CIAM testify to the damage done to traditional cities by machinism. In addition, it is clear that cities are the result of a variety of private initiatives which are not embedded in any form of planning. This situation entails a new role for the public administration. Technicians will have to guide the country in the systematic transformation of its infrastructure. It is necessary to strike a new balance between individual freedom and the collective interest. Man must become the measure of all things.

To sum up the contents of the Athens Charter, the fundamental functions of urban planning are housing, work, entertainment and

8. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 87

9. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], pp. 89-90

travel. The urbanism of the nineteenth century was only interested in the problem of traffic and the laying out of roads within an essentially traditional aggregate. The new planning objectives become those of ensuring healthy housing for all, defining comfortable and natural workplaces, guaranteeing a proper allocation of services so as to enable the inhabitants to make best use of their leisure time and have an efficient communications network. Urban master plans must be given the role of instruments capable of maximizing the potential of each specific function: *"Each key function will have its own autonomy, based on circumstances arising out of climate, topography, and local customs."*⁽¹⁰⁾ The horizontal development of the city contradicts the principle of organization of human activities in relation to daily rhythms, because the distances between the constituent parts of the city become excessive. Housing must be placed at the centre of attention and the solutions to all other issues should be subordinated to its problems. The form of the city itself has to be rethought in the light of the freedom guaranteed by the car.

Zoning should be revised on the basis of the new criteria or of the new functions and the circulation should have a supplementary role in relation to the other systems that constitute the urban organism. The various functions should be concentrated primarily in volumes with a vertical development. Only in this way will it be possible to free the land necessary to ensure the freedom of movement required by a machine civilization. The boundaries of urban agglomerations will be determined according to the radius of influence of the economy. For this reason every city will have to be rethought in relation to its region. The city will never again be the product of forces acting outside all control: *"The city will take on the character of an enterprise that has been carefully studied in advance and subjected to the rigor of an overall plan."*⁽¹¹⁾ It will be the law that establishes the characteristics of the urban master plan. The organic metaphor is capable of effectively explaining the relationship that exists between the different component systems and their parts: *"It will be a true biological creation comprising clearly defined organs capable of fulfilling their vital functions to perfection."*⁽¹²⁾ In this scenario, man should be the unit of measure for every choice and be capable of guaranteeing the unity of the manifold manifestations of the machinist society: *"If the cell is the primordial biological element, then the home, that is to say the family shelter, constitutes the social cell."*⁽¹³⁾ The home thus comes to constitute the essential core of urban planning. To ensure a good relation with services, we need to organize housing as *"home units"* of sufficient size, seeking to integrate housing with other functions and exploiting the potential offered by new technologies.

The role of the Public Administration will be critical in the management of space, as well as that of a community capable of understanding the significance of what is being done, the value of the innovative choices being made. In the end everything will be controlled by architecture. The tasks facing society are very challenging because of the complexity of the works and the excessive subdivision of property ownership, so creating an obstacle to the effective implementation of that same program. A crucial factor, in this respect, is the question of expropriation. It should be possible to dispose of land on the basis of its fair value,

10. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 97.

11. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 99.

12. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 101.

13. Le Corbusier, *The Athens Charter*, Grossman, New York 1973 [1943], p. 101.

estimated before the start of construction projects, so as to avoid the phenomenon of harmful speculative development. For this reason individual rights must be clearly subordinated to collective rights.

The text is presented in the form of a collection of essays written over a period of thirty years, which the author still considers relevant to the debate that developed in the 1950s. The common denominator is the desire to overcome the isolation to which the artist was progressively relegated, including in this definition the professional figures of the architect and engineer, with the transition from the old modes of organization of work in the pre-industrial period, and before the emergence of the new criteria. The idea of “*art for art’s sake*”, characteristic of artistic commitment in the late nineteenth and early twentieth centuries, revealed, according to Gropius, the artist’s inability to make any impression on the new society and the deliberate decision to remain confined within its own domain questioning itself on the reasons for its own actions. Although this exercise may have been partially beneficial, as a reflection on the problems of composition, regardless of the possible reasons for the undertaking, it is time that the artist and the architect again formed part of the processes of production and the organization of reality. In this respect it is necessary to set up a common working method by which an individual can contribute to the general issues of industrial society.

Industrial society is characterized in every sector by increased specialization of roles and functions. While this is the result of an atomization of the work promoted by the application of principles of natural science to the humanities, every creative act, as a point of synthesis, must aim at restoring the lost unity. It is therefore the responsibility of the architect to undertake the role of coordinator of powers among the most diverse, so that they can converge in a single order. The new means of production do not guarantee progress unless they are guided by a strong idea. Individual sectors cannot achieve ambitious targets without coordination. To accomplish this we have to invest resources in the direction of research and teaching so as to train a new professional figure. This figure will have to be educated in the new principles of production, through a learning experience that will bring him into contact with the multiplicity of problems facing industrial society. Housing, and more generally the construction industry, will have to offer projects for industrial production just like the tools that have now saturated the market, responding to the new needs of society by supplanting the previous logic of industrial production. This justifies Gropius’s unfavourable opinion of the Arts and Crafts movement, which is accused of applying preconceived ideas to industrial production. The new principles of composition will have to arise from industrial production. Craft work as compared to industrial production undoubtedly had many advantages, including the ability to ensure a comprehensive control of the work, compared with a marked division of labour. The craftsmen of the past, who controlled all stages of work, must now become conceptually responsible for the work of others.

Integrated architecture,
Walter Gropius, 1955

The value of teaching is essential, and Gropius's commitment to the Bauhaus was total. The curriculum of studies envisaged a preliminary course in which students learned the art of composing, which had necessarily to be followed by a period of work experience in industry. A preliminary was the need to get rid of received ideas in order to observe the new world without any kinds of preconceptions. Hence, in learning composition any reference to history was explicitly banned, and the focus was placed on mechanisms that were universal - because related to subconscious reactions and perceptions in relation to light, scale, space, form and colour. During the period of work training the student become familiar with the quality of materials and new production techniques. The ultimate goal was the creation of prototypes for mass production. In this logic the idea of the type was closely linked to that of the standard, and was generally used to distinguish the essential aspects of the problem from those that were accidental, the necessary from the superfluous, in a perspective of mass production.

The insistence with which Gropius returned to composition and the mechanisms of vision and its universal principles was justified in the face of continuing criticism of received ideas, those considered responsible for having inhibited primary perceptual abilities, and common to all ages, which were the basis of the recognition of the work of art. The "*grammar of seeing*", being a universal language, became the prerequisite for all the experiments with new techniques, the common equipment of both students and teachers. A theoretical training alone cannot sustain students in the arduous undertaking they face. Similarly, design is not sufficient to develop a sense of space, and above all the conquest of movement by modernity. It is also essential to confront the problems of three-dimensional composition.

Reflected in Gropius's words is the conviction that the new technologies will make it possible to conceive new spaces, unless the old principles are applied to them. It is for this reason that new buildings have to be invented and that history should be taught only in the third year of the course. The importance Gropius attributes to teamwork is also manifested in the idea of the type which progressively emerges: the integration of the best contributions that many individuals have gradually made to the resolution of a problem. Only in this way will the young designers be able to play an active part in the processes of the industrial production of building components and learn to compose with the resulting products.

Another key aspect of teamwork is that planning and execution should not be separate phases, but profoundly integrated within every work group.

The architect's role as the coordinator of a group of specialists in the construction sector has as its goal a social commitment: to furnish industrial society with effective tools in order to cope with the new needs. Social history is therefore considered an important prerequisite to understanding how the relations between individual and society have evolved over time and therefore recognizing the tasks lying ahead. Gropius's vision was of evolution under the aegis of progress, which successively traverses, in a linear progression that betrays a positivist influence, the tribal, patriarchal, individual and community stages

of organization. To each of these stages corresponds a clear social organization of roles and responsibilities and an equally clear form of law. Naturally each of the forms of social organization is also matched with a specific form of housing. Without wishing to enter into the specifics of each phase, it is clear that in transition from one phase to another there is a corresponding specialization of roles and a consequent and progressive delegation of functions to other figures that were previously carried out within individual households. The individual dimension, according to Gropius, is the one that should be associated with the organization of the industrial system, rendering even more mutually autonomous and independent the figures who constitute the earlier household, in particular through the emancipation of women from their previous work in the home. But the goal to which we must aspire is the community dimension, namely the definition of units for increased cooperation compared to the traditional family, as these will be better suited to the demands and the availability of low-income working families.

Gropius is convinced that in every age there coexist different interests, but the spirit of the age is revealed principally through one kind of expression rather than another. This means that in today's society, together with families of a traditional kind which require instruments suitable to certain social patterns, there exist others that aspire to the recognition of their role and a possible identification through a new form of housing. Collective housing, which provides various services and facilities for shared use, benefiting by economies of scale and so reducing the spaces of the home units to the minimum necessary for the recognisability of individuals, is this model. The *existenz minimum* was therefore created in response to a collectivization of services and recognition of that minimum degree of identification that he sees as necessary to be guaranteed in terms of space, air, light and heating. Seen in this perspective one understands why Gropius therefore maintains the importance of defining a room for each adult member of the family: the worker's accommodation is identified as a residual quota as compared to the dominant community dimension. "*Minimum subsistence*" cannot be defined in abstract terms, but must necessarily be commensurate with the characteristics of the context to which it belongs. Geography thus becomes a differentiating factor.

The problem of housing the working class thus becomes a central issue for the architect. As a new theme, it requires continuous experimentation; as a response to a limited disposable income, it cannot be dealt with by the parameters of a free market economy. The parameters must be not just economic but also sociological and psychological and seen as closely related factors. The rationality of the procedures of planning and construction should be commensurate with the integration of these issues.

For all these reasons Gropius distanced himself from the utopian aspiration of providing everyone with a detached house, which through the Garden City movement was a first response to the alienation of the industrial metropolis in the late nineteenth century. The contrast between the detached house and the apartment building was justified by the antithesis between town and country, which was part of the

dispute over the ideal form of housing. But industrial progress tended to reduce the contrast between the two. Undoubtedly the detached house has its advantages, but its cost makes it the prerogative of an elite class, of households of a traditional kind.

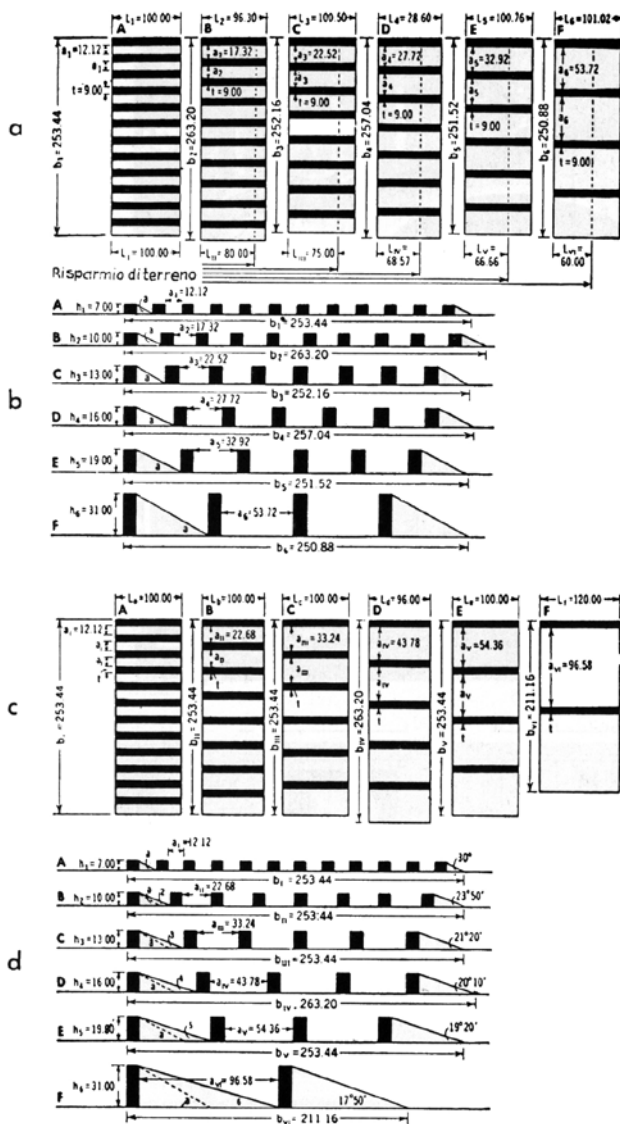
According to Gropius, the apartment building has received a bad reputation because of the experience of speculative building in the late nineteenth and early twentieth centuries, characterized by extreme living conditions, with high population density, poor lighting and ventilation, and disturbing hygienic conditions. The Garden City movement was a reaction against this overcrowding.

But this solution did not lend itself to a low-income population, as extensive developments had very high transportation costs, as demonstrated by recent studies. Los Angeles, built primarily with single family houses, fully confirmed this. Multi-storey buildings had the power to dramatically reduce the development of horizontal routes, offering advantages to the working class, and the ability to centralize shared services as far as possible in order to ensure women would enjoy greater independence. The number of floors must be commensurate with the ideal balance between construction costs and savings on infrastructure. The justified objections to the nineteenth-century city block could not be applied uncritically to tall buildings. In this regard we should recall Gropius's studies which sought to remedy disadvantages in the orientation of many buildings, especially those facing north and located at corners.

Starting from the need for least two hours of direct sunlight on all buildings under the conditions of the greatest inclination of the sun's rays throughout the year, he shows that we can reach this goal by organizing apartment buildings as linear blocks set parallel with each other and oriented on a north-south alignment, while ensuring that the distance between them is equal to one and a half times their height. The result of this arrangement is that a given area of building land possesses the same or a greater capacity for development. The space lying between one building and the next can be conveniently used for large expanses of shared green spaces. The aim was therefore is to decongest the city, rather than dissolving it through the construction of undifferentiated tracts of detached houses. Buildings of average height are considered useless because they would not guarantee the results obtained by integrating appropriately high-rise and low-rise housing into the design of cities. *Fig 4*

His thinking about new working-class housing led Gropius to redefine the characteristics of the higher levels of society, namely the new society that would have to establish the principles of the new community law. Gropius argued that the feeling of the community becomes perceptible only if its members are enabled to participate directly. In the metropolitan dimension this means that several levels of intermediate control have to be introduced between the individual and the state, so that the distance between individuals and the institutions is reduced considerably and fosters involvement. In this way the community should be well planned. The minimum residential community endowed with its own recognizable administrative unity will consist of a maximum of 5000-8000 inhabitants gravitating around an elementary school and

an adjoining civic centre. The next highest structure is the district, or the village in the rural context, which consists of 5-10 residential units with 25000-75000 inhabitants sharing a secondary school. The city will be a cluster of districts and villages gravitating around a complex set of common services. The city described by Gropius envisages clear zoning for different activities, transfers on foot within the residential units with a maximum walking distance between its farthest points of 10/15 minutes. Transfers within the city are based on motorized transport systems and should not exceed 30-40 minutes.



40. a, b, c, d. Diagramma che mostra lo sviluppo di un terreno rettangolare con file parallele di blocchi di appartamenti di differente altezza. Le condizioni per quanto riguarda l'aria, il sole, la veduta e la distanza dal blocco vicino, migliorano aumentando l'altezza in c e d. In a e b queste condizioni sono costanti ma, più alti sono gli edifici, minore è il terreno necessario per la stessa quantità di spazio abitativo

Fig 4. The diagram pre-empt the Structure, superseding the system of relation of the latter with the field of possibilities of the former. At the urban level, conceptualization is reduced to its extreme rationalization: a simple selection and combination of entities.

The creation of civic centres in the residential units, whose description closely resembles Le Corbusier's *unité d'habitation*, is intended to meet the need for a "community core" or a place in the new city that will replace the role played in the old city by the market places, squares and community gathering places in northern Europe. These centres, based on past examples, can easily be achieved by combining mutually different buildings in a relationship of harmony. Gropius believed that the construction of the new city should be pursued through the mass production of buildings. But that does not mean designing the whole house as if it were a single prefabricated tool. Gropius speaks of the

industrial production of components or standard units to be mounted dry on the construction site. In this way, through experimentation with standard criteria, it would prove possible to ensure that variety in unity of the architectural language that has always characterized the construction of the city at all times. The unified character of homes and neighbourhoods would be guaranteed by the forms of the components, determined by specific purposes and functions, and the rules of modular coordination. Thus it would also ensure a sufficient degree of freedom for national character in the constructions. The unification of building and prefabrication therefore become the medium- and long-term targets to bring the building industry to the level of machinery.

Gropius's social objective was to work with economies of scale in order to achieve the kind of progressive reduction of costs attained in a decade by the Ford Motor Company, through a policy that made the car an object accessible to everyone. The same objective – a home for all – was what Gropius aimed at. The machine metaphor is confirmed as one of the most effective images for conveying in the collective consciousness the idea of the home as a tool of everyday use, although this argument has been used by different authors with clearly recognizable acceptations. Gropius saw it as meaning the ability to resolve conflicts within industrial production by making housing a commodity that could be easily manufactured at highly competitive prices, precisely because it was recognized as a constituent unit of the emerging social organization. Of course this project was faced with the problem of the cost of land. To deal with this problem, since Gropius recognized that the objective of industry was always to make profits, and avoiding the idea of a state-owned industry, seen as a danger, the only solution was for the state itself to introduce a series of incentives and tax concessions for infrastructural projects in the territory and revise the local government regulations so as to promote the new ideas and experiments under way.

3.2.3) Projects and works

The building designed can be rightly considered a “*manifesto*” of Le Corbusier's poetic of the house as a “*machine for living in*”. It embodies the principles of Taylorism applied to the construction process and its products which are clearly expressed through linguistic choices and materials.

The site offers ideal conditions for building a villa secluded on all sides and open towards the surrounding panorama, thereby avoiding an unwanted confrontation with the environment that might have undermined the refined theorematic quality of the project. The language of the machine entailed a division of labour in homogeneous operations on elementary components, sequentially ordered, in accordance with an overall synergistic logic. *Fig 5*

The traditional typology of the building, designed as an integrated system of component “*functions*”, is undermined by negating the

*Villa Savoye, Poissy,
Le Corbusier, 1928–29*

supposed mutual collaboration between its structural, distributional and enveloping aspects. Each of these purposes/functions is rendered autonomous and resolved as a self-sufficient system through a process of decomposition and subsequent recomposition in accordance with the synergies within the system. So the decision to use a structural system of reinforced concrete pilotis and floor slabs led to the adoption of a load-bearing structure consisting of a three-dimensional grid of beams and pillars, so freeing the wall from its supporting function and reducing it to a pure screen, placed freely so as to perceptually control the sequence of spaces on the open floor. The distribution systems, stairs, ramps and corridors, could therefore be released from their subordination to the wall and be given the position and orientation that was most suitable to their nature as pure location.

Within each system, additional operations of specialization led to a more minute division of roles: the components of the division of the horizontal/vertical load are clearly emphasized in the overall composition; there are horizontal connections with corridors and vertical connections with ramps and stairs, depending on the priorities of the movements they subtend; the partitions range from the maximum degree of opacity (walls that have to screen the view and prevent access to the portal, which has to ensure both) to the window-wall which provides unobstructed perception of the exterior. *Fig 6*

Acceptance of machine logic can be recognized not only in the use of techniques and building components available on the market but by adopting the generative principles of the industrial process. As theorized by Le Corbusier, it is the light that has to ensure the perception of individual autonomous functional parts, linking them together through into a homogeneous whole through the geometry of the parts and the adoption of appropriate regulatory routes. This breakdown of the building systems into homogeneous functions and the degree of relative independence that derives from it contributes, in the abstract nature of the vocabulary used and its extreme morphological-syntactic sparseness, to unequivocally establish the semantic weight of each element, assisted by a tendency towards the annulment of the associative capacity peculiar to languages that are very rich in history. In this way, within each system so identified, the research into the axis of “*selection*” is reduced to the minimum terms (the vertical supports, for example, occur only in the form of pilotis with the same material treatment), just like the research into the axis of “*combination*” (remaining within the load-bearing function, it envisages only the pillar-beam correlation) and increases slightly passing from the distribution system to the plastic volumetric system. *Fig 7*

But there remains the clear purpose of achieving the maximum expressiveness by using the minimum number of elements. This is nothing to do with the hypertrophic emphasis with which the same theme was addressed by historicist eclecticism in the late nineteenth century. The evocative dimension of language makes few concessions in the window frames of the service parts, which immediately recall the model of industrial building. There prevails the recourse to a conceptual dimension, one shared with the logic of industrialism.

These assumptions make it possible to adopt the greatest freedom



Fig 5

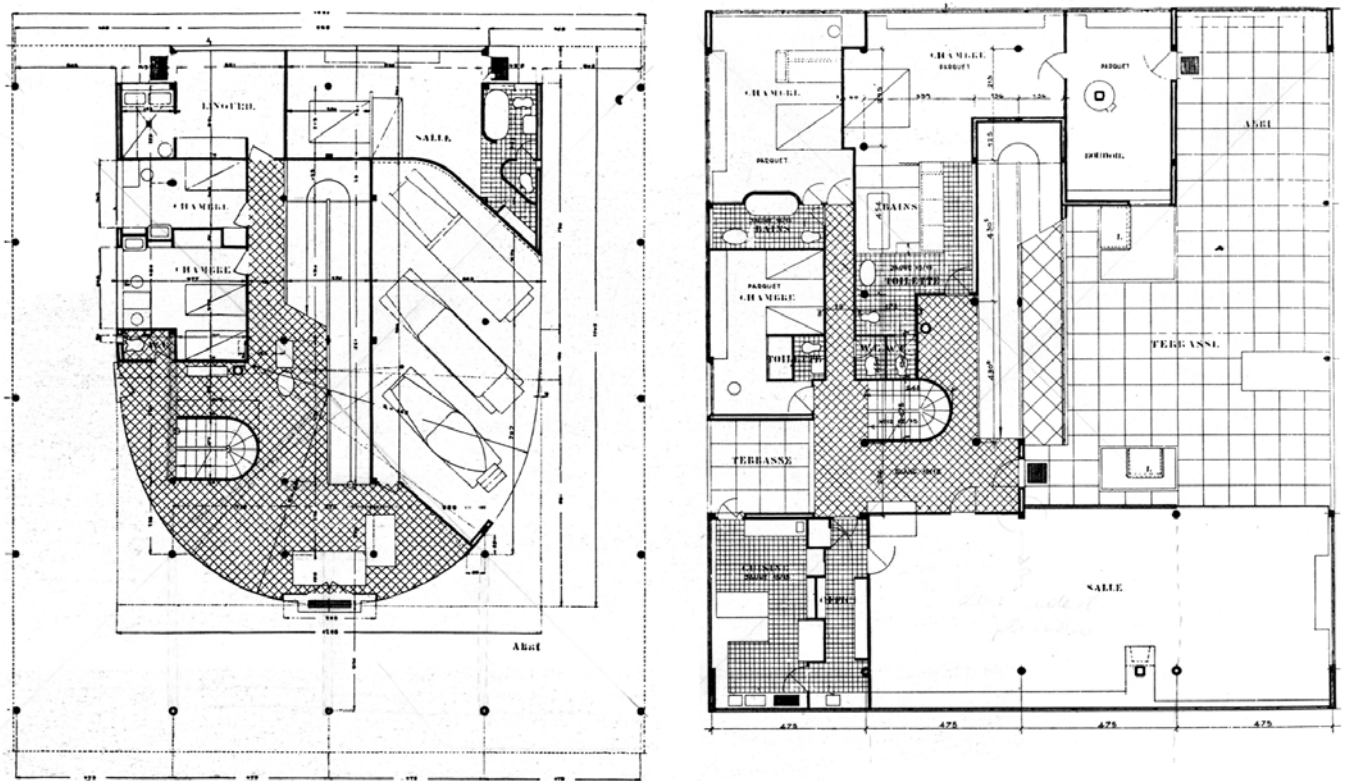


Fig 6

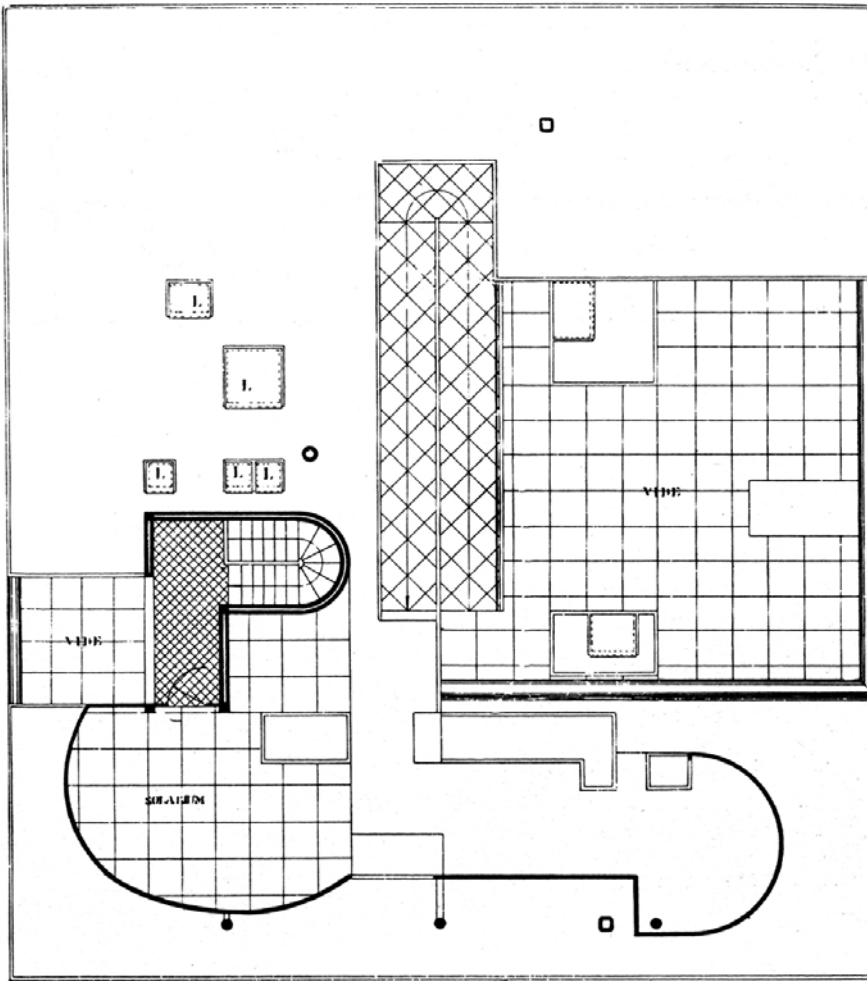


Fig 5. Ville Savoye, similarly to *La Rotonda*, acts as a *machine à voir*. On top of the hill, It polarizes the natural landscape and translates it into a sequence of static and dynamic pictorial frames. Simultaneously, the Five point of Architecture make possible the translation of the industrial process into a coherent product, the phenomenon into its conceptualization and the cultural project of Modernity into an aesthetic experience.

Fig 6. The adopted architectural language allows five different releases of the design to accomplish the client desires, confirming that life partitioning (the functional zoning) cannot operate the translation of the decision process into a complete proposal.

Fig 7. The architectural promenade through the villas end into a roof terrace, where sculptural volumes act as *object à réaction poétique*. Le Corbusier talent mitigates and smooth the transition from the natural ambivalence of sense to the industrial univocity of significance.

in dealing with the brief, the home of a wealthy insurance executive, by reducing the initial programme, which called for three separate dwelling levels, without appreciable effects on the architectural choices. The ground floor contains the service areas with the parking spaces and the chauffeur's accommodation. The first level contains the daytime quarters and sleeping quarters with the distinction between the spaces for the parents and those for their son, while the top floor is a large solarium. The great freedom sought in the organization of the volumes allows for all the movements necessary to meet the needs of the occupants, though within an enveloping surface which on this occasion is reduced for plastic reasons to a stereometric purity.

The “*expressive*” character of the building in reality enhances the conceptual dimension of the whole project, namely the desire to express the strength of the new language unequivocally. *Fig 8*

The outcome cannot be definitely regarded as a new type of house, meaning a consolidation of the spatial, distributive and enveloping relations. Le Corbusier seems to be telling us that the potential of the new language is endless and the society of the 1930s has only just embarked on a phase of experimentation that cannot yet search for safe havens. Villa Savoye is an expression of hope in the destiny of the machine civilization.



Fig 8

This building has a special significance in the poetic of Mies and makes a contribution of outstanding value to understanding the significance of modern architectural research. The topic lends itself to a critical reflection on the concept of “*duration*” in architecture. Firstly, because a pavilion is by its nature a temporary space, and secondly because this condition in fact negates the possibility of a “*codification*” of the theme or a typological interpretation of it.

The idea of defining an open spatial fluidity responded appropriately to the conditions of the project. At the same time it made it possible to experiment with innovative solutions because of the extreme flexibility of the program itself. These premises were therefore ideal for developing new prospects for research. *Fig 9*

The building constructed confirmed Mies’s desire to free himself from the traditional architectural language without sacrificing the “*evocative*” dimension of architecture. In other words, the work represents an attempt to give expression to an idea, or a new language of space, maintaining a minimum degree of correspondence with the legacy of the past.

The latter can be recognized in the determination to raise the building above the ground on an opaque travertine podium, in the preservation of the idea of the enclosure that surrounds the space clearly on at least three sides, in the wish to provide access to the podium not from the front but laterally, in the desire to identify, within the “*sacred*” enclosure, an archetypal structure consisting of eight cruciform pillars supporting the concrete slab forming the roof. All quotations, these, that allude

German Pavilion for the International Exposition, Barcelona, Mies Van Der Rohe, 1929



Fig 8. Life flows through the materiality of the architectural space as if it is attracted into a theatrical *mise en scene* of the latter plain rationality. The void clarity amplifies the resonance of the furniture as seducing objects disseminated on a smooth surface.

Fig 9. Mies has the chance to experiment De Stijl provocation: to blur art into life. Art should reduce itself to a minimum degree of constrains in order to immediately guide life into action. Life surfs through an essential system made of sliding planes. However, the author additionally demonstrates that the classical language, reduced to its basic principles, it is not contradicting the challenge of Modernity. In fact, both of them share the idea that what is defined as “*space*” belongs to the field of Rationality.

sufficiently clearly to the morphology of the classical temple, revisited with an unequivocally modern sensibility.

Yet, compared to that heritage, there emerges clearly the desire to build a space and not a sculptural event, and above all to renounce the “*classic*” integration between structural, distributive and plastic-volumetric components which the morphological choice adopted seems to presuppose. Hence the decomposition of the classical space into a modern spatiality does not happen in a too obvious fashion or stress with an excessive emphasis the subdivision of the building into functionally homogenous systems that are reciprocally specialized, as evident in the work of Le Corbusier.

The superseding is gradual, painless and arises out of the interference between the archetypality of the primary space of the pavilion, roofed over and virtually open on all sides, and the slabs of green marble, onyx and dark green glass which, revealing their belonging to different planes that are parallel and orthogonal to each other, design the space through an elementary and at the same time rigorous law of mutual slippages and virtual intersections. There no longer exists a qualitative difference between interior and exterior. The open spatiality, neoplastic in inspiration, has an explicitly performative character, as its development constructs a space that is subtracted from any codification – hence of any typological classification – and is translated into pure language. *Fig 10*

Performativity is therefore an essential characteristic of Mies’s proposal, because it shows how the architectural language does not pre-exist the built object, which would in that case come to constitute a simple product of it, namely one configuration among the infinite number conceivable, but instead in itself it becomes language, a continuous manifestation, infinite and unpredictable, of spatial sequences whose only limitation of a pragmatic nature is represented by its function.

Hence the enclosure of Mies’s pavilion presents itself, allusively, as the

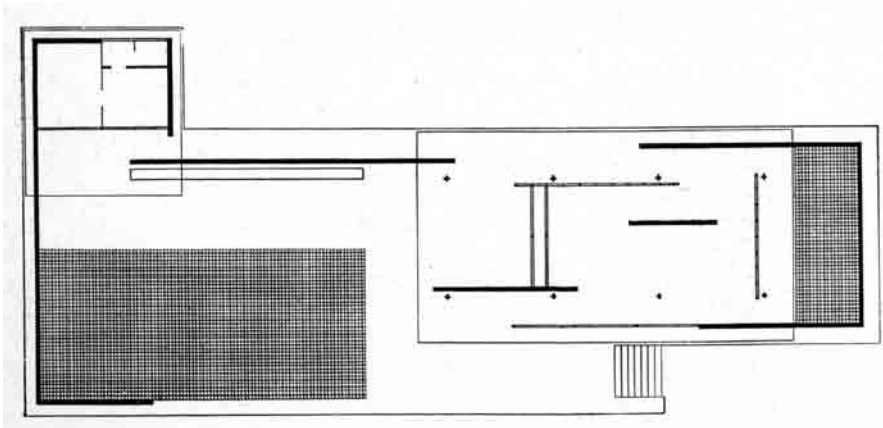


Fig 10. The absence of clear borders, the enclosure of classicism, is replaced by the limitation guaranteed by the thick podium. The essence of rationality requires it.

sole conventional element – being established a priori – compared with the modularity of the space, based on a few basic rules yet capable of achieving a variety of unpredictable outcomes. The character of abstraction of the pavilion, emphasized by the “*mechanical*” treatment of materials with a strong expressive value, brings out even more the theorematic value of the project. Only the presence of water and the figurative nude by Kolbe restore the sense of the passing of time within a pure construction of thought. *Fig 11*



Fig 11. The realized pavilion is a monument to the conditions under which the provocation of De Stijl is acceptable within the western architectural tradition. The used language is reduced to a logical partitioning of life. If art blurs into life architecture becomes a diagram of life itself. Beyond that minimum, there is nothing but the process.

Mies's work clearly expresses his wish to subordinate the use of technology and the general compositional choices to the construction of a thought of crystal clarity. This objective is perfectly consistent with the aspiration to a universal, or general, language one capable of abstracting from the conditions set induced by the program, from factors of a contextual and historical conjunctures. Thus we must not forget the highly symbolic significance of the choices made by the architect, especially in technology. From this point of view, Mies's work is the most coherent result of a research into language, capable

of revealing the potential of the new world. The very sense of the potential implies that character of generality, of totality, which absorbs all concrete manifestations into itself.

The Casa del Fascio has been the subject of frequent critical analyses which have demonstrated in various ways its intellectual and paradigmatic value within the experience of Italian Rationalism. Despite this, interpretative misunderstandings persist about its author's true intentions and the semantic qualities of the work, which help, in the implicit limitedness of the judgment, to bring out the unique aspects of the work: "*Terragni and others of his generation, cultivating the misunderstanding that the Fascist regime was socially progressive, set themselves the goal of supporting its operations, of creating its image, establishing new typologies, offering architectural types that could be easily repeated by the minor professionalism.*"⁽¹⁴⁾ It seems worth starting from these observations, and their obvious bias, to reflect on the value of the work itself and in relation to the culture of Italian and international Rationalism.

Admitting that with the Casa del Fascio Terragni intended to configure a new building type, one capable of effectively conveying the values of Fascist culture, amounts to arguing that the culture of the period immediately associated the significant form that results from a project with a conventional "*ritual*" significance that was easily recognizable, not only in its formal appearances, but also in the articulation of the spaces. Conversely, the absence of iconic components that could somehow guide the user towards the intended use of the building is confirmed by the very project of setting up a wall collage representing scenes of gatherings of workers under the watchful eye of the Duce, significantly placed on Piazza dell'Imperio, as if delegating to the language of the graphic work a semantic intentionality of which the object itself is programmatically devoid. *Fig 12, 13*

This hypothesis is confirmed by the different versions of the project drafted between 1928 and 1932, the date of the definitive assignment of the commission by the Fascist Federation. These versions, by contrast, reveal that Terragni's research into the theme of the Casa del Fascio, was conducted by evoking the image of the Palazzo, embodied in languages in period style. The abandonment of the original exercises indirectly confirms the freedom from any conventional typological solution.

The Casa del Fascio, in other words, deprives the type of its semantic component, and reduces it to an original significant form, available to express multiple functions and meanings. However Terragni remained aware that the building was adapted to the continuity of Como within the walls, behind the Duomo, in a position that, under the master plan, was to become the new political centre of the city and part of a complex comprising the Palazzo del Governo, the Casa della Milizia and the Palazzo della Economia Corporativa, arranged along the sides of Piazza dell'Impero. But historically Como was also a noble Roman colony facing onto the lake which, despite the far-reaching changes that had occurred over time, had successfully preserved the recognisability of the original, especially in the configuration of the street layouts and

*Casa del Fascio, Como,
Giuseppe Terragni, 1932-36*

14. Silvia Danesi and Luciano Patetta (ed.), *Il Razionalismo e l'architettura in Italia durante il Fascismo*, La Biennale di Venezia, 1976, p.131

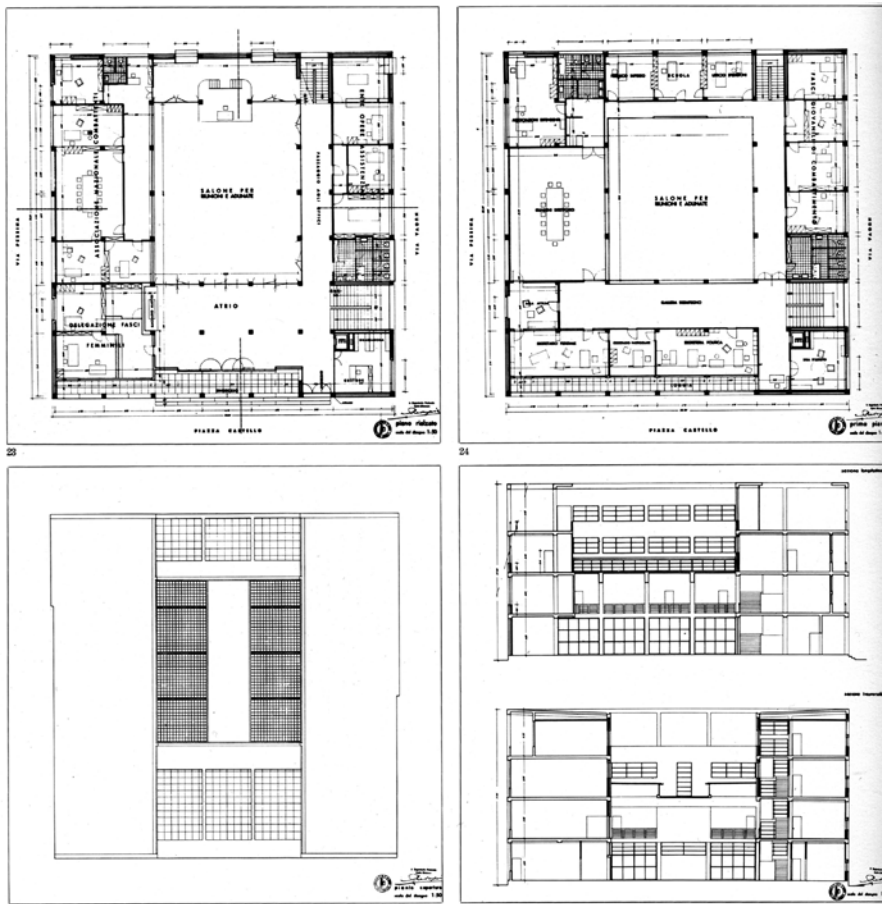


Fig 12. The courtyard type is an homage to the local tradition of the roman and medieval city. However, it is reduced to a plain rationality, consciously avoiding any concession to historicism.



Fig 13. The Casa del Fascio acts as a metaphysical entity within the historic context.

the permanence of the Roman *insulae*, created through processes of aggregation of the original houses laid out around courtyards or their subdivision between numbers of families.

Therefore, having freed the architectural object from any form of conventionality, of every fragment of iconicity, consumed through the proportions of the spaces and the relation between solids and voids, Terragni ascribes to it the value of a metaphor, never banally explicit, for the city block in Como and the homologous logic of the courtyard house. An allusive reference, this could only be appreciated by Terragni himself and recognized by someone who was familiar with the historic fabric of the city. Hence it is a work that rejects the conventional and formal semantics implicit in the type.

However, deprived of conventional iconicity, the Casa del Fascio is able to convey the allusive significance described above by emphasizing the role of the syntactic dimension. Peter Eisenman, who has studied Terragni's "text" in great depth, compared it to the work of Le Corbusier: *"The importance of Giuseppe Terragni's work, and particularly his Casa del Fascio in Como, lies in the fact that it suggests a similar variation, this time with the assertion of the dominion of syntactic duties over semantic duties, with the passage of the conventional and traditional notion of the relationship in the structure, in the technological sense, to its form."*¹⁵ Eisenman himself therefore brings out the way the responsibility of the significance of the work should be attributed to the syntactic dimension.

And in fact the syntax used by Terragni is profoundly classical and repeats a "measure" and a logic that is implicit in the processes of

15. Silvia Danesi and Luciano Patetta (ed.), *Il Razionalismo e l'architettura in Italia durante il Fascismo*, La Biennale di Venezia, 1976, p.131

formation of built-up areas of Roman origin. The structure is reduced to a pure three-dimensional, immaterial, organizing grid, enveloped in a volume, simply resting on the ground, which is exactly half of a perfect cube thirty-three meters square. Instead of structural isotropy, which would have suggested the use of identical modular bays and would have given the building an excessive theorematic abstraction, Terragni prefers a slight degree of hierarchization, elegant and of slenderly shaped finish, attributing to the bays a prevalent orientation with equality in the frontal development, ordering them orthogonally to the street fronts and suggesting a rotation of the floor slabs (without having to break the alignments) which begins on the representative front and ends at the rear. In this way the basic structural framework creates an elementary fabric that takes the Piazza del Impero as the principal front, with Via Pessina and Via Bianchi as the streets on its other frontages, and the side facing the service courtyard as its completion.

With this configuration the structure, devoid of any tectonic evidence or static responsibility, is reduced to an organizing grid compared to which the architect was able to “*measure*” the degree and method of compositional intervention. The syntax works by deductions from the volume, by “*paring away*” from the envelope with which it began, diversified along the street fronts to reflect a clear principle of subordination, and inside the building through the extrusion of the central courtyard. In this way the principal front on the Piazza del Impero is configured as a large portico, whose great equilibrium is achieved through a carefully calibrated axially, achieved by a different degree of hollowing-out of the surface. In fact the two bays on the left, partial voids, are offset on the right by two solid bays which define a complete marble panel, intended to display the regime’s hagiographic collages.

The three central bays present hollows in the volumes mirrored between the ground floor with its loggia and the top floor with its practicable terrace, which reveals in depth the wall of the offices on the connecting route.

As a whole the syntactic articulation on the principal front therefore displays an H-shaped configuration, revealing the presence of the central void and the two side blocks in depth. Inside the building, the operation of hollowing out the courtyard created a Salone delle Adunate (assembly hall) rising to double height that receives light from above through a shed roof lined with glass blocks and traversed by a practicable terraced roof level. The offices on the different floors are served by balconies which are all recessed them within the functional volumes. The hierarchy implicit in the hypotactic structure is also evident in the facades. Here the differentiation between the structures, strictly modular with the exception of the in the front facing onto the piazza, is achieved through an elegant graphitism, expressed in the differentiation of the thickness of the wall, which is subtly recessed in relation to the alignment of the façade, and through rectangular panels which are particularly evident on the rear facade, where one again finds a pattern that mirrors the double height of the ground floor void and a similar measure of the loggia which traverses the building on the

top floor in correspondence with the central courtyard. These syntactic choices therefore bring out the relational analogy between the layout of the Casa del Fascio and the Roman insula, as a derivation of the original courtyard house, although without any conventional iconic reference. *Fig 14*

From a morphological point of view, the differentiation between the parts is wholly related, in the substantial homology between voids and solids, to a problem of relations between the masses of the individual functional volumes, their proportions, depths and geometries.

Fig 14. The architectural system is reduced to the rationality of the three-dimensional grid, which synchronically act as a bearing and a compositional system- in both plan and section- and the rules which govern the infill strategy, in terms of inner space partition and façade articulation.



The same differentiation between service and served areas is softened within the above equivalence, related in the ambit of a constant subtractive operation recognizable on all scales. On the ground and

top floors one reads a twofold volumetry with a double structural body that develops in depth on the flanking streets with a central void traversing the building, while on the two intermediate levels the volume is distributed annularly along the four façades of the building. It is important to note that Terragni, while revealing a classical measure in the articulation of the overall volume, supersedes the morphological tripartite division into plinth, elevation and parapet. Significantly, the podium with four steps which raised the level of the building to that of Piazza dell'Impero, is wholly incorporated in the thickness of a general grid, subject to the logic "*subtractive*" that governs the whole.

The formal grammar rests wholly on the principle of qualitative opposition between the parts, and is not attained by gradual juxtapositions. The vertical axes of symmetry (subtending voids) and the (horizontal) axes of specularity which imply solids are always recognizable, mediating the traditional oppositions between solid/void, deep/shallow, light/shade and open/closed. The supported/supporting opposition is essential to a reading of building, as is the one that makes visible the morphological distinction between the parts, the characterization of the interiors subtended by the panels and the relationship between the different operations employed to organize the work.

The lexical choices confirm Terragni's bent for abstraction, his shunning of recognition for all conventional components. The typical finishes used in the construction industry in the period were rejected, being translated into simple planes, obtained by graphitic exercises that pattern the infill panels defined by the individual bays, playing on various degrees of permeability (with opaque/transparent oppositions) geometry and topology, differentiating the apertures in relation to the location of the user in space. This makes it possible to distinguish the ventilating and lighting walls in relation to the height of the viewer, by multiplying the perspective depths of the interiors. The design of the window frames grammatically reproduces the subtractive operation of the syntax, so that each modular panel is subdivided internally into sub-modules that match, depending on the case, to balustrades, French doors, windows, lighting fixtures, ventilating frames, downstand beams, etc. The choice of vocabulary responds to the rejection of any facile recognisability even in relation to the theme of industrial building, by negating the extreme seriality. Here, each component responds to a precise role with an equally clearly defined collocation. *Fig 15*

The expressive choices reveal the urge to efface of evident materiality in the object, which is reduced to its logical reasons. In this respect, it is relevant to recall Mario Labò's observation: "*Even the materials, worked industrially without a trace of craft manuality, white marble, exposed concrete, sheet glass and opalescent black, are conducive in keeping this architecture in a rarefied atmosphere, static and immobile, not provisional, not for a generation, but architecture from eternity.*"⁽¹⁶⁾ In particular the marble cladding of the external walls is reduced to pure texture, through its fabrication with vertical slabs with joints aligned. All this contributes to the definition of a conception which becomes form through a process of crystallization, made possible by a profound, natural language, just as the processes of industrial production also appear universal, opposed



Fig 15. Every compositional detail is governed by the respect of the grid order. The architectural language mediates between the functional requirements and the corresponding spatial materialization performances.

16. Mario Labò, *Giuseppe Terragni*, Milano, Il Barone, 1947.

to the conventional and predictable character of the craft building configurations to be found in the immediate vicinity and that frame the building, heightening its value by the contrast.

3.2.4) The phenomenon interpreted: analysis of the sources and spread of themes

The use of new materials is certainly the factor of continuity between the achievements of the engineers and that of the masters of the Modern Movement, especially as regards the use of prefabricated components for use in very different situations. In particular we can see a common interest for the distinction between load-bearing structures and infill panels, which reduces the latter to pure texture, used indifferently as surface decoration or permeable membrane.

It was substantially in the vocabulary that we can find analogies of behaviour, because on the level of the “*code*”, the architecture of the Engineers (if an exception is made for specific topics such as infrastructure) was still strongly linked to the teaching of the Ecole Polytechnique (subsequently widespread even within the Ecole des Beaux-Arts), on which Durand had left an indelible imprint. This was a culture from which the Modern Movement tended to clearly distance itself.

It should however be noted that the architecture of the Engineers anticipated, in its most mature developments, the application of the free plan and the dissolution on the morphological level of the classical coherence between distributive and structural aspects and plastico-volumetric legibility.

The architecture of the engineers

The urban theories of the Modern Movement were not given systematic application until after the World War II. It was through the experiences of the first New Towns in Britain, and the later Villes Nouvelles that it became possible to conduct experiments on a large scale with the principles of distinction and specialization promoted by the Modern Movement in the Athens Charter. In particular note the separation of routes depending on the type of preferential user, the total independence of the buildings from the road, the idea of a city as a large urban park in which the individual buildings are freely placed, and the functional specialization of the city.

A distinctive feature of the New Towns, especially in the English experience, was the typological mix, which in substance supplemented the principles of the Athens Charter, and the introduction of the commercial core and the Civic Centre, which attempted to recover the idea of the centrality of the traditional city within a multi-purpose container, however isolated from other urban components. In this container it was attempted to revive the idea of continuity of space that is now lost in the public dimension of the city.

With regard to the first generation of New Towns, it should be said that within the residential areas, the houses were organized in observance of

The New Towns

principles enshrined in the Athens Charter, as neighbourhood units in clusters, with a relatively low density of up to 10,000 inhabitants. Each neighbourhood unit was endowed with the primary services set within a maximum radius of 600 meters, so that they could be reached on foot. As for the architectural language used, it should also be remembered that the individual architectures reflected the organicist current, and sought to reconcile elements of the local vernacular with the influence of the International Style.

In the second-generation New Towns attempts were made to increase the building density of the urban landscape as compared with the first generation (dubbed “*Subtopia*” by a significant group at the “*Architectural Review*”), through the image of the compact city, but without guaranteeing those growth mechanisms that were still typical of the traditional city. These experiments produced, in essence, rather blocked agglomerates, unable to adapt to changing conditions of use.

In the New Towns of the third generation we are witnessing a recovery of the principles of the cluster organization of the first phase, although included within a more substantial urban programme, by exploiting in the start-up phase integration with existing urban centres, which become “*parts*” of the new agglomerations.

The Villes Nouvelles are inspired in substance by this latest phase of research, both in the quality and quantity of the projects in place, further increasing their density. Absent, however, from these latest proposals, is the anti-urban ideology that inspired the first projects in England.

3.2.5) The role of architectural “*language*”

The cultural attitude of the Modern Movement, though with inevitable internal variations, tends towards a progressive abstraction in relation to the material manifestations of its building culture. The built object, like a product of industry, is deprived of any expressive personalization, being reduced to its pure logical structure. The architecture, like the design, tends in other words to be identified with its own “*code*”. Or rather the code is “*formalized*”.

With the Modern Movement, for the first time in modern history, form was clearly identified with its process of construction, transcribing all its operations. In this sense we can say that the Modern Movement completed a historical experience that had been launched by Enlightenment culture. That culture had identified an architectural “*language*” independent of its tectonics, a procedure of a compositional nature capable of governing the design process, without for this reason expressing it as the objective of design, which is identified in the expression of “*character*”. The Modern Movement once again confirmed the existence of a language, with the aim, however, of “*representing*” it through the architectural object and the urban form. Therefore these were identified in the representation of the process of construction of the form itself. If this aspiration was already recognizable in the design of a private house by Victor Horta in Brussels in 1896, or in the subway

The “code” as object

stations designed by Hector Guimard for Paris, and generally in the *Art Nouveau* Movement, here the object was still strongly characterized by the expressive qualities of the materials used, meaning that the desire to identify architectural form with its process of construction remained within a purely constructive interpretation of architecture. In the late nineteenth century, the interpretation of form as process was developed within the scope of “tectonics” in clear opposition to the teaching of the Ecole des Beaux-Arts, and was identified in the building process.

Although this line of thought also persisted within the ambit of the Modern Movement, particularly active in the Werkbund and the teaching of Walter Gropius, it was progressively combined with a “linguistic” interpretation. The process of construction of form is wholly contained within a it – and the purpose of architecture is to represent it – and it does not necessarily derive from the nature of the new processes of industrial production. This step was effectively described by Peter Eisenman in the case of Le Corbusier’s work: “*In 1914 Le Corbusier showed us the paradigm of this new architecture in his ‘Maison Domino’. Evidently through the mediation of the new technology, it potentially contains a new conceptual structure of space. In Le Corbusier’s early work, and especially in the Villa Savoye at Poissy and the Villa Stein at Garches, the organization of space is revealed not so much as the literal result of the new technology, as in the case of skeleton frame construction in Chicago, where the technology itself is the essence of the form inserted in space, but rather as a metaphor for the new technology. It is quite irrelevant whether Le Corbusier’s buildings used traditional building techniques.*”⁽¹⁷⁾ Le Corbusier is therefore taken as providing a frame of reference for the idea that the process of the construction of form acts within its syntactic dimension, and that this dimension, within the ambit of a linguistic interpretation, is absolutely independent of the expressive character of the architecture itself or the nature of the materials used in its physical construction.

However, it is much harder to agree with Eisenman when, having identified the process of the construction of form with a process of construction of meaning, not unlike what happens in language, whether written or spoken, he affirms in apodictic tones the unconventional nature of architectural language: “*Unlike what happens in verbal language, the architectural forms, the floors, walls and colonnades, are not ‘signs’ to which a conventional and unmotivated significance has been given. Perhaps in the literal sense, architectural forms can be seen as natural signs, in that they actually indicate something. Likewise certain formal structures may also receive a significance as symbols of a culture.*”⁽¹⁸⁾ A space does not immediately evoke a ritual associated with it, but presupposes a conventional use, meaning a practice shared within a community. For the same reason it has been possible in the history of architecture to adapt new rituals to existing containers, since their code – just one of the components that comes into play in the problem of architectural representation – proved suitable to convey the values subtended by these rituals.

We can now return to the question of the “materiality” of architecture, typical of the recovery of tradition, and to the process of abstraction that the Modern Movement opposes to it. It is precisely by reducing

17. Peter Eisenman, *Dall'oggetto alla relazionalità: la casa del Fascio di Terragni*, in Casabella, no. 344, gennaio 1970, p. 38.

18. Peter Eisenman, *Dall'oggetto alla relazionalità: la casa del Fascio di Terragni*, in Casabella, no. 344, gennaio 1970, p. 38.

the material components of the architecture to simple adjectival expressiveness, and dissolving them into a pure system of logical relations, that the Modern managed to give the object that lightness, that buoyancy, which is characteristic of thought and of the language that determines it. Although it has already been mentioned how the recovery of tradition proposed an idea of architecture as the “*representation*” of its way of being, the way is interpreted as the “*technique*” of construction, which contrasts with the “*logic*” of construction in the Movement Modern.

The products of the Modern were therefore “*crystallizations*” of thought, or “*formalizations*” of the code that shaped thought. This innovation, still clearly present in the work before the moderns, became first the object of deformations and then of harsh criticisms. However, it clearly expresses the desire to reduce form to the system of the logical relationships that construct it, i.e. to its codes. Only in this way could the reestablishment of a language have passed through liberation from the eclectic “*encrustations*” and Novecentismo. “*Constructivism*” thus becomes one of the essential components of modern linguistic research and demonstrates its close consonance with the principles of industrial production and its striving for anonymity, for perfection: the object precisely as a product of thought that “*calculates*” and “*programs*”.

We can therefore say that within the Modern Movement there are two separate “*cores*”, clearly recognizable, although sometimes closely integrated with each other: the “*productivist*” and the “*constructivist*”. The first recognizes in the process of industrial production a model that should be embraced by architecture and which should revolutionize the production process. This attitude results in decomposing the traditional operations of the construction of architecture – still mainly artisanal in nature – into the new industrial methods. It was the strand in Modernism which was most concerned to experiment with the potential of the new materials as tautological expressions of the new society, in particular as regards the system of extensive prefabrication and mass production of housing. This was the approach substantially adopted by Germany under the Weimar Republic and by post-Stalinist Communist Russia, which banned “*Constructivist*” experiments.

The “*constructivist*” attitude turns to the processes of industrial production, not as models to be imitated analogically, but rather as principles to be translated into an independent architectural practice, based on formal, and not industrial, codes that govern its construction and transformation. The operations conducted by architectural “*constructivism*” reproduce metaphorically, and not analogically, the processes of industrial production. It accepts the method of working of the industrial process but not necessarily its outcomes. This explains the sense of the words in which Eisenman speaks of an architecture that can truly be called modern while using traditional technologies. Modernity is expressed through the evolution of language in accordance with the processuality of the real. Since reality is increasingly informed by the principles of industrial production, it is the nature of these principles that has to be investigated and assimilated. The problem is thus to define the “*code*” of Modernity, and it is in this sense that we can recognize some features relevant to the different “*souls*” of Modernity.

In this way salient features of the codes can be explained.

The syntax used is additive, paratactic, in nature, within which there is no relationship of subordination between the parts, because all components are on the same level of importance. However, the decisive factor becomes the exact order of the sequence in which various operations are conducted, but none prevails over the others. The syntactic configurations of the Modern are also open-ended, because the process of an additive nature that governs them is theoretically unlimited, just as the chain of industrial production is unlimited.

From the morphological point of view it results that architecture – understood both as a constructive process and as a formal process – is subdivided into its elementary operations and recomposed by combining them so as to reflect their relative degree of homogeneity. Each elementary action, or system of elementary homogeneous actions, is associated with a significant form. The relationship between each form and a function assigned to it is of the one-to-one kind and justifies the fact that modern architecture has a strongly “*machinist*” formal character, in which the parts are distinguished from each other by form, function and material-expressive character. Morphological specialization was therefore one of the most decisive “*productivist*” and “*constructivist*” languages between the wars. In the same way it called into question the authority of traditional tectonics, and rejected the “*classical*” morphology and the distinction between pedestal, column and entablature or, if one prefers, between the plinth, elevation and coping of the building.

The grammar is based on the use of few “*operators*” which metaphorically allude to the systems of industrial production: serial repetition, distinction, dissonant oppositions, etc.

The vocabulary is strongly innovative. All references to the architectural tradition and recognition of its elements are banished, though without giving up the “*nominability*” of the components that come into play in the project, whose identification and specialization allude, albeit metaphorically, to the nature of the processes of industrial production. Think in this respect of Le Corbusier’s five points of architecture: strip windows, pilotis, roof terrace, open plan and free façade. Each factor has to be easily recognizable in terms of identity and structure within the completed work: basically there should be no ambiguity or overlapping of roles.

3.2.6) The role of “*type*”

If we exclude the influence of external factors, such as the processes of industrialization in construction, which was undeniably important as a driving force, or the motivations of a political and social kind for phenomena such as those related to urbanization and the development of the working class and its “*elementary*” demands among the factors within the disciplines of architecture and urbanism, the lever of greatest interest in judging the development of the Modern is definitely the aversion to the concept of the type. However, to avoid generalizing

The rejection of style and the search for a new language

about an important and delicate question, it is necessary to specify that this aversion was addressed to a particular, historically grounded interpretation of the concept: the historicist approach typical of nineteenth-century thought.

The second half of the nineteenth century, as we have seen, came to clearly identify the type, in all its possible constructional specializations, with a form of expression that started with the identification of characters adapted to the functional program, in accordance with the principles of decorum and convenience, and associated with them the use of a particular language or rules derived from past experience. Note that historicism's reference to the past was not directed towards the wealth of specific experiences that had accumulated gradually over time as a system of responses to a more general problem of making buildings, and drawn on for a reasonable modification of the situation currently being experienced. Rather the past was seen as a relation to a correct vocabulary and its rules – in the best of cases – governing the way of building in the specific sense (mansion, church, covered market, theatre, etc.) in a given historical period.

Together with historicism, the Modern rejected the correspondence and/or identification between language and type. Language had a unifying function within a defined community and could not be reduced to a recognizable heritage within a genre, and even less in relation to specific species of buildings. This interpretation was clearly contrary to the type of Messianism implicit in the lesson of the Modern. All the same, it distinguished itself from historicism by denying that a language can exist outside its partial historical expressions. A new world has arrived, and it requires all its manifestations to respond to a new order, a new language. In addition, this new language has to reach the same level of generalizability and universality aspired to by the system of industrial production, which soon became the frame of reference and the model for the new architectural ambitions.

The need for a new language was felt all the more strongly because it was considered that the age they were living in did not involve elements of continuity with the past, and undoubtedly the logic of industrial production acquired a leading role in directing the new course of events. The existence of a new language has to overcome the historical styles and at the same time be a unifying factor capable of recomposing the fractures and the specializations that bourgeois society made ever more conspicuous through "*historicism*". This was the purpose of the appeal to standardization of production, optimization of parameters and a relative dissemination over a territory in which geographical-political borders were increasingly blurred.

The method followed in the Modern was purely deductive, because it proceeded from the identification of general principles that unified the individual building events. But since every single manifestation is also an "*individuation*" of those same general principles, it reveals a paradox already noted by Alan Colquhoun in his famous 1962 essay about the use of technology in massive and plastic ways that had spread throughout the world since the second half of the twentieth century and that was tending to supersede the early Modernity's aspiration towards constructional abstraction: "*What inevitably followed was a*

*more empirical attitude toward the construction and researches into form, which was fundamentally unconcerned with the problem of advanced techniques. To some extent this has been enforced on designers by economic necessity, but there is no doubt that the feeling of mass and permanence which traditional or semi-traditional materials give has been sought after for its own sake, and that the technical and public aspects of buildings have fallen progressively outside the field of private symbolic expression. It is as if the urge to create the world anew as a result of structures that had the lightness and tenuousness of pure thought had given way to the desire to create solid hideouts of the human spirit in a world of uncertainty and change, each one in itself a microcosm of an ideal world.”*¹⁹ The author’s words are prophetic because they show the desire for greater individuation of architectural design evident in the projects of the post-war period, but also the ontological after-effects on the search for universality of Modernism and its paradoxes.

The aspiration to a new language with an international breadth involves the use of technologies that masked their tectonic function and tended as far as possible to achieve a level of abstraction from the concreteness of the materials. This is also evident in the use of white, the non-colour that absorbs the whole range of existing colours within itself. The first built works of the Modern Movement clash with the problem of the translatability of an idea into a building, which by definition has an inherent degree of physical “*presence*”, and the desire to conceal that same presence as far as possible through the selection and use of materials. Steel, glass, concrete and white surfaces responded to these needs, as well as research into systems of assembly that dissimulated the presence of nodes, meaning the points of convergence and transmission of forces and their emphasis. But in being prototypes, these buildings somehow also claimed their uniqueness, the fact that they were artisanal products to be subjected to processes of standardization consistent with the logic of industrial production. So the search for a universal architectural language always moved on the knife-edge of a delicate balance between abstraction and individuation, generalization and identity.

From these observations it follows that the function, in the most successful expressions of the Modern, is invoked precisely in order to acquire a role that is individualizing and distinctive, but not unifying. The unifying function is left to the new language. The “*function*” in the poetics of the avant-garde played the same part that in Enlightenment theorizing had been played by “*character*” and that in pre-industrial production had been played by the use of resources and skills firmly anchored to the relevant geographical and cultural context.

It should not therefore be surprising that the critique of the nineteenth century city was pursued by questioning its own rules of construction and transformation. It is in the works of the masters that this revolution was brought to completion. Mies van der Rohe pursued it through the grammar of open space, which can give shape to any requirement imposed by modern society without the urge for recognition and identification of different building types being able somehow to prevail over the “*unifying*” and “*totalizing*” function of language. In other words, Mies’s individual works intentionally seek to elude any form of

19. Alan Colquhoun, *Essays in Architectural criticism*, Chicago, MIT Press, 1995 [1981], p. 28.

codification because they are not meant to be erroneously interpreted as languages reduced to signs, in a historicist vision of reality, or as simple signs of a new language, but as possible and accidental derivations, functional needs that will soon be overtaken by the course of events, from a new understanding of space, whose grammar and vocabulary are clearly indebted to the teaching of De Stijl. As Rafael Moneo states with great accuracy, referring to the output of the Modern Movement: *"The nature of the architectural object thus changed once again. Architects now looked to the example of scientists in their attempt to describe the world in a new way. A new architecture must offer a new language, they believed, a new description of the physical space in which man lives. In his new field, the concept of type was something quite alien and unessential."* (20)

In the Maison Domino, Le Corbusier seems to have pursued the same results. His proposed configuration of the space has that degree of novelty and generality which is in essence in the primitive, elementary formulation of language, understood as a form of thought. It is again impossible to conceal the importance of thought in deciphering the new parameters of the project. Thought is, indeed, the highest form of human activity, or what comes closest to the idea of totality, generality and all-inclusiveness. All its representations through artistic manifestations such as speech, writing, painting, etc, constitute an implied limitation. Yet the activity of thought, in order to manifest itself, needs language. Nothing is thinkable without the potential of language.

It follows that the emphasis laid by the Modern on linguistic research is legitimated by the aspiration to a state of *"totality"* and *"generalizability"*. Only the impalpable *"presence"* of language makes it possible to *"think"* the totality, to consider thought itself as a totality. There can be no clarification of the condition of modernity without recognition of the importance of philosophy as a sublime activity of the individual. The Maison Domino constitutes the icon of this condition. By carefully observing the accidental elevation of the skeleton of the building, which enables artificial land to hover in space and, while dissimulating its load-bearing function, support the envelope of the building, and working on it through a series of operations of individuation, only conceived, one finds all the built expressions of the culture of modernity. The Maison Domino potentially expresses the unlimited resources that the language of modern architecture intrinsically possesses.

Similarly the image of Ludwig Hilberseimer's *Groszstadt Architektur* performs the same task: to demonstrate through the project activity, or through a hypothetical future projection, hence in a completely potential and not actual content, the unifying powers of a new language consistent with the times, one capable of breaking free from the constraints of the typology of a historicist and positivist matrix. Although the author attributes a certain individualizing ability to the *"function"*, it seems to constitute the maximum degree of *"presence"* consented by the totalizing aspiration of the Modern so as to prevent its symbolic dimension from being irretrievably lost.

These notes thus serve as a reminder that too much emphasis was placed on the processes of typological specialization in the Modern Movement. If one carefully observes the results of this process it

20. Moneo Rafael, *The Solitude of Buildings*. Kenzo Tange Lecture March 9, 1985, Cambridge, Harvard University Graduate School, 1999, p. 28.

will appear that the totalizing aspiration towards the unity of the new language prevailed clearly over the individualizing aspiration of the typology and its processes. This indirectly confirms the capacity of language, whatever its nature, to always present itself above any innocent correspondence with reality. The semantic value of language exists in the structure of language itself, regardless of the specific interpretations historically given to those same basic meanings. The conventional nature of language is therefore the principle that enables on to talk of the referent by using signs that have nothing in common with the referent itself.

However, there exists a second level of conventionality that gives a precise meaning to each component of language. These meanings, more direct and necessary, can be defined as “*literal*” and are different in nature from the “*symbolic*” meanings within the language system and implicit in its mechanism of functioning. Therefore if we interpret architecture as a language, or as a separate discipline independent of its referent – meaning of the society historically given that inhabits it in a particular historical moment – we have to draw on the “*symbolic*” meanings of architecture, or to those immediately correlated to significant forms and their content, as defined by Alan Colquhoun, and not to literal ones which derive from historically given conventions. This conceptual passage is fundamental to any understanding of the sense of architecture as a language and its revolutionary implications in the field of architectural criticism. This interpretation also illuminates the significance of architectural research in a new way.

The aspiration to a universal and completely sharable character implicit in the new interpretation of the architectural language explicitly disregards that unity of space, time and place that denotes the classic concept of the “*aura*” associated with artistic production. That loss had already been underscored by Walter Benjamin in relation to the new modes of production.

The loss of the aura

Industry, by reducing craft activities, unique and unrepeatable in their genre (though possessing a degree of recursiveness), to standardized and endlessly repeatable operations, strips that sacrality from the act of producing that stems from its being a historical action endowed with individuality, a discrete moment within the concept of a continuum which in fact constitutes a clear abstraction.

There are also other aspects that clarify the change in the relationship between the subject that produces and the object produced. In the preindustrial system of organization, the tool of work acts as a simple extension of the body of the person who acted on a material in order to translate a concept into matter. Despite being made of a substance that was essentially different from that of the body, the tool embodied its logic and extended its potential. On the part of the craftsman it assumed an a priori knowledge of the qualities of the material in order to obtain the optimum performance from the transformations applied to the material itself.

In the system of industrial production the “*machine*”, by contrast, is inserted as a medium between artificer and the product. As such it

is an alien presence, with its own inner logic, independent of that which governs the human action. In this sense we can say that "*the machine*" constitutes a further matter which the artifice is forced to cope with. This medium therefore introduces into the production process an element of impersonality or abstraction compared to the expectations of the craftsman, to the point where the researches of the historical avant-garde tended to recognize precisely this character of impersonality, which is unprecedented in the history of the applied arts, as a distinctive value in contemporary production.

As an immediate consequence it "*banished*" from production that sense of belonging characteristic of the traditional working method, because it overtly expresses a history, meaning a specific time and place. The artificer is no longer one who acts directly on the work but is simply one who conceives it. In this sense there is no need to be deceived by the words with which Le Corbusier called on the architect and the engineer to recognize themselves in a single professional figure. In fact both belong to the phase of the conception of the work, not that of its execution, as was to be affirmed by the logic of Taylorism. However, artisanal knowledge must form part of the training phase of the future technician, because a knowledge of materials and their expressive possibilities underlie the definition of a good prototype. However, once this state of knowledge is attained, the precision and accuracy of the machine, through the logic of calculation, will restore to the product that character of impersonality, abstraction and universality that is distinctive of modern culture.

This same loss finds immediate confirmation in the abandonment of an interpretation of a productivist or economic stamp, in favour of a more direct interpretation of a linguistic kind.

In fact every manifestation of language, or every linguistic act, acquires a specific identity from being expressed in definite and unrepeatable terms. Yet if we think of the modes in which that same expression is revealed, of the operations necessary to select and appropriately combine the terms of that language, we can also understand how that constructive expression is in fact an inevitable limitation of the unlimited potential of language to produce speech implicit in its structure and lexicon. In this sense, the Modern interprets history, and its uniqueness of space, time and place, as an improper reduction of potential, of conditions of equality and generalizability, consistently with the principles admitted as the basis of its reflections. Language alone is the place that can deliver such a level of generalization, while its manifestations are risk undermining its principles.

In this sense the system of industrial production is to language as the products of the former are to the concrete manifestations of the latter. Just as language does not belong to its speaker except indirectly, as a collective product, to the point where paradoxically he or she "*is spoken*" by language itself, in a similar way the new demiurge "*is built*" by the industrial system in so far as its task becomes that of expressing the potential implicit in the system, once its rules are understood. Those who work in the industrial production process, by definition, share the logic of the system.

These principles justified the progressive increase of interest in forms

of prefabrication, above all lightweight forms, that accompanied the development of the industrial system. Prefabrication, in fact, further distanced the artificer from the final outcome of his work, not only because he was compelled to use the rules and the vocabulary of the system itself to act on production, but also because there was no longer any connection between the ultimate product of the combinatorics implicit in the system, of which a priori it is not given to know the form, and functions that the artificer himself is called upon to perform.

The movement and the dynamism with which the city is experienced modify its meaning and the scale on which its form is observed. A negligent perception thus requires the repetition of simple solutions as an optimal strategy of learning in accelerating conditions of space and time. The times of reflection by which, with a contemplative attitude, one can place oneself before a work are effectively replaced by comprehension through an accelerated use.

Repetition is a strategic condition for comprehension in distraction. The serial logic which suggested the use of identical and essentially interchangeable elements, and that was to reach maturity only in the phase of advanced Modernity, found a valid confirmation in the methods of industrial production. Architecture and urbanism tended to make it their own precisely in the organization of the territory.

The modes and times of learning have a precise correspondence in the modes and times of production and to that extent the proposals of the Modern were completely consistent within themselves.

The negligent perception of the city

The research of the Modern in architecture is characterized by the refusal of an iconic code, or a repertoire of “*figures*” whose significance is “*historically*” understood and accepted by society, meaning based on a system of conventions external to the practice of language and inherited from earlier experiences. Consistent with what happens in other artistic disciplines, the objective is to find a new way to represent contemporary civilization that is comprehensible only within the same system of rules that governs it. Just think of abstract painting which, in the early twentieth century, expelled from the canvas any direct reference to the real world (traces of which still remained in Impressionism and Expressionism), reducing itself to pure geometrical expression and colouring, hence to “*composition*”. A similar process took place in architecture, although with greater difficulty due to the functional responsibilities that are required for a habitable space.

That “*exclusion*” has a precise significance and is extremely important for an understanding of the reasons of the Modern Movement. It shows that art is not a representation of phenomenal reality, a reduction of its complexity to a system of signifying forms, so much as a simple manifestation of the language appropriate to it and which is absolutely independent of all external referents. Abstract painting thus becomes sublimation of the research that the visual arts, as different modes of language, conducts on its own system of rules to confirm their existence and specify their characters.

Abstraction against figurability

The iconic dimension is considered in this respect a distracting presence, as the observer immediately diverts attention from the formal code to the referent and simultaneously limits the value of the code itself by suggesting the idea that it could be translated into a system of significant forms only in relation to the referent itself.

This process was acknowledged by Alan Colquhoun in an essay from 1978: *"It is certainly true that the development of the avant-garde marks a radical break with the form of artistic language which existed until the latter part of the nineteenth century. Traditionally, language was always thought of as describing something outside itself, in the 'real' world. The difference between natural language (considered as an instrument rather than a poetics) and artistic languages was merely that in the latter the form was an integral part of the message – the 'how' was as important as the 'what'. At whatever date we put the moment when the epistemological foundations of this 'rhetorical' world began to disintegrate, it was not until the end of the nineteenth century, and in the context of avant-garde art, that the content of a work began to become indistinguishable from its form. External reality was no longer seen as a donnée with its own preordained meanings, but a series of fragments, essentially enigmatic, whose meanings depended on how they were formally related or juxtaposed by the artist."*(21)

In architecture, as mentioned above, a similar process occurs. In this case the iconic component of architecture, implicit in the notion of type, is rejected. This representation of the building constructed, or to be constructed, is in fact based on the preliminary recognisability and nominability of its constituent parts and reciprocal relations. The form and identifiability are key factors in the design process based on a typological method. The rejection of the typological procedure translates into a coherent response to the idea of architecture as research into its status as language, independently of the existence of any specific reference, meaning of a building called on to perform a specific function within the city. Once again the emphasis is placed on the figurative-spatial code of architecture, regardless of the functional relations between the parts. Individual buildings can be considered as mere manifestations of that code, though often the ambition of the pioneers of the Modern was to give a shape to the code itself, the sublimation of that concept of abstraction and generalization and a response to that need pursued by the avant-gardes. This does not exclude the possibility that there were alternative experiments, or proposals with a strong iconicity, whose designs have been borrowed from other disciplines, as in the case of Le Corbusier and Russian Constructivism.

The tendential exclusion of any iconic reference in architecture, emphasized in the experience of De Stijl and the work of Mies van der Rohe, also responds to the need to replace the traditional method of production and design with an approach more consistent with the principles of industrial production. The former was characterized by a process of imitation which started from the inherited object and sought in the subsequent stages to adapt it to the changing needs of use in which the operator, through the typological representation, knew perfectly well ahead of the planning process the concrete outcome that would have to be reached by its conclusion.

21. Alan Colquhoun, *Essays in Architectural criticism*, Chicago, MIT Press, 1995 [1981], p. 172.

The design method of the Modern instead presupposes that the form of the object cannot be prefigured, but is the simple result of a series of scientific analyses and quantitative parameters that, through the precision of the calculations and the rigour of the scientific method, leads to a result freed from the arbitrary constraints of the artificer. It was no coincidence that the Modern cited in confirmation of this procedure, and the concept of beauty that arises from it, the products of mechanical engineering, such as ships, airplanes, cars and trains, results stemming from exactness of calculation. In this way it was considered advisable to realign artistic processes through adherence to the natural laws of mechanics and mathematics. Hence the idea of biotechnical determinism is often attributed to the processes of modern design. This concept is clearly expressed by Alan Colquhoun in an essay of 1967 dealing with the relationship between systems of representation and the real world in the theories of the Modern: *"The Modern Movement in architecture was an attempt to change the representational systems which had been inherited from the pre-industrial past and which no longer seemed meaningful within the context of a rapidly changing technology. One of the main doctrines at the root of this transformation was based essentially on a return to nature, deriving from the Romantic movement but ostensibly changed from a desire to imitate the surface of natural forms, or to operate at a craft level, to a belief in the ability of science to reveal the essence of nature's mode of operation. Underlying this doctrine was an implied belief in biotechnical determinism. And it is from this theory that the current belief in the supreme importance of scientific methods of analysis and classification derives. The essence of the functional doctrine of the Modern Movement was not that beauty or order or meaning was unnecessary, but that it could no longer be found in the deliberate search for final forms. The path by which the artefact affect the observer aesthetically was seen as short-cutting the process of formalization. Form was merely the result of a logical process by which the operational needs and the operational techniques were brought together."*(22) It is therefore important to remember that although the Modern Movement tended to reject the iconic codification present in traditional architecture and more generally in the idea of the type, it did not as a result abandon this idea of architecture as representation. If anything the consideration is valid that the modes of representation were new because they disregarded the referent as far as possible, meaning they tended to be presented as manifestations of abstract codes tending towards the self-referential. This means that the way the architecture of the Modern Movement fulfilled a representative function in relation to contemporary society was no longer direct but mediated by the presence of the formal language adopted. In this sense it negated the possibility that there exists a derivation of language from function. Language and function are to one another as form and content, but this content has to be understood as a microcosm, a symbolic expression of the reality one wishes to represent. In this way there exists a correspondence between form and content, because both are abstractions compared to the reality analysed. An interpretation of architecture in linguistic terms is therefore capable of easily explaining the phenomenon.

22. Alan Colquhoun, *Essays in Architectural criticism*, Chicago, MIT Press, 1995 [1981], pp. 44-45.

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4) POST-MODERN CULTURE

4.1) Structuralism

The principles of architectural structuralism (1), a subject unjustly relegated to the margins of Italian historiography (2), have rarely found adequate expression, in architectural publications or works. This apparent neglect can be attributed to the diffidence displayed by our architects when faced with the idea of the project as a process that is open to input from all those involved in managing the built environment, with a particular interest for the end users.

A further factor is our culture's considerable unfamiliarity with a language that is more sensitive to the processes of construction of form than to control of the outcomes. We are more inclined to insert the thinking of the historical avant-gardes, of De Stijl in particular, into the fabric of relations in urban tradition rather than illustrate the unlimited potential, in relation to an all too often evoked finiteness and uniqueness of inherited spaces.

To a rather lesser degree, the rapid erosion of hope in our country that political institutions, the market and planners might collaborate in encouraging heavy and light prefabrication and modular coordination systems, while extending the idea of "standardisation" to all aspects of environmental construction, may have impacted on anti-"structuralist" theories.

Various publications, mostly foreign, have recently drawn attention to the phenomenon of "structuralism" (3). Although the historical conditions that provide justification for its birth and explosive impact on functional design no longer apply, reflecting on its principles now means recognising the importance of an aesthetic philosophy that is sensitive to the issue of transformability and reversibility of decisions, to inherent differences in the durability of materials and solutions, and to interpretational freedom in organising the spaces that a highly dynamic multi-racial society such as ours, urgently demands. While

1. Manfredo Tafuri and Francesco Dal Co, despite the brilliant formulation, in a linguistic sense, of their *Architettura Contemporanea*, make only a very brief reference to "structuralism"; Renato De Fusco, although he stresses the significance of "structure" and the "ideal type" as fundamental to a new interpretation of the historiographical method, does no more than cite Aldo van Eyck and Herman Hertzberger in his *Storia dell'architettura contemporanea*; Bruno Zevi, in *Spazi dell'architettura moderna* merely includes the name of van Eyck among the Dutch exponents of neorationalism; Leonard Benevolo, in *Storia dell'architettura moderna* takes a negative view of Team X as a simple crisis of Modernism; less lukewarm, although it can still be seen in the perspective of a loss of credibility of Modernism, is Benedetto Gravagnuolo's analysis in *La progettazione urbana in Europa, 1750-1960*.

2. In this chapter the term refers to experience gained within CIAM during the early 1950s in reaction to the products of urban functionalism. This experience led to the creation of Team X, which was heavily involved in research into the processes of construction of form, which finds a theoretical basis in Chomsky's "generative-transformational" theory and practical confirmation in the experience of the traditional city. Italy did not stand apart in this matter, and several authors, including Giancarlo De Carlo, a founder member of the historic Team X, refer expressly to the principles of structuralism, Ludovico Quaroni, Costantino Dardi and Franco Purini being some of the most important thereof.

3. Wim J. van Heuvel, *Structuralism in Dutch architecture*, Rotterdam, 010 Publishers, 1992; Francis Strauven *Aldo van Eyck. The shape of Relativity*, Amsterdam, Architectura & Natura, 1998; Herman Hertzberger, *Lezioni di Architettura*, Bari, Laterza, 1996.

not denying the importance, in the current situation, of fundamental solutions as the sole basis of ensuring control of a complexity to which time alone, and not the architect, bears witness.

The aim is not to reconstruct the history of the movement but rather to illustrate its distinctive features and emphasise the topicality of its principles. To this end, it was deemed important to analyse the subject matter from various perspectives, such as the cultural context, the architects' intentions, the completed works, the cultural obligations and interpretations and the role of type, the aim being to restore richness of expression and depth of thought, albeit within the space restrictions of a brief essay. What emerges is a planning philosophy capable of challenging modernist Utopian values and creating an irreplaceable premise for fragment size and its poetics, Deconstruction.

4.1.1) The cultural context

Historical events associated with the spread of Modernist culture have caused chronic disparities between declarations of intent, the formulation of principles and theories and inspection of the works. Indeed, apart from in the New Towns, there were no significant attempts to test the new settlement models until the end of World War II.

Apart from some very rare exceptions of an experimental nature, the urban landscape, still strongly linked to economic decisions made at the start of the century, began to change noticeably during the 1950s. The linguistic and iconographic model of industry also increasingly influences expansion of residential city areas towards the countryside, its works following earlier, widely-coded predictions from the world of the visual arts (see Sironi, De Chirico, Balla, etc.).

The present state of affairs explains the hesitation of the younger generations of architects and town planners to recognise the limits, and document the failures, of the functionalist lesson when developing their arguments and programmes. The city-factory model is characterised by an implicit and reciprocal "*distance*" between "*things*" and human activities in clear contrast to the values still exhibited by European cities, where the vitality of the spaces contradicts the millenarist visions of Modernism and its "*figures*". Functional zoning and the consequent absence of reciprocal relations between constructions rapidly appears as a factor in social disintegration and cultural marginalisation. To this is added familiarity with the prevailing anonymity of new initiatives alien to the environments and habits of customs and sense of belonging of those for whom they are intended.

It is above all in the lack of interrelation between the parties, allied to a deterministic identification of the objects with their intended use – borrowed from the language of industrial architecture and transferred to all the other aspects of social life that recent generations acknowledge a serious loss compared to the vitality still to be found in "*historical*" city centres.

The rejection of functionalist thought involves a semantic revaluation, systematically undervalued by critics, of the morphological categories that mark the city. The street, which through an irreversible and progressive process of isolation from the other components of the city, is reduced to an increasingly specialised link by planning requirements (consider the intense specialisation of functions implicit in English New Towns), is subjected by Modernism to a *reductio ad unum* of its possible values, evident in even a superficial comparison with the “*redundancy*” of functions recognisable in traditional environments.

The final CIAM meetings were marked by increasing signs of impatience, clearly expressed in the Dutch publication *Forum* and, on a more international scale, in the establishment of Team X. Although the term “*structuralism*” was coined only later, to legitimise and popularise a series of works and theoretical reflections that were already fully developed, it concisely and effectively expresses those aspects that mark a new way of viewing the city and its components, while avoiding a nostalgic reversion to the codified forms of the pre-industrial age.

Whereas the traditional city shows the clear syntactical integration of private and public areas achieved through the carefully calibrated levels of control on the part of users, and of empty and developed urban spaces, achieved through the complex city fabric as a long-term unifying element, the city organised on the industrial model is marked by a clear reciprocal separation of volumes, independently of their role, and by the “*residual*” nature of the featureless space between objects.

Empty space is deemed negative, a reflex response to the redundant presence of constructions relegated to a condition of suspense and unable to relate to anything beyond the wholly conceptual sense of belonging to the functionalist model and the universality of its language. Heidegger’s perception of space as a “*gap between objects*” is thus dramatically subverted, a reductive act bringing recognisability and identity to the interior of a pre-existing previously anonymous continuum. This is architecture detached from urban concerns, and not solely in terms of scale, seeing itself as a clearly self-contained field of research and induced relations.

In “*structuralism*” reaction to this state of affairs produces a critical reflection on the nature of the empty space, considered as a place of opportunities and possibilities, endowed with a strong personality that only planning, via multiplication of its manifestations, can reveal through a constant tension that is asymptotic to the depletion of opportunities. In this sense it will tend to assume clear expression regarding the historically determined economic and social relationships of the settled. This new cultural attitude is creating renewed interest in the syntax of spaces in the traditional city, and experimentation designed to apply its principles to the demands of modernity, figurative or otherwise. In architectonic terms, this produces an attempt to overcome the idea of the object as a closed form that is pure in its isolation and to replace it with an open and unfettered idea of spatiality. The language of architecture developed by Modernism is slowly becoming the language of the city.

Existential space and urban space

The traditional urban organism is the system of “*transitions*” between public and private, apparent in various guises – from house to street, from district to city centre – and varying from area to area depending on their histories; between the homogeneity of building development and the monumental individuality; between varied activities employing markedly differentiated linguistic registers; between family intimacy and the sociality of extended relational circles. These domains often partly overlap for fortuitous reasons that are only subsequently codified, multiplying semantic values by means of a considered ambiguity in the concept of “*threshold*”.

The industrial city rejects interference between different spheres of interest, deemed the reason for loss of system efficiency, and emphasises the identity and role of each component through the logic of reciprocal separation. The lack of unit scale clearly expresses an inclination to judge a single episode on its ability to respond to the problem that it is called upon to resolve in total autonomy.

The desire to overcome the typical objections introduced by Modernist culture leads to exaggeration of the significance of areas of overlap as places of greater urban wealth and complexity, exhibiting the integration that the modernist landscape clearly lacks. Functional integration is associated with spatial overlap and stratification, not only in a vertical sense – superimposing various activities and ensuring that they functionally and perceptually interact through multiplication of the visual perspectives – but also horizontally, giving new form to the idea of the crossover point as a place of “*evenementiality*”.

*The scale of the threshold;
integration of interior and exterior*

The traditional city appears to the observer as an “*open*” work, a place of continuous transformation that has evolved over millennia of adaptations, of greater or lesser degree, to altered terms of use, through a focus on the recovery and recycling of existing materials found in a state of “*ruin*” and brought back to a cyclical state of “*second nature*”, to the state of newly available matter. In urban centres that have not been irretrievably compromised by industrial use, stratification is a precious source of wealth and knowledge that is perpetuated over time through “*action*” and archaeological evidence. This is attributable to an implicit “*scale*” that connects minor building works and monumental architecture and urban land use through the system of sub-division, and guarantees easy re-conversion and interchangeability of roles that is appropriately codified in its internal organisation procedures and accurately shared in its technological choices.

Empty space is given structure through design of the ground surface, allowing it to share the same system of scale and proportion as occupied space. There is no qualitative difference between the two – since they are both subject to the same rule – there is rather a specificity of roles, which allows decisions to be changed at minimum cost to the community. This all contributes to the necessity and urgency for lasting decisions.

The industrial city is ruled by an additive temporal logic that brings negative change to what already exists through elimination of its state of isolation or, alternatively, through neglect and/or replacement.

*Articulation of the system and
formal configuration*

Architecture as an industrial object is condemned to the fate of all consumer goods, that is to rejection, and the city consistently attests to the relentless progress of urban development through a logic of “*accumulation*”.

The contrast between the ephemeral nature of the industrial city and the powers of self-regeneration of the traditional city means that, for the latter, planning should be seen in terms of the “*possible*”, involving principles of self-correction and self-regulation for the rational use of constructions, both now, influenced by contemporary historical-programmatic premises, and in the future. The transformability of architecture and the city therefore lays emphasis on the internal “*scale*” of urban space and on the system of rules that must, over time, allow it to function unconstrained by the emergence of new expectations.

The design of the fabric, central to structuralism’s interest in traditional space management, thus involves prior definition of an aggregative logic common to open and developed spaces, minor architecture and archaeological works, guaranteeing urban anti-monumentalism without loss of identity of the spaces obtained. It is indeed implicit in this idea of system and configuration that there should be clear margins of appropriation of the environments by those who are responsible for their ongoing maintenance and management.

The Albertian analogy between architecture and the city finds easy reinterpretation in the manner in which “*structuralism*” establishes common rules and principles, ascribing the problem of complexity to the nature of relations rather than of materials.

The traditional city possesses a contrapuntal nature arising from simultaneous periods of standard building, formed by aggregation of elementary units, and monumental works, that act as factors of dynamic polarisation of the former units. Despite strong cultural links between the two phenomena, the very fact that a distinction can be drawn between Architecture and building suggests something exceptional in the former.

Urban anonymity

This can be attributed to conscious intentionality, the cultural input of the architect allied to the community’s linguistic contribution. Such intentionality sometimes resolves itself as a personal interpretation of a shared need, while at other times the individual’s intention conflicts with that of the community.

The Modern Movement has given a twofold response to this question. On one hand the search for anonymity through extension of the language of industrial architecture to all components of the city, guaranteed by the uniformity of standardised practices, on the other a process of formal simplification applied to a pre-existing heritage of strong cultural character, distinct and analogous to that employed by the language of industrial architecture.

“*Structuralism*” intensifies the anonymous dimension of language, or rather of the heritage of universal experience, through the emphasis attached to the construction of a four-dimensional geometrical order. This involves the temporal aspect of transformation as a structural element of space under set rules, but at the same time recognises

individual contribution through advocacy planning, i.e. the active participation of users, who exploit all the degrees of freedom allowed by the system to take ownership of the space and characterise it through clear processes of identification. In this way “*structuralism*” appears to resurrect the idea of space as a place of dynamic interaction between private and public domains, not only in terms of formal and/or functional configuration, but also productive and social configuration.

Because of the dynamicism implicit in the organisation of society and its members, this concept is essential to an understanding of the idea of updating and transforming traditional spaces. Inertia to change varies according to the degree of complexity and hence of interaction, involved: inertia is minimal where end users need to help define their own daily need, greater when attempts are made to revise relationships within a small community and significant yet manageable when the community as a whole is involved.

This need has an immediate impact on decisions relating to construction technology, organisation of space, choice of materials and changes to relationships between public and private spaces defined at the planning stage.

The city has an “*open structure*”, organised according to elementary principles that are systematically repeated and to technological decisions that are clearly linked to the ease of availability of materials and their re-use for the purposes of changing decisions. The unfinished character of the city and the architecture of both its minor building works and institutional buildings, confirm its historical development through a continuous series of extensive interventions that can only occasionally be seen as transformations. Formal incompleteness is the resource that allows the, only apparently “*picturesque*”, traditional city landscape to guarantee the city’s long-term survival in defiance of a lack of order.

The industrial city’s stereometric staticity and purity of volumes are the logical consequence of a planning process that seeks confirmation of its accuracy and legitimisation of the language of calculation, in the end product. The object of static contemplation, it refutes hybridisation with anything that does not share the same internal logic.

The search for flexibility implicit in “*structuralism*” springs from the desire to eliminate rigidity of choice and translates as a clear constructive formulation capable of ensuring an adaptable construction. As long as the quest for compositional freedom is not pursued arbitrarily, in the absence of shared rules, the emphasis placed on the construction system becomes an “*expression*” of the geometric configuration that contributes to the open and modifiable character of the work. In terms of legibility, the predilection for prefabricated systems justifies identification of invariants that affect decisions that can always be checked, with respect to infill walls and materials deliberately left incomplete.

Flexibility

The traditional city is characterised by significant hierarchisation and a system of order that is clearly revealed in a temporal and spatial

The loss of the centre

priority of choices., The form and organisation of its constituent parts progressively records both this order and any changes made to it in terms of centre to periphery, public to private and collective to individual ratio, with all the possible intermediate forms.

As a result of zoning, the industrial city develops multiple urban centres that tend to have an equivalent, or even complementary, weight because of the high level of specialisation they have acquired in a process that has origins in the development of bourgeois society.

In essence, the system favoured by “*structuralism*” has neither centre nor periphery, although it possesses a high degree of internal coherence. This is why it is well suited to the condition of instability implicit in a highly dynamic society. Community action is thus reflected in the compositional choice of an open configuration that ensures individual freedom of expression without imposing constraints on those unforeseeably involved for whatever reason in the process of modifying urban reality.

4.1.2) The ideas of authors: intentions and definitions

The text can be considered as an a posteriori systemisation of the authors’ views as they developed during trials from the early 1950s onwards. The Smithsons’ critical reflections on the contemporary city stem from the rethink on a sociological and relational note of spaces in English “*by-law*” cities, which were redeveloped to the tenets of the Modern Movement. These spaces, seen as integrating buildings, appurtenances, streets and meeting places, show great vitality and constant appropriation by their users and are able to creatively “*subvert*” the role assigned to such places and their supposed performativity. The industrial city seems to have lost these values through a misplaced emphasis on functionality.

The space of the pre-industrial city is therefore seen as a condition for constructional expressivity of social dynamism. In this sense houses, streets, districts and the city represent formalisation of the social structure and the corresponding richness of articulation – structural, functional and formal – is closely linked to the complexity of interpersonal relations specific to the area in question. The traditional city thus implies that dwellings be viewed in terms of human association. The latter is defined on the basis of level, i.e. in scalar terms (from house to city) and of degree (relative to public-private interaction) through all the possible intermediate nuances. The concept of “*unit of value*” is essential to understanding which spatial extension best reflects a recognisable social organisation capable of characterising the identity of the relationship. *Fig 1*

Analysis of growth models becomes vital for defining a possible transformation of the city that can be articulated on the basis of the complexity of organised social relations and modified to register new roles in an appropriate fashion. Town Development is therefore essential.

Recognition of the primacy of social over architectonic aspects has

Urban Structure

Alison & Peter Smithson, 1967

led to radical reassessment of the language and its expressivity. While required, for the purposes of communication and sharing, to refer to the traditional morphology and syntax of space, terms such as house, street, district and city are now overloaded with adjectivation, are historically compromised and are liable to distract from the real tasks of architecture.

A higher degree of abstraction is required, to discourage immediate and often too automatic, reference to past experience. The idea of “*cluster*”, borrowed from chemical modelling, seems to be effective in expressing the authors’ radical and eminently relational appeal and responds to these needs, which have no immediate link to ideas acquired from sociologically inspired linguistic innovation.

The term cluster in fact is a simple expression of the aggregative principle that, at various levels definable as steps, ensures recognition of the connective logic and relative degree of integration/autonomy in relation to the structure of social interactions. The cluster, guaranteeing both freedom and systematisation of spatial choices, becomes the translation of a specific associative model in architectonic language.

Mobility is a further factor in promoting space organised to be coherent with social interaction. In the contemporary situation mobility acquires the unifying and identifying role that was guaranteed in the traditional city by the nature of the community’s landscape.

While recognising the qualities of the pre-industrial city, Alison and Peter Smithson do not mean to re-propose it as a model for resolving today’s problems. The identity of the system has changed and transformation has been assimilated, first into theories then into the creations of the Modern Movement. The street is no longer a relational environment controlled by pedestrians, but a space for cars and the urban motorway has now clearly prevailed over traditional traffic routes. *Fig 2*

These facts are inescapable, just as it is impossible to ignore the existence of a well-established and partially immovable agglomeration that puts some of the principles of Modernism into practice.

Urban scale itself is modified in the complexity of relations: no longer a dense, compact structure, but an open and bounded reality, with roughly equal numbers of empty and occupied spaces.

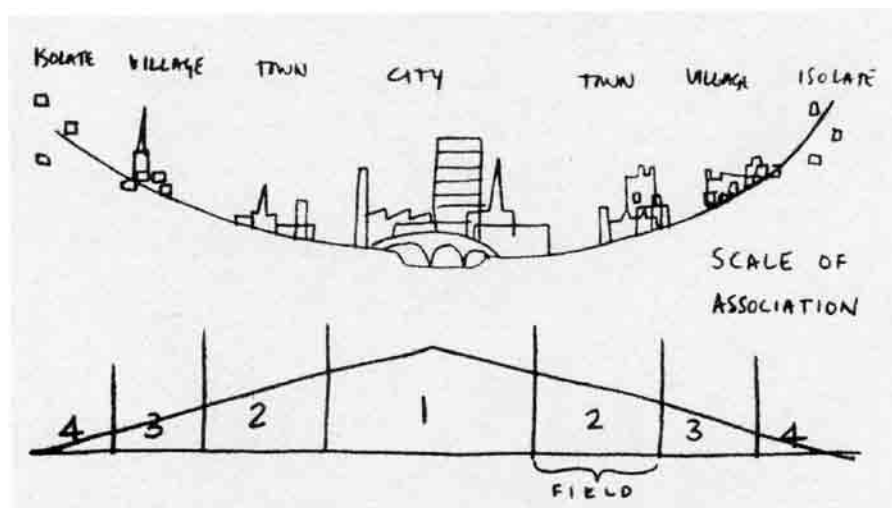


Fig 1. Each urban fact, depending from its scale, or level of complexity, materialize a corresponding level of association. Architecture, in a broader sense, embodies system of relations, which contemporary act within every human institution.

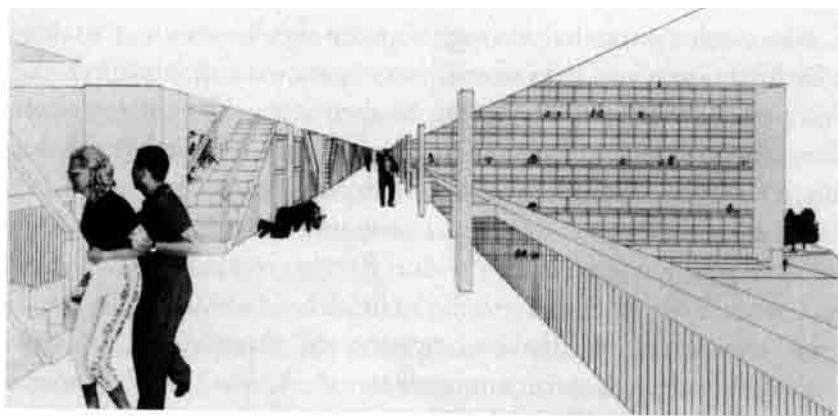
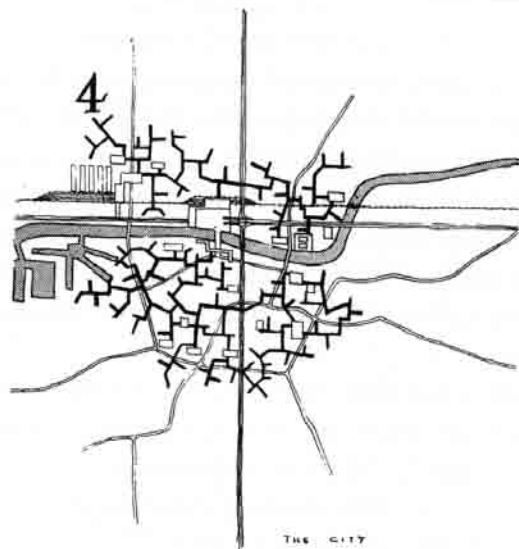


Fig 2. Golden Lane acts as a vertical system of street, intended as system of association among building entities and people. The city acts according to a theoretical model which encompasses different levels of association: the building, the street, the district. What is missing within the proposal is whether or not each level is conventional and recognizable, and under which conditions people can identify with it.



Yet the authors take a critical view of such agglomeration as a driver of physical and social decay that causes existing centres to languish.

It is possible to transform a fresh and highly artificial urban geography by finding a balance between current redevelopment needs and existing reminders of the past.

The Smithsons therefore suggest that town planning should favour vertical construction, with an internal structure that can reproduce the levels and degrees of articulation of the traditional city, leaving the ground surface to infrastructure networks and city parks. Their proposal thus translates into a residential infrastructure that artificially restores possible relations between house, street and district – a reminder of Le Corbusier's experiments in the Viaduct Building – and that recovers, in section, the wealth first attributed to the plan.

Because of its relational clarity, infrastructure of this kind slots into the interstitial spaces created by urban industrial culture, in an attempt to redeem the implicit marginality of areas lacking character and internal identity. This is no longer the new town favoured by the experts, but a tool for transforming the existing city by a process of decongestion.

This process allows the city to become more than a mere accumulation of buildings and to transform itself into a tool for controlling its own growth and transformation through an open aesthetic logic, capable of dealing with changes of roles and social objectives.

The city as an expression of an endless process of social reconfiguration is possibly the Smithsons' most profound contribution to the problems of the post-city.

This text, presented to the reader as a technical and methodological design manual with a sound theoretical basis, rigorously systematises the repercussions of structuralism on housing.

The author treats the subject by means of a decision-making process that involves all future users in decisions relating to the appropriation of physical space, working closely with the planners and producers of construction components. This makes it possible to consolidate a widely shared heritage of knowledge that is not confined to planning. The need for this approach stems from the fact that, as confirmed on a wide range of actual cases, once built, housing is constantly subject to a series of small-scale modifications prompted by various factors such as a desire to personalise space, lifestyle changes, the advent of new technology and any changes to the family structure. The study of various types of dwelling, conducted independently of environmental context, gave Habraken and his work team the idea of “*systemising*” the spontaneous transformation processes, establishing them from the very start as essential to the planning process. This made it possible to derive a system of rules for generating the most appropriate solutions for organising space, through codification of a language of modification.

Planning will be successful if carefully thought out from the start to give a clear view of possible transformations that can be managed by future users, possibly without technical assistance, or by an initial process that allows optimal solutions to be visualised. The need for systematisation of the planning process is further justified by the desire to clearly establish the competence of public and private bodies in space management processes and thus avoid conflict and interference. When the research perspective has been defined, the problem of housing and its components is analysed from an essentially “*internal*”, or logical and syntactic, perspective, in line with the methodological premises adopted. The architect thus sets out to codify both the nature of the construction components and the system of rules that allow the volumetric, structural and functional and spatial systems to be articulated in all possible combinations to meet the “*external*”, or pragmatic, requirements of the public authorities, that determine the characteristics of the development, of the planner, who operatively interprets the guidelines and of the end user, whose wishes must be acknowledged. The proposition naturally takes account of a more general cultural climate, which implies that the so-called “*structuralist*” experience should have strong social and participative features.

The emphasis placed on logical and syntactic, or “*internal*”, analysis in the planning process arises from the centrality of the idea of “*system*”. The housing problem can be treated systematically given certain preconditions regarding the definition of the number of elements, their size and nature, the reciprocal position and the position with respect to the given environmental context, the rules of reciprocal association, the rules relating to the environmental context and the definition of a spatial frame of reference. Assimilation of the structuralist planning process into the configuration of language matrix emerges clearly from these premises.

Although a system may be easily described, difficulties, particularly of the conceptual kind, arise when the time comes to visualise it. This is in

Variations: The Systematic Design of Supports

N. J. Habraken, 1974

fact only indirectly possible, by taking into consideration all its possible variants that make up the localised structures. This clearly shows why the idea of system is the most appropriate one for planning that involves a comprehensive survey of transformative solutions conforming to the premises of the solution provided by original equipment manufacturers. But structures can be visualised only if account is taken of the respective variants; these may be defined as associations of components that, in a process of successive implications, are uniquely recognised through the entirety of their corresponding meanings, identifiable as assemblages of materials. Independently of the results obtained, this synthetic sequence of reciprocal inclusions shows the objective to be definition of a “*code*”, i.e. an assortment of possible associations of elements that will show structural, spatial and functional connotations depending on the amount of focus on the subject of housing. *Fig 3*

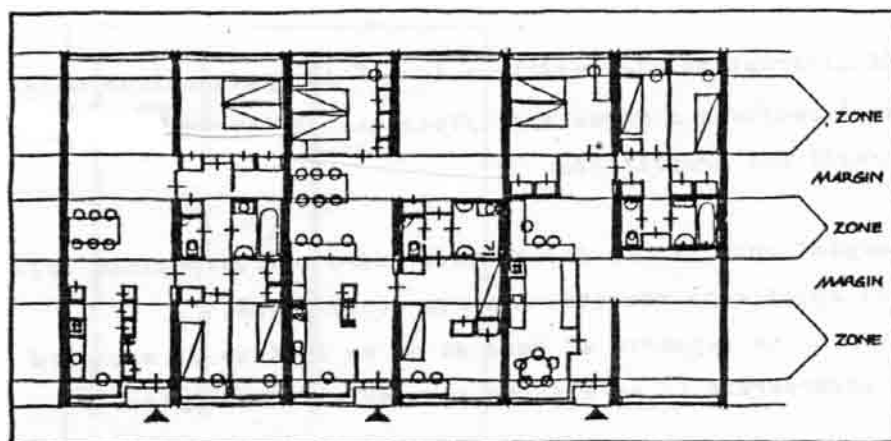


Fig 3. The support system articulates the building production according to different levels of control, which correspond to different levels of responsibility within the community in relation to the built environment development. The system itself symmetrically defines the degree of freedom according to which each level of association can engage within the design process. The system itself aims at avoiding social conflict, translating it into social participation. Just an aspect remains unquestioned: who is responsible of the system as such and is it the system negotiable?

If the project is viewed as construction of a “*code*” or “*language*” capable of coordinating and guiding concrete and contextual aspects on the subject of housing, each of its elements will assume all the characteristics of a sign, to use the analogy of semiotics. The project as language, or, conversely, language as project, thus becomes the aim if the intention is to define a process capable of involving, in various capacities, everyone involved in organising the environment. Nevertheless, it is important to emphasise that planning of this kind, already a feature of Modernism, is not limited to architectonics, but extends to urban configuration as a whole. Advocacy planning emphasises the value of built space as a particular manifestation of language, historically and culturally inter-related with all its other forms of expression and finds its own epistemological base in “*structuralism*”.

In Habraken’s view, the contributions of all those involved must be clearly identifiable if there is to be an orderly process and to avoid possible conflict. Identification of the areas in which control of space is exercised is therefore essential and explains the nature of the definitions introduced by the architect. Planning of “*supports*” and of the “*distribution zones*” is the responsibility of the public administration, which it carries out through the planner, who operatively translates the objectives thereof. Definition of “*separable elements*” and “*functional spaces*” is controlled by the users, in order to guarantee all possible developments

that may be seen as necessary over time. Producers are responsible for defining the characteristics of the components and materials used, through compliance with a modular coordination system that guaranteed compatibility between superordinate, necessarily synthetic and high priority options and the highly differentiated options provided by individual suppliers.

Everyone involved faces decisions of various kinds. The public defines the structural and volumetric components of housing units and their location in the system of external spaces, through control of the supports. It also identifies potential areas of functional zoning by specifying the density and numbers of zones and margins of distribution. Users organise space within the supports by placing separable units and establish the areas in which equipment and utility services are to be sited by defining the functions.

Construction producers check the characteristics of the components and the relevant materials, items that cannot be further divided in the space management process, and integrate them with other process moments by means of a modular grid. It is thus possible to observe how each area of control represents the environmental context that restricts the range of choices available to adjacent domains. Taken together, the full range of possible combinations available at different levels is what makes up the reference architectonic code. As Habraken states, the best support – but the example would also apply to the other components – is the one that allows the greatest degree of variation in the system for well-planned homes. In linguistic terms this is defined as the “*economy*” principle of the language system.

Habraken’s text also considers interactions between components directly controlled by one person: the dialectic between supports and distribution zones produces “*sectors*”; between separable units and functional units it produces “*spaces for activities*” – of a general, specific or service nature as the case may be – while interaction between components and the reference grid defines the furnishing elements.

The planning process can genuinely be seen as an “*open work*” that is completed and progressively enriched by the contributions of the various people involved in its implementation stages. Each project is thus really the construction of a language rather than adhesion to prior decisions. In fact it is the story of a community that is not considered to impose material or cultural constraints. In a certain sense this constitutes the strength, but is also the most obvious limitation, of architectonic “*structuralism*”.

According to Herman Hertzberger, architecture must give form to the system of social actions, that is, to the various rituals that shape urban life. Public and private thus become the realms within which individual and collective action is articulated. Realms of relation replace functional spaces and, in Hertzberger’s theories, define the principal act of determination of each architectonic intention. *Fig 4* Architecture itself is thus interpreted in purely relational, or differential, terms and as such becomes a “*representation*” of its contemporary society. Because of their relative specificity, the realms of relation present different degrees of

Lessons in Architecture
Herman Hertzberger, 1991

accessibility, the definition of which is influenced by the organisation of spaces and the use of materials. In other words, architecture gives form to the system of territorial claims that shape the life of the city and its. Space draws its own unique and unrepeatable character from those who equip it: “*The very form of the space must offer users the opportunity to determine its final form, including its fittings and accessories according to their needs and wishes.*”⁽⁴⁾ Appropriation of space was considered to be of great importance in the 1970s and reflected the wish of institutions for “*bottom-up*” refoundation that would take account of their members’ expectations and desires. Hertzberger attempts to systematise the associated spontaneous process, reconciling the drive for self-construction implicit in requests for wider involvement in any decision making-processes, with the need for a modern social democracy such as the Dutch model, oriented towards the planning of urban initiatives. In this setting, the public-private relationship assumes a symbolic value in the organisation of space, as an expression of the principles underlying social, political, economic and cultural order. It can be given new form by differentiating the value of the various parts, creating lesser or greater degrees of involvement in the organisation of an area. The architect took advantage of this opportunity, in the Montessori School of Delft and in Amsterdam’s Apollo Schools for example.

Between the public and private ambits there is another at an intermediate level, which can be seen as a meeting point between areas, or relational scales, of a different order. The concept of threshold thus translates the idea of mediation between interior and exterior. Architectonic choices cooperate closely to establish the extent and nature of these areas of overlap. Conflict over the use and appropriation of spaces is clear expression of claims for private over public interests and vice-versa.

It is the relational nature of architecture means that must drive public works to be carried through with the involvement of residents rather than being imposed from on high. This requires recognition of the importance of user-initiated actions.

The basic concept that architecture in all its aspects – structure, distribution, legibility – is a relational space is particularly evident in the case of the street. The street’s role as a relational space is lost in Modernism. Some planning ventures have sought to compensate for this loss. Among these we may cite the Weesperstraat Student’s House. The author has given a relational interpretation to historical building models. Referring to Royal Crescent in Bath, he states “*The curved facade promotes a sense of belonging; at the convex rear, the houses seem to turn their backs to each other, which adds to the privacy of the gardens. The crescent solution functions effectively on each side.*”⁽⁵⁾

The sense of appropriation of space can be stimulated by enriching the architecture of installations. This makes it possible to create the conditions that allow individuals to have direct influence on the configuration of their own space. The city returns to being a work of truly collective character. In this relational vision architecture becomes assimilated in a city and the city is likewise assimilated in architecture. Streets and houses are further complementary elements. The public domain is not necessarily configured as open space, but may assume an architectonic configuration. One only needs to think of Victor Baltard’s

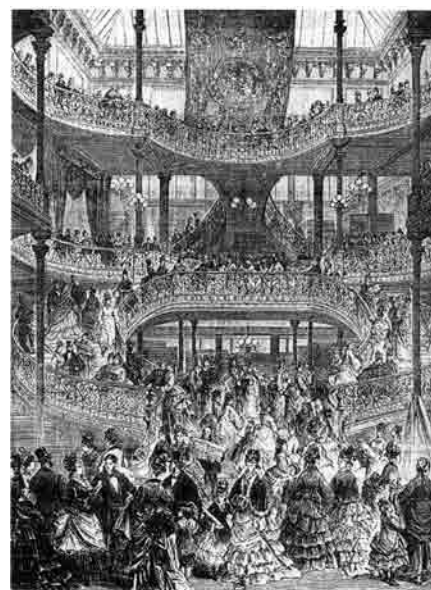


Fig 4. Au bon Marché, Paris, L.C. Boleau, 1876. The public space as a built environment. The image shows a complete identification between the structure of the space and the behaviour of the individuals, which are asked to interpret it. The bourgeois society proposes a sort of *mise en scene* of the industrial production goods, and consumers theatrically performer the screenplay. The society of the spectacle comes into action.

4. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], pp. 17-18.

5. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], p. 51.

Les Halles, exhibition pavilions and railway stations. Yet conversely, it is also possible for private spaces to offer public access. The passages of Paris provide a good example.

Twentieth century urban planning has changed the relational nature of space; empty and occupied spaces, which displayed a certain degree of interchangeability in the traditional city, are homologous materials. The relational nature of architectonic space expresses itself by associating form with use, understood not as a function but as a ritual that takes place in that space. Use also translates as an interpretation of space itself.

The relational nature gives architecture homology with the structure of spoken language. In particular, Hertzberger maintains that the existing relationship between architecture and use resembles the relationship between language and word, or between collective information and individual interpretation. A relationship of reciprocal influence exists between the two terms: "*It may therefore be said that not only does language determine the word, but language itself is modified in turn by the word.*"⁽⁶⁾ The distinction made by Hertzberger dates back to studies by Ferdinand De Saussure, from whom Claude Levi-Strauss borrowed his ideas on structural anthropology to identify individual action in relation to a collective order in human behaviour. Another important matter raised by Hertzberger relates to the nature of language: "*Language is certainly a pre-requisite of the ability to think, since it can be maintained that an idea exists only insofar as it can be expressed in words; language is not used merely to communicate one's own ideas. In fact language shapes those ideas at the very moment that they are expressed.*"⁽⁷⁾ In other words, we are "*spoken*" by language, insofar as it constructs the ideas we wish to communicate at the very moment we conceive them. Thought itself is constructed by language and is therefore not independent of it. For this reason language plays a part in the process of constructing meaning and is not a neutral support with respect to its formulation. The process of constructing meaning, which according to Hertzberger, is largely determined by the structure of "*language*", is thus homologous with the process of constructing form, which is also strongly influenced by the use of architectonic codes. Among the factors that play a role in the process of constructing meaning, language is predominant in Hertzberger's view, to such an extent that process and language tend to be identified with it in the same way that form tends to be identified with the architectonic code employed.

Having established homology, Hertzberger attempts to define the process of construction of form using linguistic categories. If the structure of the codes influences architectonic form in a decisive way, to a point where it is identified with them, it is necessary above all to understand the nature of the operations that define those very codes. With reference to Chomsky's generative-transformational grammar, Hertzberger maintains that such operations belong to an innate heritage and can be traced back to Jungian archetypes. Architectonic codes are therefore not conventional in nature; they are not the result of a social contract, but belong to everyone, regardless of race or culture. They differ from each other only as specific and unrepeatable "*interpretations*" of a series of operations on "*symbols*" of an archetypal nature – which

6. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], p. 86

7. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], p. 86

justifies recourse to generative-transformational grammar – that are common to all humanity.

Thus explained, Hertzberger's thesis acquires marked logical clarity. Starting from the belief that form is strongly influenced by architectonic language, just as meaning is strongly influenced by spoken language, the problem becomes one of understanding the nature of the code. Once again with reference to generative-transformational grammar, Hertzberger postulates that every code originates as interpretation or specification of a series of functional operators and "*symbols*" that are the common heritage of mankind. The concept of "*competence*" expresses the innate ability to create forms, or to communicate, while the term "*performance*" identifies the unique way in which forms come to be used by the individual. The author employs this argument to assert that a code cannot be imposed, that no-one has that right and that it must be constructed by those who are to use it through a process of interpretation of relational operations on archetypal structures. The architect's task is simply to arrange the archetypal structures, or installations, or to draw up the rules of a game that will end in unexpected interpretations.

Nevertheless it would seem that reference to Chomsky is more than legitimate in this perspective, less so the reference to De Saussure. The Genevan author, in fact, does not pose the question of how language is constructed, instead postulating its conventional nature, resulting from an accord between individuals described in time and space. For De Saussure language is a product of history, namely a collective work. However, it is true that everyone plays a part in building language through use of the *parole* and that the *parole* would not be recognisable if it did not adhere to the principles and rules implicit in the *langue*. In that sense, therefore, it is possible to maintain that the *parole*, used individually in a shared language, expresses one of its possible interpretations.

A noted Italian linguist confirms that the thinking of Ferdinand De Saussure cannot be precisely superimposed on Noam Chomsky's: "*It should be noted that there is full correspondence between the Saussurean concept of parole and the Chomskyan concept of execution. There is less correspondence between the concept of langue and the concept of competence, because langue is conceived as a system, or collective "institution", of a social nature, while competence has a "mental" nature and should be seen as a system of generative processes internal to the speaker.*"⁽⁸⁾

In turn, linguistic "*competence*" can be viewed as the result of the convergence of two distinct abilities. The first is "*universal*", being common to all "*tongues*", which is associated with a "*particular*" competence arising from the characteristics of a specific language. It also needs to be said that Hertzberger's archetypal structures, in analogy with Noam Chomsky's reflections, are defined by a restricted assemblage of primitive symbols and "*operators*" that act on those same symbols. On this subject Altieri Biagi comments: "*Describing a syntactic structure with symbols and operators means giving abstract representation to concrete expressions (we might say a "scheme of expressions"); it is a habitual procedure in mathematics and Chomskyan linguistics tries to get as close as possible to mathematical models.*"⁽⁹⁾. In plain words, Hertzberger's objective is thus to give an abstract representation of real architecture using "*operators*"

8. M.L. Altieri Biagi, *Linguistica essenziale*, Milan, Garzanti, 1985, p. 273.

9. M.L. Altieri Biagi, *Linguistica essenziale*, Milan, Garzanti, 1985, p. 262.

and symbols, where the latter correspond to architectonic functions, in the sense of “roles” of the single parts. It is in this sense that the recursive character of his architectonic “scripture” finds justification: “*In mathematics a recursive calculation is one that predetermines the structure of a theoretically infinite number of objects, operating on a minimum number of primitive elements; if the concept is transferred to language, the “objects” are linguistic structures, or sequences of symbols, or expressions.*” (10)

Hertzberger therefore looks for archetypal configurations that can be found interpreted in finished works: ports, viaducts, the amphitheatres of Lucca and Arles and Diocletian’s Palace in Split. Universal principles and distinctive characterisations can be recognised in each of these works, and each is therefore an example of forms that can adapt to a variety of functions. The relationship between structure and interpretation reveals itself not only in time, through processes of change, but also in space. Consequently a distinction is made between warp and weft: “*One can say that the warp establishes the basic character of the fabric. In so doing it creates the conditions that allow a maximum of colour and variety to be obtained from the weft.*” (11) As examples the author quotes Le Corbusier’s Fort l’Empereur project, John Habraken’s Theory of Supports and the floating houses created in Amsterdam during the 1970s. In this latter example, a process that began spontaneously was subsequently “*institutionalised*” and expressed as a “*code*” used to standardise the subsequent construction of floating houses. *Fig 5*

This led to the concept of transformability as a value, through the possibility of adding new elements or modifying other elements, depending on circumstances. Structure defines the rules of the game, which can potentially be interpreted in a wide variety of ways. The grids function as looms of generation and transformation. The structure, in its coherence, can absorb change.

The grid is a form-generating system that has come to define Barcelona’s and New York’s specific codes through a certain number of operations constituting its generative grammar. Naturally, what is true of space is also true of construction. If architecture is a relational activity, then so is construction. Hertzberger speaks of structural Order to express the degree of correlation between the construction as a whole and its parts. Relational interpretation goes beyond Modernist identification of form/function, since the same relational configuration, from a structuralist viewpoint, belongs to all physical manifestations of a particular culture. In order to reduce architecture to its own relational system it is necessary to establish the factors common to all its manifestations, each of which represents individual and unrepeatable use, in terms of both construction and utility. Aldo van Eyk’s project for the Amsterdam Orphanage provides a pertinent example. But a relational interpretation of architecture also makes it possible to justify the preservation of unity at the heart of a transformation process. The application of these principles to properly planned architecture makes it possible to identify what is fixed in every project and what can be finalised and changed. This can be clearly seen in the Centraal Beheer office project. Hertzberger’s words on constructive order are relevant in this regard: “*Constructive order is the result of a more in-depth*

10. M.L. Altieri Biagi, *Linguistica essenziale*, Milan, Garzanti, 1985, p. 260.

11. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], p. 102

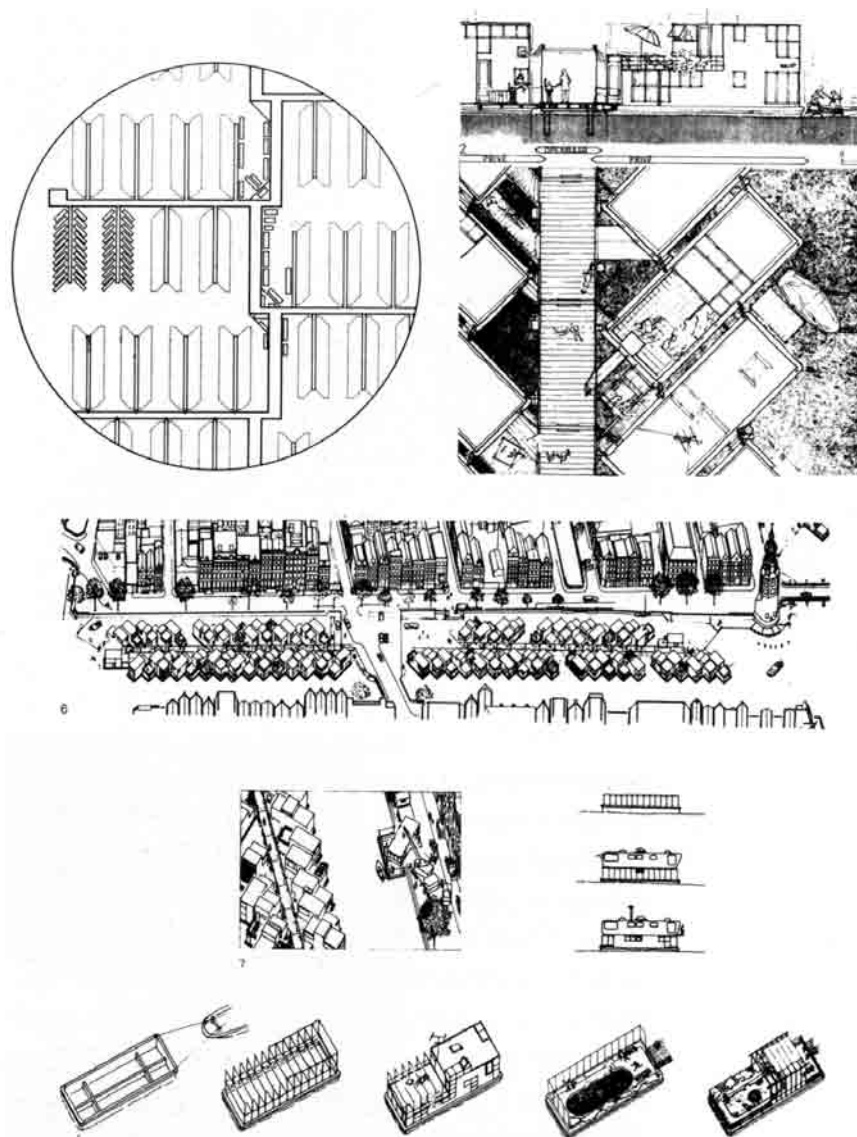


Fig 5. Project for floating house boats. The proposal is very interesting and unique. The author recognizes that the phenomenon is widely spread through The Netherlands, according to a bottom up spontaneous process. The architect assumes the explicitly shared consensus on that experimental praxis and translates it into a structure, with its clear system of relation among spatial components. Each of them embodies the final results of an implicit discussion on the categories and the related catalogue about what is valuable for the community. The structure is now fully ordered and ready to unfold its power. The project of the system is made by people and the architect simply acts as a cultural mediator, displaying his competence on behalf of the community itself.

understanding of present and future use."⁽¹²⁾ Interpretation of architecture in a structuralist sense leads to the concept of "*polyvalency*", or to the correspondence of multiple individual manifestations to a unique system of relationships. Polyvalency does not mean neutrality. On the contrary, the concept describes structures of strong identity that can accept change without undergoing transformation. In the same way, language does not undergo substantial change even though it always takes on a different appearance through its infinite manifestations, or "*signs*".

Architecture must be able to respond to daily changes in the fabric of human relationships, just as there is a daily need to express new concepts which language must be able to translate. Hertzberger also raises the question of the significance of architecture in a structuralist vision: "*The ability to absorb meanings and then abandon them once again without really changing makes form a potential carrier of meaning – in short, meaningful.*"⁽¹³⁾ The attribution of meaning to architecture arises from its usage process. It is the unfinished sense of architecture that must stimulate end users to complete the work: "*What do we truly know about the desires of each individual and what can we do to discover what they are?*"⁽¹⁴⁾ Everyone should be able to give a personal interpretation

12. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], p. 138.

13. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], p. 145.

14. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], p. 152

of a collective plan. Hertzberger's Diagoon Houses in Delft provides an exemplary example in this regard.

More generally, new residential construction needs to regain the ability of old houses to be continually modified to meet people's changing requirements. Architecture must offer incentives to this end. "*The incentive is a kind of constant that produces a variety of interpretations through various associations. And if we replace "competence" with "incentive" and "performance" with "interpretation" we again discover the linguistic analogy described previously.*"⁽¹⁵⁾ Hertzberger uses linguistic reasoning to articulate his critique on functionalism, emphasising the need for the semantic redundancy of space and for its capacity to reflect multiple meanings: "*If a house is restricted to a very specific role, it functions as it was designed to function, or as it is expected to function. This is the kind of functionalism that functionalists used to speak of, but it is also the least that can be expected from architecture...It is as if what is expected from users, what they may and may not do, had been decided in advance.*"⁽¹⁶⁾ A structuralist interpretation of architecture can therefore ensure that space has various attributions of meaning arising from the contribution of appropriation of space by the user. When the rules for articulating space, or its code, are understood and with recourse to relatively unsophisticated construction technologies, users can be helped to develop their own way of living and their own meanings albeit in compliance with collective sentiment. Space "*occurs*" through spontaneous processes of appropriation, while time is translated into a unique and unrepeatable event by the individual's presence. Architecture and the city are all the richer for offering a density of places and events. The concept of density involves not only the degree of accessibility in space, but also the extent of its introspection. Architecture creates the conditions for socialisation. Hertzberger's structuralism thus promotes substantial homology of occupied and empty spaces, leading to interchange between interior and exterior.

Finally, structuralism seeks to reveal form as a process of organisation of the parts within the whole and vice versa, through a relational interpretation of space. In this sense "*There is a change of emphasis from the objects towards the relations that link them and towards the things that connect them.*"⁽¹⁷⁾ Such an interpretation establishes a kind of abstraction with regard to individual constructions, which are ascribed to features that are common rather than distinctive in nature. Hence it is appropriation of space that makes space unrepeatable. Meaning is constructed analogously through a series of operations and it is the task of linguistics to clarify them and highlight the nature of the materials it uses.

The structuralist interpretation of architecture facilitates the introduction of the concepts of hierarchy and equivalence, which clearly express the relations between the parts and the whole. It is interesting to note that they correspond to the concepts of organicity and seriality, first developed by the Muratorian school in the 1970s to express an analogous interpretation of space that was nevertheless rooted firmly in local tradition. In this sense it would be reasonable for Dutch structuralism to view Chomsky as the Italian version views Ferdinand De Saussure.

15. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], p. 163

16. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], p. 171

17. Hertzberger Herman, *Lezioni di architettura*, Bari, Laterza, 1996 [1991], p. 237

4.1.3) Projects and works

This work expresses all the distinctive characteristics of architectonic “*structuralism*” with great immediacy. The functional design submitted to its creator was extremely detailed, not only in strictly functional terms, but also and above all, with regard to the image that the building should present. The director of the Amsterdam Orphanage wished to move it from the city centre to the periphery, where its occupants would benefit from large open spaces, green areas and above all, better light. The building had to accommodate children in a family atmosphere, clearly expressing the relationships that were considered to typify life in a small community without emphasising the public institution’s role as a pre-existing social guarantor. The director insisted above all on the idea of a “*home*”.

Amsterdam Municipal Orphanage
Aldo Van Eyck, 1958–60

The functional requirements were specified in great detail. The building was required to allow children to be separated by sex and so that they could be placed into groups according to their different needs and to provide suitable means of communication both between groups and to the outside world. Other requirements included areas for service staff to allow them to monitor children’s movements without being excessively invasive, administration offices, a theatre/sports hall and areas for general activities and events involving the whole community. Each group was to have its own day and night zones that would permit it to be relatively independent of the others while pursuing the normal activities of daily life.

Aldo van Eyck achieved stunning success, meeting the director’s requirements with a solution that is more than a simple translation of a functional design into architectonic form.

The request for space organised on the model of a small community was addressed from the start with the formal image of a village whose relatively small dimensions made it possible to qualify the space by giving clear expression to the system of relationships that characterised it. The language used suggests that of a rudimentary settlement organised on a number of elementary principles. Seen from above the site resembles a small Islamic Kasbah, with prominently repeated square spatial modules, 3.6 metres per side, that immediately reveal the project’s uniform “*dimension*”. *Fig 6*

Each such “*cell*” represents the qualitative “*measure*” of all the spaces, whether open or closed and thus ensures the coherent organisation of the whole. The village appears as a free and extensible collection of elementary cells, contradicting the idea of a building as the articulation of formally complete parts that respond to equally clearly defined necessities of the functional design.

Each of these spatial modules operates as a self-contained structural and volumetric unit that organises and structures space according to laws of aggregation imposed by the entire “*generative-transformational*” system. Each contains four circular pillars supporting a double-section architrave on which a low profile parabolic dome is seated. In its basic concept this space is both open and closed. The sides of each cell vary in character depending on its position within the whole: open,

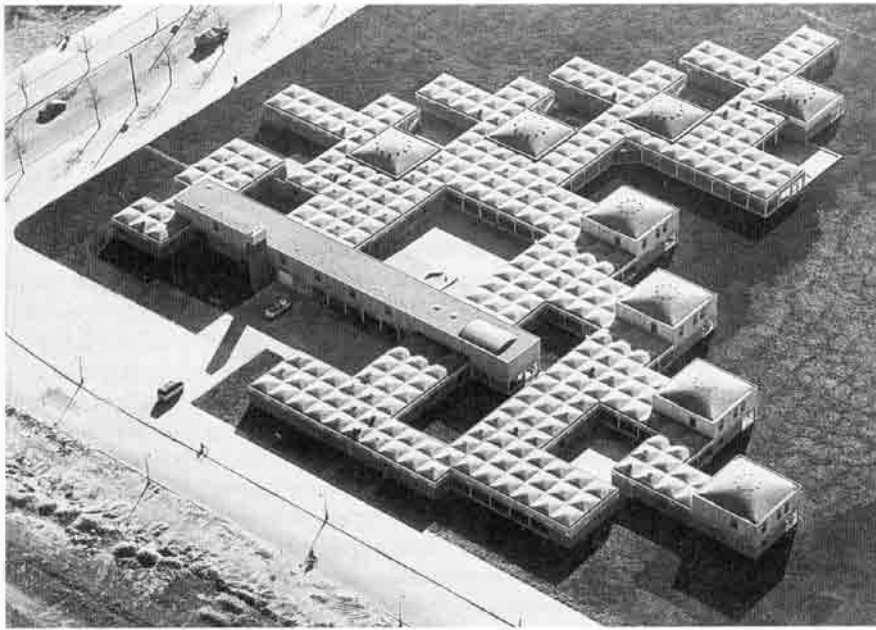


Fig 6. The structure acts as a built order, which unfolds its power through the construction process, sooner, and the user behaviour, later.

partially screened, or completely closed by red clinker brickwork and partitions of glass bricks or normal glass. The elementary cell has clear and simultaneous archetypal and classical features. Nevertheless, in this respect Van Eyck's solution reveals an intention that uniform integration of constructive, functional and plastic-volumetric values should never correspond to the module, such as can be found in classical construction culture.

Such a decision, which does not seem arbitrary, can be ascribed to a desire not to induce too close and deterministic an association between functions and plastic solutions, or between formal choices and codification of the architectonic order. The elementary cell thus becomes a module that gives scale to the open configuration of the village system without being identified with a part having autonomous value within the whole. The architect's decision suggests analogy with spoken language, which presents a dual level of articulation. In fact the system assumes that there are units lacking autonomous value (spatial in this instance) - i.e. the "*phonemes*", which are represented by spatial/structural modules in this case - that are conveniently related to each other and produce units possessing meaning, the "*monemes*".

In Van Eyck's proposal, the latter correspond to the functional units requested by the director to allow children to be separated into classes by age. The older children occupy "L"-shaped units with a squared 9-module main building block, comprising a ground floor common room, stairs and a night zone on the upper level, which contains a further 8-module day zone for creative activities. These spaces have direct access to open areas and define clear transition zones between exterior and interior, characterised in a formally recognisable manner. The two-level section is formally qualified by a larger vault, which nevertheless shares the basic characteristics of the elementary module, differing only in scale. Greater relational complexity is thus achieved by simple proportional enlargement of the base spatial unit. This correspondence between the complexity of social relations and articulation of architectonic solutions undoubtedly represents a cultural

legacy of classicism, which can often be seen in traditional forms of urban construction. *Fig 7*

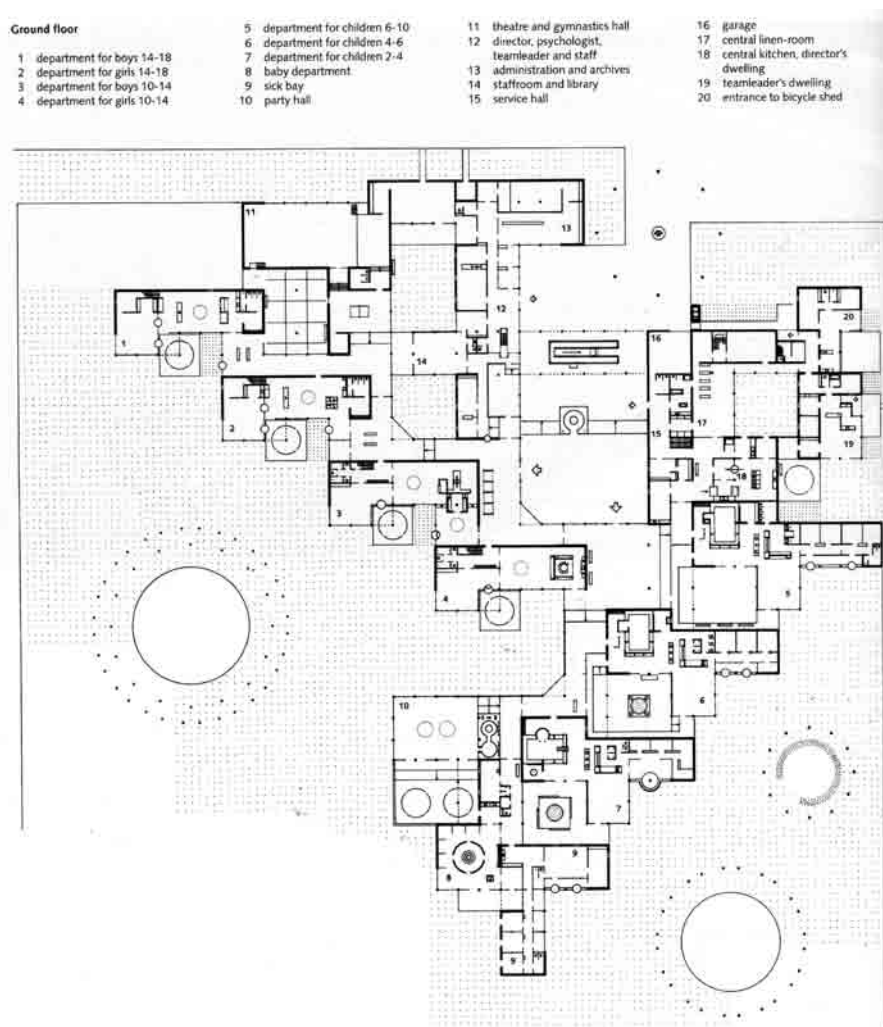


Fig 7. The structure's degree of freedom allows space for interpretation. The ground floor clearly expresses a quite wide range of possibilities according to little inhabitant's gender, education necessity and expectations. Discussion about what is valuable in term of space is therefore carried in the system itself. Is this participation or interpretation?

Units for the younger children allow life to take place on a single floor, with the same differentiation as the main block, such as a common room for meeting other groups or friends and a less central zone for work activities and bedrooms. A four-module loggia delimits a patio area and clearly distinguishes it from the exterior, giving the impression of greater security that is needed by young guests.

All the units are staggered to give them maximum daylight and are connected by a system of covered internal walkways, which in line with the aggregative logic of the village, follow a characteristic zigzag course. The streets connecting senior and junior units intersect diagonally in a communal atrium. To the north of this there are common service areas and a number of staff facilities situated around the main courtyard. This in turn leads on to a forecourt that provides access to the city and is monitored from the offices of the director and the staff. The progression of activities and the character of the open spaces give clear indication of the desire to gradually define the passage from areas open to the public, located alongside the road to the north, to more private areas situated on the opposite side. *Fig 7a* The configuration of the village, in the shape of a triangle, with its base skirting the access road to the Olympic Stadium, further strengthens this impression. At

the entrance, as if to establish a further threshold between interior and exterior, a predominantly linear expanse of building, containing staff accommodation on the first floor, extends from the base structure.

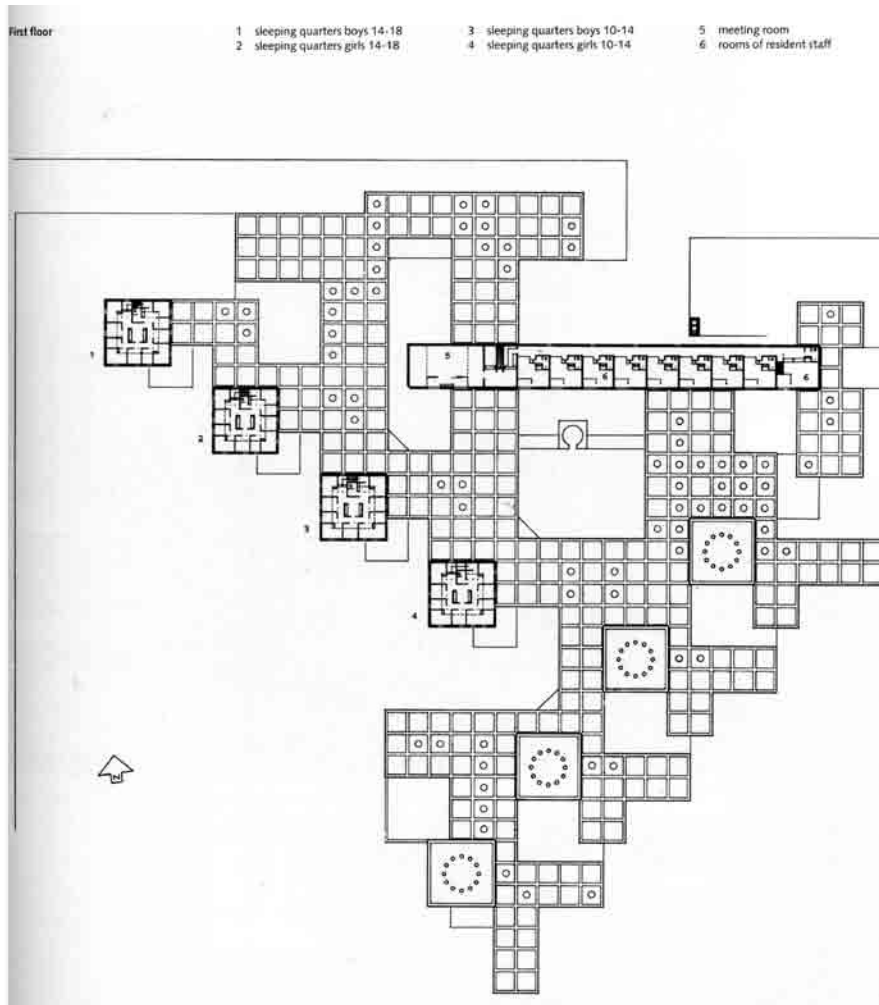


Fig 7a. The roofscape of the orphanage manifests to what extent the system possibilities can extend through the space their ramification.

Although the quality of the transition zones is always guaranteed by an individual treatment, they are integrated into the whole through the use of the same modular system and the same construction materials. Van Eyck's compositional solutions seem to reconcile the idea of flexibility and openness in the compositional process - which we may define as simultaneously additive and subtractive - with the need to ensure that internal social relations can be identified, without resorting to a closed configuration of the elements. The planning process itself thus creates system flexibility, its capacity to guarantee the planner sufficient freedom to cater for possible future changes to the plan. *Fig 8*

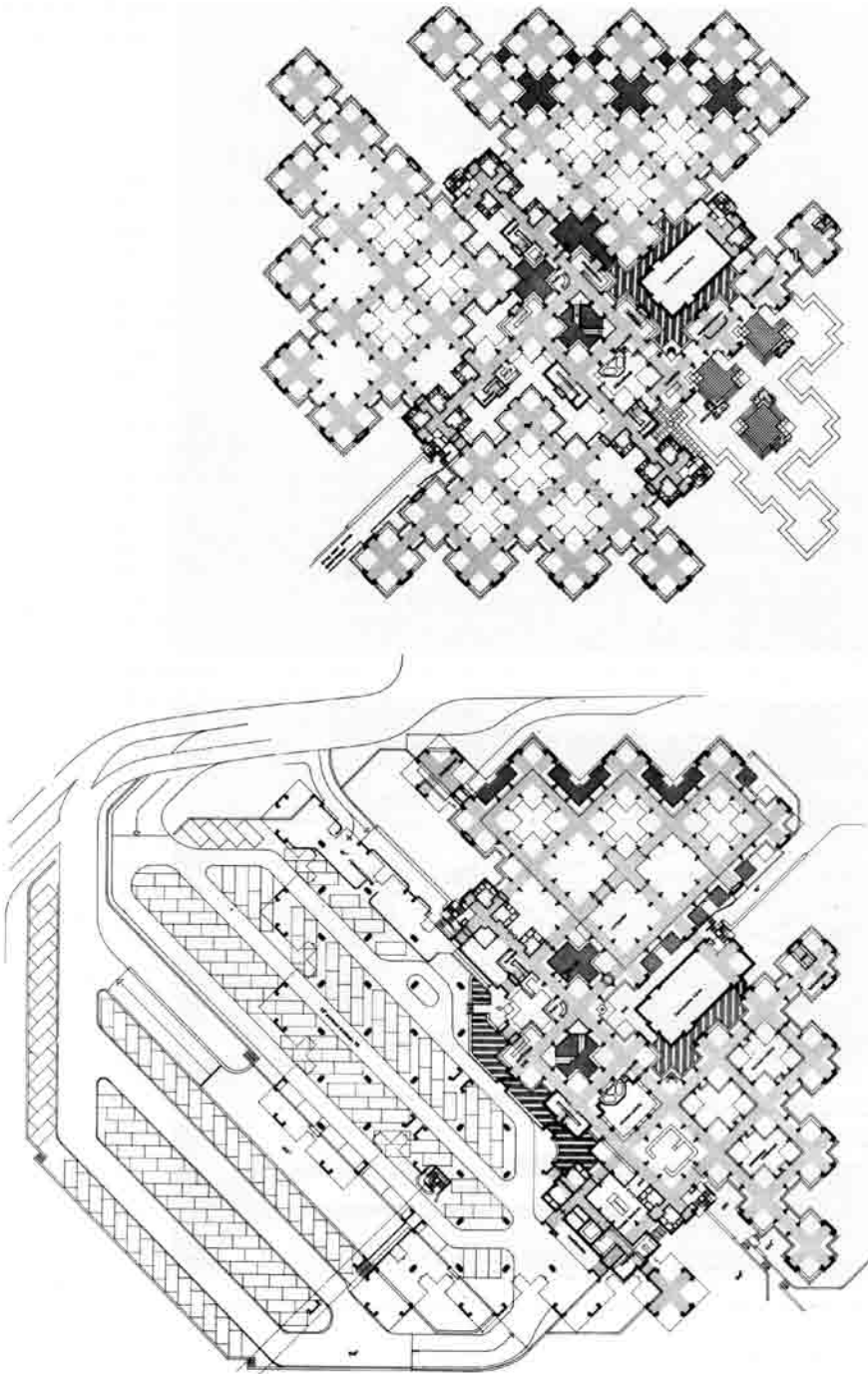


Fig 8. Different interpretations of the basic space module according to the expected behaviours. By enabling them, the system unfolds its implicit power. Symmetrically, the use of the language through its endless interpretations, confirm the power relation institutionalized by the system itself.

This was a project for a headquarters office complex for the Centraal Beheer insurance company. The site is an interstitial and anonymous strip of land with a railway line and an important high-speed infrastructure on two sides and bounded on the other two sides by local roads. *Fig 9*

Centraal Beheer Offices, Apeldoorn
Herman Hertzberger, 1968–72

Fig 9. The Dutch Structuralism questions the possibility of immediately translating a functional brief into a project. The answer is the language. The structure, or the system of relation among entities, becomes the category which makes possible to translate requirements and needs into performances and values. In this case, a three-dimensional Cartesian system embodies the system, i.e. the language.



These constraints led the architect to accept the loss of a direct relationship with the street, now the domain of vehicular traffic. Instead of planning the project around a single building indifferent to its setting, Hertzberger settled upon a compact scheme of repeated spatial and polyvalent modules, organised as an open network oriented diagonally within site boundaries and capable of being expanded to cater for possible future needs. This main framework constitutes the

basic structure of the project and corresponds to the internal flow of pedestrian traffic and the system of service ducts.

An early town planning proposal suggested the creation of a new railway station alongside the project, with an underpass running from it and through the site, to give access to buildings adjoining the high-speed infrastructure and to the complex itself. An intermediate entrance zone was planned, sited between Hertzberger's building and the contiguous office building designed by Wim Davidse. However, the initial plan was abandoned.

Hertzberger's decision in favour of a structure consisting of repeated identical modules, rather than a single-unit building, signalled a repudiation of the doctrine of object-type promoted by Le Corbusier, in his same size unit housing. If these could rightly be viewed as an interpretation of the concept of the city as a great edifice, the aspirations of structuralism are moving in the opposite direction, or can be seen to be projecting the idea of architecture as a small city. The major difference at the core of the idea lies in the question of scale and, obviously, the relationship created with the users of the various environments.

Every spatial unit forms part of a construction in the form of a tower, open at ground level and below, where free movement is required for pedestrians and vehicles and compact at the upper levels (varying from one to three and arranged in the form of a pyramid around the outer part of the construction) where work areas are located. The pure stereometry of the square plan volumes is articulated and differentiated through the presence of full-height glazed corner panels around the "served" spaces, which are separated by walls of bare honeycomb concrete blocks lining the "serving" spaces. In the levels not used for work activities the absence of infill walling reveals the supporting structure that dictates the general construction, emphasised by the presence of empty corners and panelled walls given a different degree of permeability. *Fig 10, 10a*

The compositional choices make it immediately clear that the supporting structure is a framework, with twin pillars placed symmetrically in the spatial units to draw attention to the internal distribution corridors. This kind of static solution allows floor structures to float above the corners, free from the cumbersome presence of support points. They extend from ceiling to floor in the presence of activities and are brought together in groups of four by extremely robust mushroom-shaped columns in the covered parking areas.

Each spatial unit, having a 9m x 9m square plan and separated from the neighbouring unit by a 3 metre gap that allows the mid-day sun to filter through to the internal spaces below, marks out a node in the walkways and service routes and is connected to adjacent units by a system of links extending from the internal walkways. The legibility of the glazed infilled walls thus corresponds to the distinction between work areas and linking routes, in accordance with a classic principle of coherence. *Fig 11*

This leads to strong integration of structural, volumetric and distributive components. The overlap of the system of towers with the network of walkways and ducts negatively identifies the functional components of the programme, to be completed to the company's specifications.

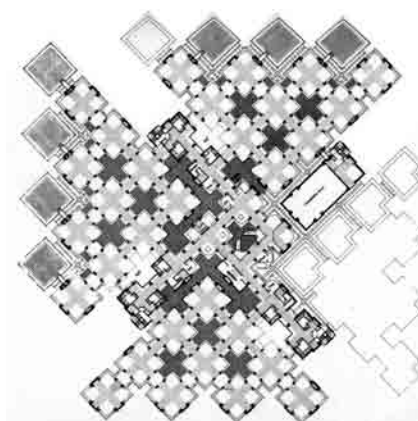


Fig 10. The system is not limitless. It enables a certain degree of freedom. The performances of the system are the explicit affirmation of its power and its definition of democracy. Beyond any representation, the system becomes the tangible expression of power relations. The Structuralism defines the "condition of admissibility" of De Stijl Avant-gardism: to blur art into life.

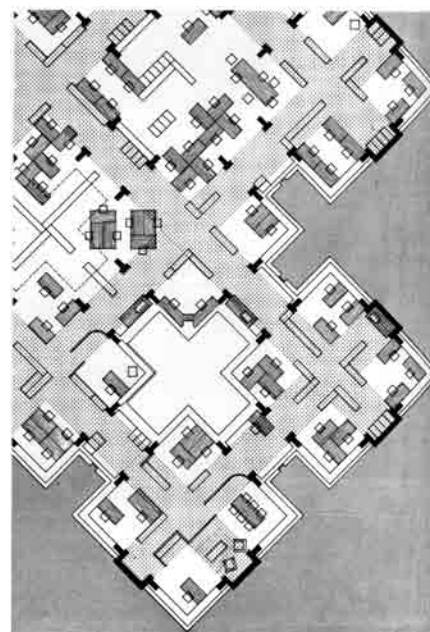


Fig 10a. The system acts according to a tree logic: the more you deepen the design strategy, the more the design itself enables degree of freedom. The more the system is zooming in people expectation the more they have the opportunity to perform their ability. Each control level has its own field of possibility. At the lower level competes partition subdivision and furniture selection. At the upper level corresponds construction concept and orientation arrangement. Who shares these decisions?



Fig 11. The three-dimensional mat building embodies the language intended as a system in motion, deploying its capacity. Its Lying position confirms its extraneousness to the context, which becomes an unquestioned *tabula rasa*.

Internal fittings are deliberately left unfinished to encourage users to complete the work. The base configuration thus goes beyond a mechanical correspondence of form and function, reminiscent of the Modern Movement, to achieve a structure designed to be receptive to any updates that may be required over time, with adaptability thus established as a precondition of the plan. Although space is organised openly and non-hierarchically, Hertzberger identifies a topographically central public area on the ground floor, which gives access to the offices above. This entrance arrangement resembles Le Corbusier's 1965 design for the Venice Hospital, which shares many of the principles of architectonic structuralism. The network of walkways extending from the entrance along the major diagonals leads to four outer spatial units containing stairways and staff service areas on each floor. This arrangement makes it possible to plan four distinct zones, two for parking, one containing computer workshops and the fourth a restaurant.

An interesting feature is that the ground floor network of walkways is staggered so as to correspond with the spaces separating the single spatial units. They thus appear to be configured as public galleries lit by skylights that look up to the links connecting the volumes. The ambiguity generated by the different orientation of the public walkways and the walkways linking the offices creates perceptual enrichment and an abundance of visual connections. Internal workplaces look out on the walkways and empty spaces, giving the impression of balconies overlooking a street and emphasising the idea of interaction and integration between public and private domains. They have different levels of permeability depending on the work carried out. *Fig 12*

As initially planned, the base configuration establishes a single set of rules governing the whole, leaving ample scope for users to complete the project as they see fit. The notion of the project as materialisation of a code suggests, both literally and metaphorically, the idea of an aggregation of modular units offering great freedom of use. This idea is

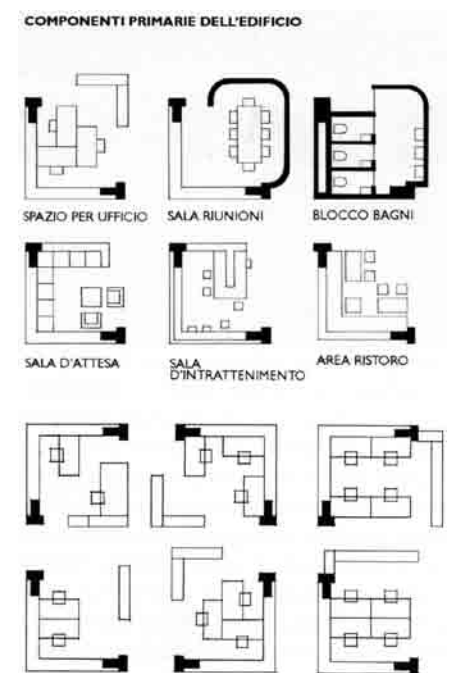


Fig 12. The primary components of the System express the degree of freedom it enables. Leftover of the banquet? The system as a Daniel Spoerri's *Tableaux-pièges*.

also implicit in the choices of materials and basic components, and is translated into the building's code of use. The doors, for example, have different degrees of transparency depending on the nature of the space they open into. Those that connect to collective areas and cater for a large number of users are the most transparent, the most opaque being those leading to private areas.

Adherence to elementary principles allows space to be arranged in such a way that the system of rules implied by the code can be developed through use. Internally, the floors of communal walkways use materials that have an outdoor feel, with other areas acquiring a sense of more restricted access, confirming first impressions of the building as a "*little city*" on a human scale. The system of rules envisaged in the articulation of forms and spaces is thus configured as a "*code of permeability and connection*". The project can be seen as an apparently endless process of completion, in which public and private areas are clearly distinguishable. It can also be seen as artificial interpretation of the traditional city's values, which can no longer be wholly recovered because of changes in the scale and use of external spaces, now largely dominated by vehicular traffic. The city-in-miniature becomes a metaphor for the place of multiple possibilities, a means of allowing the language of constructed forms to rediscover its roots through a balanced compromise between industrial society and the spontaneity of social relations. Architecture of this kind reveals its origins and establishes itself as translation of the language of sociology into constructed forms. In terms of legibility, however, the extreme coherence between the organisation of internal spaces and the treatment of the walls shows a new approach in Hertzberger's return to the question of the city in its traditionally sense. The concept of frontage no longer exists, in the sense of an attempt to mediate between recognition of the nature of the building's internal articulation and management of its surrounding spaces. In effect this is the result of an additive compositional principle that, in terms of Modernist theorisation, proceeds from interior to exterior. Such a choice generates a sense of excessive mechanicalness in the articulation of volumes as observed from the outside, belying the richness and variety of form within. It thus reduces the possibility of establishing a connection with the pre-existing environment and contributes to fragmentation of the city landscape, although based on principles that differ from those of Modernism. These limitations are common to everything produced by structuralism and would draw a common response from neo-historicists, with projects tending to shift their focus from the general to the particular, or from control of the public domain to control of the private domain. *Fig 13*

Another important question raised by Hertzberger's proposal relates to the matter of scale. If the building is to simulate the richness of relations of a small city and share its compositional principles, endless repetition of identical spatial components, regardless of their roles and functions within the public/private dialectic, contradicts one of the essential tenets of the language of the city - graduation of scale. In terms of proportion, linguistic register and materials, there are major differences between residential and institutional construction, although they share the same reference base, implicit in the code.



Fig 13. The internal space is the result of the dialectical relation between the system and its user's interpretation: the art of discussion versus the discussion as a means to create art.

The desire to implement the code in a manner that fails to give even formal representation to some of its many applications impoverishes the final proposal. An ambiguity that was overcome in Aldo van Eyck's project for the Amsterdam Orphanage, which was undoubtedly a more successful exercise from a structuralist perspective. Following identification of a framework capable of lending unity to the plan without sacrificing the character of individual ambits, the presence of spatial modules needed to be concealed, or at least absorbed, within more complex volumetric compositions capable of revealing the richness of the planning code through a subtle interplay of combinations, permutations and transformations. Such a process of individuation was instead confined to the interior of the building, in the treatment of boundaries between one ambit and another, as we have seen in connection with visual permeabilities. *Fig 14* The basic misconception of the project lies in its reduction of the city to a completely undifferentiated, non-hierarchical fabric. In fact the city is defined by dialectic impasse, between the base fabric and its monumental buildings and between public and private space, which cannot be gauged solely on the basis of a graduated permeability of space. If the corridor can be likened metaphorically to a street, it should not be forgotten that such correspondence "*functions*" by maintaining a clear distinction between the scales of definition of public and private space. By contrast, the sensation produced by Hertzberger's project is one of inappropriate overlap of the two, which generates a series of interpretative ambiguities that greatly limit the potential, that is in any case present, of the structuralist approach.

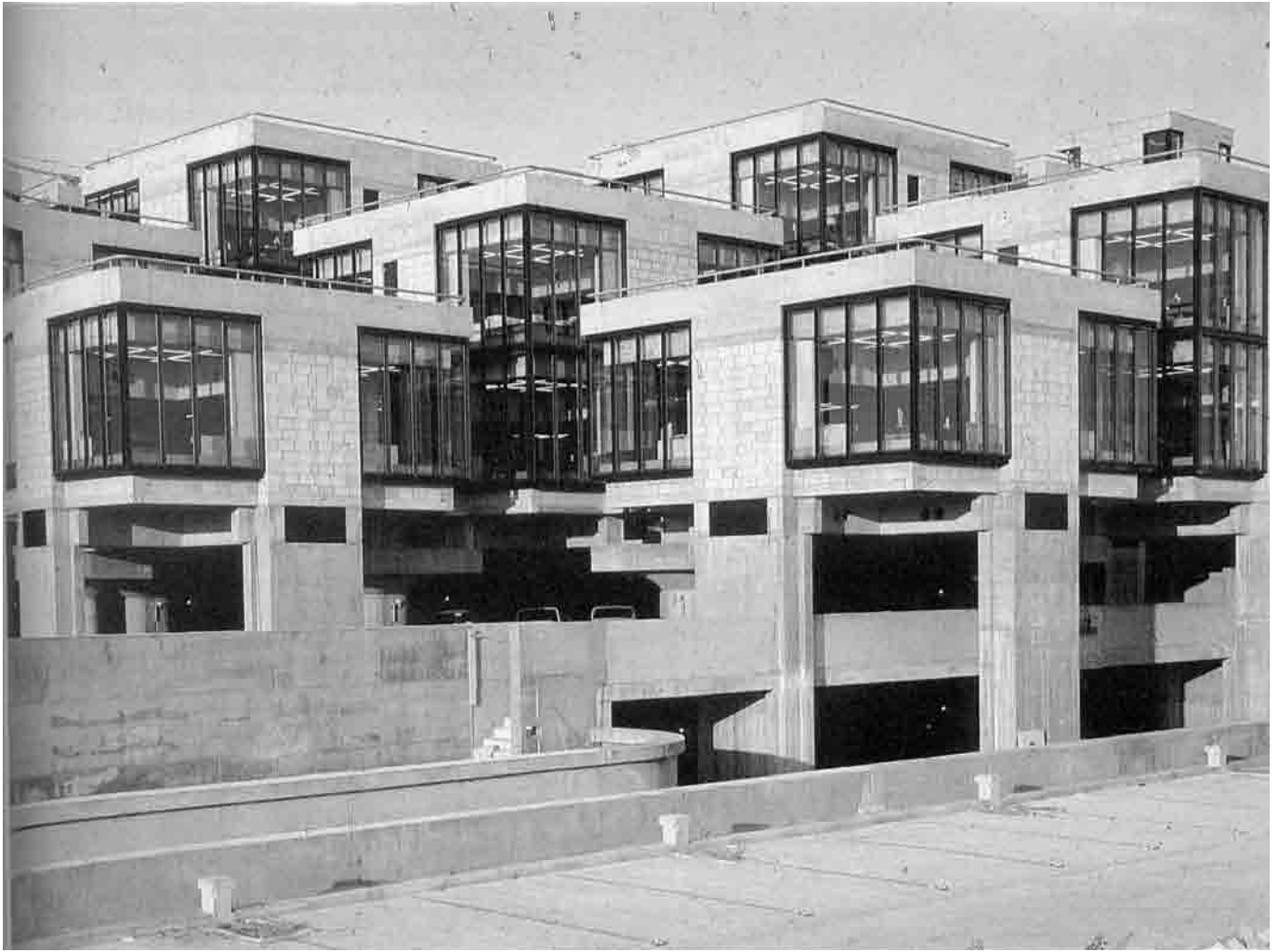


Fig 14. The external space express the system in its apodictic quality.

In positivist and functionalist tradition a university was always treated as a system of faculties, each possessing its own building complex divided, at most, between institutes and departments. The architects replaced this highly specialised vision with one of a single continuous structure that functions as a unique university complex, internally articulated to cater for different requirements.

This approach was intended to meet two particularly important requirements: the constant need for growth and the flexibility to cope with changes of function or teaching methods, which were unforeseeable at the time of implementation. The concept of relational architecture lends itself well to adaptability of this kind.

In essence, the university is configured as a campus, a complex that is relatively isolated from the city. For this reason the project attempted to reproduce in miniature the rich articulation of an urban organism, homologous with Berlin itself, although on a different scale.

Because of the need to rigorously “*design*” building rules, leaving the other aspects subject to possible change, the first step was to define the internal communication routes connecting the various functions: “*Our intention, therefore, in this plan, is to choose a minimum organization which*

The Free University of Berlin
Candilis, Josic & Woods, 1963

provides maximum opportunities for the kind of contact, exchange and feedback that is the real raison d'être of the university, without compromising the tranquillity of individual work. By providing first for individual integrity we establish also the first premise of a possible community...It is not a megastructure but rather a minimum structuring organization. This organization keeps its potential for growth and change, within the limits of the technological and economic milieu."(18)

The project avoids introducing centrality to the internals of the system. All elements were designed as substantially equivalent entities. The architects maintain that decisions relating to spatial hierarchies must be left to end users rather than to planners. *Fig 15*

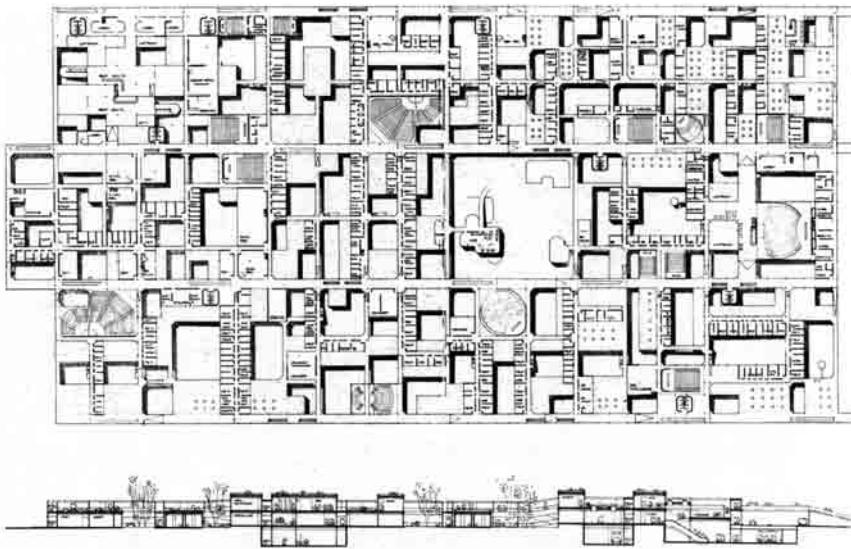


Fig 15. The University as a System embodies its community as a small society with its rules and entities. Each of them is materialized within the build space. All its members act within it as players into a playground.

The idea of minimum organisation was thus effectively reconciled with the concept of user freedom to determine the arrangement of spaces, i.e. with considerations regarding ways of completing the base structure, understood as an archetypal installation. The walkway system defines a grid whose rectangular mesh has a different relationship between the sides to ensure adaptability to any functional requirement. The various environments - office, lecture rooms, laboratories, conference rooms, theatres etc., - are distributed along the sides of the mesh with intermittent "*undeveloped*" open areas for ventilation and illumination of the distribution spaces. Further service routes, perpendicular to the first, lead away from these open areas, allowing the spaces behind the first sets of rooms to be exploited. Over time each mesh would become progressively saturated until it developed into a continuous tissue, the "*labyrinthine clarity*" on which Aldo van Eyck wanted to base new projects and which he recognised as the constituent principle of primitive architecture. A very compact web of construction, which progressively influenced the planning of service routes, was thus created. The modular coordination system that underpins the architects' plan and explains the fact that every "*urban*" mesh can be saturated with a finite number of elements, is also seen in the curtain-walling in the individual pavilions. Designed by Jean Prouvé, it is fashioned from panels of core 10 steel. The entire complex develops the idea of

18. Woods Shadrach, *World Architecture*, London, 1965, pp. 113-114.

horizontal growth to simulate the idea of the Kasbah and its complexity arises from the desire to reconcile the sense of open growth with the possibility of modifying the density of the individual meshes. In other words and this is an important point, not applicable to other Dutch experience, the complex is designed to become simultaneously wider and more dispersed, or, if necessary, to grow by densification. In this sense it effectively expresses one of the most important growth criteria of the traditional city.

In 1964 the Venetian authorities awarded Le Corbusier for the project for the new city hospital. It was a particularly complex and highly specialised assignment. The procedure developed in application of functionalist theories required a solution giving maximum recognisability to the various functional components, in line with the Taylorist model of specialisation: *"It is possible (even within the height restrictions imposed by the site) to imagine a solution in which vertically organized blocks of different classes of accommodation would be related horizontally, but Le Corbusier has decided to separate the different classes vertically, so that each level serves a different purpose, and a cross-section at any one point is, in principle, typical of the whole organization."*¹⁹ The chosen solution therefore responded to a need for flexibility and extensibility, also guaranteeing more effective administration of the complex. But these were not, in themselves, sufficient reason for the scheme to go ahead. Being unique at the time, the adopted solution would not necessarily have become associated with the hospital theme and thus have gained recognition, although it had been devised to meet radical innovations introduced in the hospital sector since the time of the pavilions.

Corbusier in fact intended to integrate the project into the historical fabric of the city that had made a deep impression on him during his first visit in 1906. It therefore had to blend into the urban setting and gradually lose itself in the "maze" of its spaces. But Le Corbusier had no intention of evoking Venetian spatiality either allusively or metaphorically. His is a "structural" interpretation in the sense that it seeks to define and, in any case, modern system marked by a reproposal of the typical relations of the city's urban fabric. Only thus is it possible to recognise its association with a unique and unrepeatable space, in respect of a time, that of contemporaneity, which must necessarily be a crucial indicator of its historical setting. This is relational recognisability, anticipating that of single themes, which are absorbed therein; the revelation of a language capable of unifying the diverse episodes that shape the city in its synchronic and diachronic projection; a belonging to a place that does not become "contemporaneity", but strives to repair the break with remote history, in which it skilfully rediscovers the common matrix. This is the source of interest in the architect's simultaneously pragmatic and intellectual stance. *Fig 16*

Over the area of intervention, which forms the last advance of Giudecca towards the stretch of water separating it from Mestre, Le Corbusier laid out an urban fabric in which the street pattern corresponded to the system of service routes, arranged as an isotropic and multi-directional

*New Venice Hospital
Le Corbusier, 1964-65*

19. Ian Colquhoun, *Essays in Architectural criticism*, Cambridge, The MIT Press, 1985 [1981], p. 35

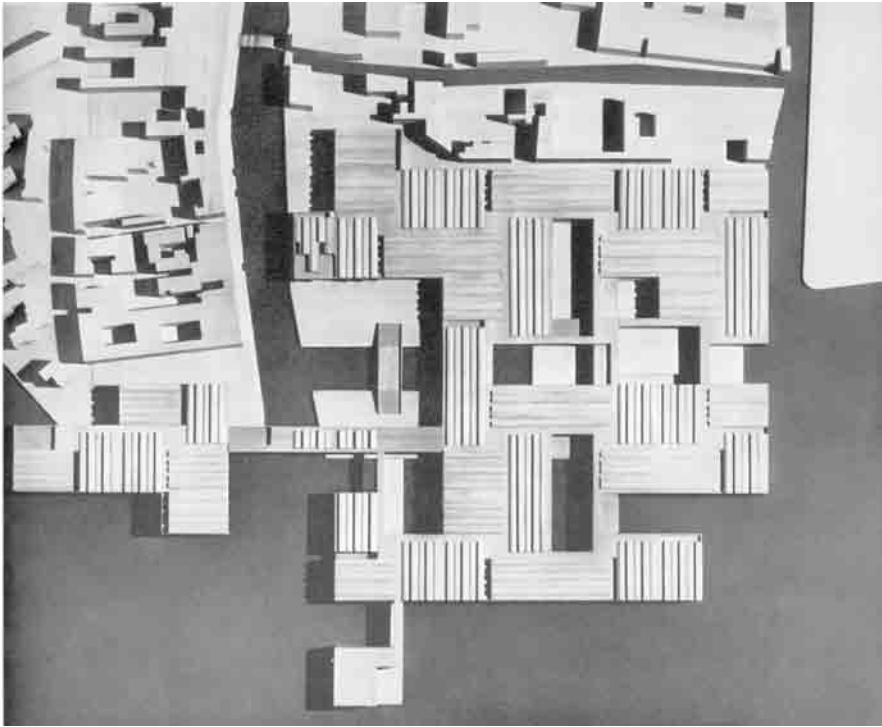


Fig 16. Le Corbusier landing on Venice. The language of Modernity accepts to absorb and metabolize the byzantine spatial structure. The turbine like system unfold its power towards the lagoon. The particular becomes the universal and the functional brief becomes instrumental to its logic. The revision of Modernity starts from within.

campielli in staggered fashion, so that views are always blocked by one of the campielli boundary walls. This particular configuration of relational spaces and the manner of connecting streets and squares, known as “*turbine*”, are typical of the campielli of Venice, just as it is common for built-up areas to lie perpendicularly to access routes, resulting in a peculiar rotation at junctions. Alan Colquhoun underlines the fact: “*The concept of the top-floor plan is reminiscent of the Islamic medresehs of North Africa, where subcommunities of students’ cells are grouped around small courtyards, forming satellite systems around small courtyards.*”⁽²⁰⁾ The fabric of Venice is essentially Byzantine in origin, with a primitive imprint that connects it to the continuous and “*labyrinthine complexity*” of the fabric of the Middle East.

The chosen design does not reflect the conventions of functionalism, but reconciles the need for flexibility in a modern building with constructional principles still clearly visible in the inner city. These principles are brought back to life through the adoption of a model possessing the unifying power that alone can be attributed to a “*deep structure*” of generative grammar, from which the historically verifiable fabric of Venice took its origins. In this sense Le Corbusier’s operation goes beyond the postulates of the Dutch tradition of structuralism, which had always shown considerable indifference to context, or lacked a clear relationship with place: “*The plan differs from those isomorphic schemes where the unit of addition is elementary (as implied, for instance, in the roof of Aldo van Eyck’s school of Amsterdam). Here the basic unit is itself hierarchically arranged, with biological rather than mineral analogies, and capable of local modification without the destruction of its principle. It is obviously related to such matrix scheme as the Candilis, Josic and Woods project for the Free University of Berlin.*”⁽²¹⁾ Colquhoun thus confirms the project’s affiliation to the culture of structuralism, but acknowledges a higher level of organicity and less mechanicity.

20. Ian Colquhoun, *Essays in Architectural criticism*, Cambridge, The MIT Press, 1985 [1981], p. 38

21. Alan Colquhoun, *Essays in Architectural criticism*, Cambridge, The MIT Press, 1985 [1981], p. 38.

The innovative contribution of Le Corbusier emerges more clearly at code level. Dutch structuralism is characterised by a search for a module that can be repeated identically throughout the system by virtue of its possible interpretations and completions. In addition, the principles governing the functioning of the whole are repeated identically in the parts, such that local modifications are forced to adhere to them; this guarantees a sense of great unity, but drastically reduces the room for “bottom-up” change. Le Corbusier’s syntax is paratactic, open and centrifugal and operates through the addition of qualitatively and quantitatively equivalent parts that are not reciprocally organised. An obsessively “democratic” syntax, that responds to real needs for flexibility of use and continuous growth, as specified in the plan. *Fig 17*

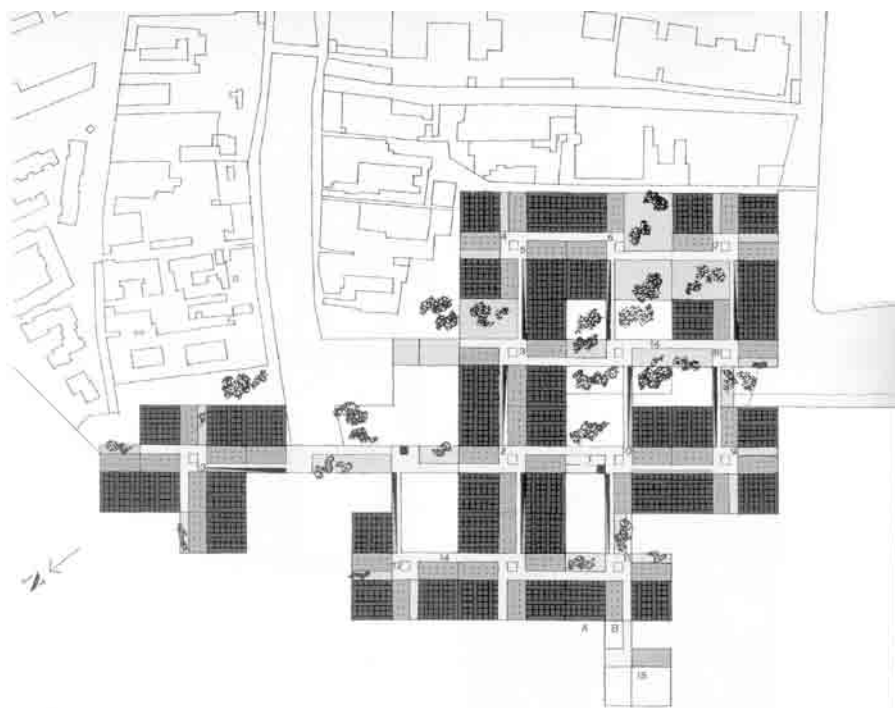


Fig 17. Le Corbusier’s abstraction of the existing building fabric, by acting within Structuralism, tends to subvert it, going beyond. The particular solution of the service core and the related corridors, derived for venetian *campi* and *campielli* structure, unfolds its capacity by governing the entire structure; the degree of freedom it enables define the field of possibility of the ensemble. The Partì is inverted: from the specific to the generic, from the context to the text via the language.

From the morphological point of view the building is characterised by repeated functional units, characterised differently at different levels. At the third level, which displays theorematic clarity and can also be viewed as a guiding principle for the other levels, each specific ward is organised as a fabric of rooms arranged at right angles to its access corridor and oriented by the same *campiello*. The urban arrangement thus hierarchises the corresponding structure of horizontal connecting routes on the *campielli*. The margins of areas situated inside the individual meshes, spaces yet to be articulated in relation to the hospital’s future needs, thus correspond to the orientation of communal spaces. Morphologically speaking, each part is organised as a systematic fabric of rooms. The morphology of the parts varies according to specific needs at every level: the second floor accommodates treatment rooms and operating theatres, while the first contains administration areas, kitchens, general services for the public and entrances, differentiated according to the means of transport. The various panels are suspended on a system of reinforced cement partitions to highlight the orthogonality with respect to the walkways, while the play of light and shadows

thrown by the profile of the complex reverberates on soil and water. In terms of morphology the various functional units are differentiated in respect of one principle.

The grammar adopted locally establishes a principle that complements the one that is observable syntactically in the whole. The method used is repetition of the modular ward units, consisting of a central corridor with rooms either side that receive light and air from above, interrupted only as imposed by necessity and aggregated along the blind sides. But the device of repetition is used to progressively fill the meshes of the base network, which operates through a play of equivalences between occupied and unused spaces, affording views of hanging gardens and the lagoon shore, the natural landscape over which Le Corbusier's "artificial land" extends. The internal arrangement of each mesh, especially when seen from above, thus resembles a spade, just as the sign produced by the skylights can be ascribed to the same tool.

Le Corbusier uses an elementary lexicon that can be traced back to an articulation of partitions on which the basic grammar of repetition, translation, contrast and rotation operates. The layout achieves great complexity without resort to intersections, emphasising a sense of openness at the structural level, the distributive level (with walkways "bayonet" walkways) and the volumetric level (contraposition of the different series of sheds in relation to a particular walkway). The modular concept is highlighted by the use of concrete, which the architect possibly intended to be partially prefabricated.

The project can thus be seen as an interpretation of structuralism, its complex configurations containing a variety of structures which do, however, respect the basic principles of the general system. The analogy between Le Corbusier's organicist structuralism and the development of the traditional city can be understood in that sense.

4.1.4) The phenomenon interpreted: analysis of the sources and spread of themes

Without doubt, this has been a source of inspiration for at least two reasons (22). The new typologies introduced by industrial society - covered markets, railway stations, large stores and general exhibition areas for instance - carry public and private dimensions, in all the complexity of reciprocal relations, within a coherently constructed architectonic space, without producing appreciable qualitative distinctions between the different morphological classes involved. *Fig 18*

This is essentially attributable to the articulation of the plan that is to be achieved and the profusion of activities, reflected in the large dimensions of the buildings designed to house them. In this regard the institutions of bourgeois society thus represent the first intriguing attempts to restore urban richness artificially through a unique linguistic code closely linked to the new possibilities of the architecture of steel and glass, which is able to synthesise house, street and city within the same scalar dimension. Even though total awareness does



Fig 18. *Les Halles* in Paris are a striking precedent of Structuralism. The Pavilion system identifies with the construction order, which immediately express the new rising values, disseminating its power into Haussmanian Paris. However the market fits to the context, extracting its proportion from it. The Structuralism, on the opposite, disregards the context, transforming it into a pre-text to amplify its capacity.

The architecture of engineers

22. Herman Hertzberger's thoughts on the subject can be read in his *Lezioni di architettura*

not exist among either contemporary observers or earlier figures more conscious of the phenomenon's impact (23), these experiences form the example of an open code that tries to reform architectonic language, beginning with the identification of new archetypal themes, such as the unsupported wide-span hangar, the pavilion and the gallery, that are repeated indefinitely to satisfy the plan's functional requirements.

Although the emphasis is placed on purely constructional aspects, in a kind of self-limitation of expressive potential, there is a lingering classical wish, always easily identifiable, for correlation between volumetric and spatial components. The economicity of language adopted, arising from the nature, number and dimensions of the elements used and the serial logic of reciprocal correlation, which tends to reject closed compositions in favour of modular grills, linear installations and concentric configurations, is associated with the huge potential for use confirmed by the works completed over the years.

The nineteenth century nevertheless failed to fully exploit either the new technologies or the experience gained in dealing with new planning concepts. The architecture of glass and steel has failed to establish itself as a global strategy for a coherent rethink of the city. Apart from such instances the sundry languages of eclectic culture are dominant and are recognised as standard codes for interpreting the various institutions of bourgeois society. The individuality and recognisability of the parts prevail over the desire for uniformity concealed in the language of industrial architecture.

Many aspects of "*structuralism*" are common to the De Stijl experience. In fact this movement presents itself as dissolution of style in favour of a universally valid code known as "*Neoplasticism*" (24). *Fig 19* This implies immediate rejection of any historical legacy and refusal to acknowledge any temporal or spatial convention or constraint. Architecture is no longer a question of form, but the construction of an open and theoretically unlimited Cartesian spatiality capable of returning the traditional distinction of project scale - house, district, city or territory - to a uniform and qualitatively continuous dimension. The archetypal pursuit of "*structuralism*" shares the same desire for universality, although within a single project.

The De Stijl movement thus tends to manifest itself as a logical-syntactic system tied to the idea of instability and continual change; it uses a generative-transformational grammar to establish criteria for the articulation of a small number of fundamental components that shape space in a process that makes no distinction between interior and exterior. The movement therefore rejects types understood as pre-established forms based on formal correspondence with the allocated functional theme.

Architecture changes from static to dynamic. The time factor changes from extrinsic, i.e. tied to a particular historical period, to intrinsic, or closely connected to the process of construction of form and its deliberately unfinished character. De Stijl language rejects the idea that realistic form is fundamental to the artistic process. As a direct consequence its vocabulary is substantially impoverished by a process

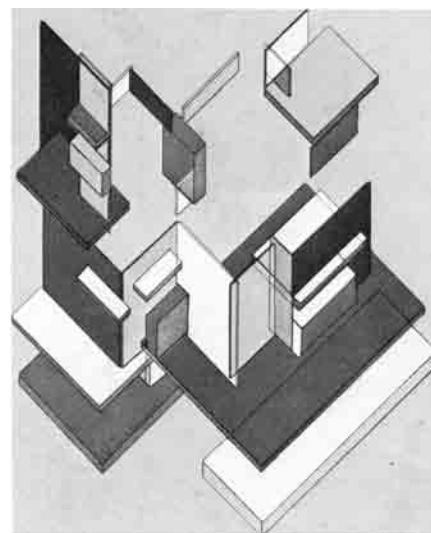


Fig 19. De Stijl precedes Structuralism' search for abstraction. In the former case, art blurring into life, is a radical statement compared to the latter, where life is absorbed into the quality of the system, presuming its universality and not questioning its conventionality.

The De Stijl Movement

23. Sigfried Giedion, in *Spazio, Tempo e Architettura*, although acknowledging the importance of the phenomenon because of the impact it will have on the future developments of architecture, gives little weight to forecasts, largely hazy and uninformed, of a new way of seeing space in the city.

24. In this regard, the thoughts of Bruno Zevi in his *Poetica dell'architettura Neoplasticista*, Turin, Einaudi, 1974, are particularly relevant. The urban planning visions of Piet Mondrian are particularly important in terms of our discussion.

of systematic abstraction that affects all the traditional components of architectonic activity. The easy identification and nameability of different elements - structural (pillars, beams, walls, roofs etc.), volumetric (windows, doors, balconies, porches, loggias etc.) and distributive (corridors, rooms, atriums etc.) - distinguishable in countless adjectivations and linked to knowledge and means of transmission in traditional cultures, is progressively replaced by a vocabulary of simple panels distinguished by number (but not by nature, apart from the contrast of opaque and transparent surfaces), placement and rules of correlation, both relative (involving reciprocity) and absolute (with respect to the whole). An analogous process affects "*structuralism*" although it is not taken to extremes, as is the case within the avant-garde movement.

Even from a strictly semantic point of view, what we are witnessing is a genuine revolution. Each component acquires unique significance from the system of syntactical relations and its position. The roof is thus only identified as such by virtue of its simply being "*a plane situated above...in a horizontal position*" without regard to its iconic significance. The window is similarly defined as an "*interruption between two or more panels oriented at right angles to each other*" rather than on the basis of an assumed conventional form. "*Structuralism*" shares these presuppositions, which make it an "*operational*" system, but enriches them with semantic input in the form of user interpretation of each material and/or spatial component, based on personalised use.

With regard to expression, De Stijl attaches value to proportion and colour alone, submitting each physical item to a process of abstraction that rejects any explicit reference to materials, whereas structuralism opts for strong architectural characterisation through contrast of materials, which also lends semantic enrichment.

From a pragmatic point of view Neoplasticism seeks to merge the language of built space with that of mechanisation through recognition of the project as a dynamic process on one hand and, on the other, through an obsessive search for impersonality and objectivity, which finds constant reference in industrial architecture and its relationship with the individual. In "*structuralist*" philosophy the search for anonymity in planning decisions exists alongside a desire for individuality and personalisation, achieved through completion of the work by its future users.

These positions constrain the user - in both codes - regardless of any immediate relationship with previous experiences and consolidated traditions, with a remembered heritage. Conversely, the significance of every operation is contained within itself and cannot survive if set in a relationship with extrinsic factors. The contextual condition of understanding the work presupposes its substantial detachment from previous experience and determines its common theorematic character.

The systematic intention underlying "*structuralism*" comes to the fore in post-modern culture as an attempt to find rules for constructing a coherent and complete language within every artistic experience, following recognition of the failure of every universal principle and

The Utopia of megastructure and High Tech

every generalising codification. In this sense it is a notably anti-modernist phenomenon, lacking the utopian element implicit in the functional plan and lying closer to some extremes of the historical avant-garde. *Fig 20, 21, 22*

Furthermore, the emphasis placed on aspects of transformability is justified only within an open planning process analogous to that theorised in linguistics, in practice as well as in strictly compositional terms, as a reality that needs to harness all the strengths of social organisation if it is to make use of its own energy. These intentions are strikingly apparent in the architectonic interpretation of structuralism. In particular the Utopia of megastructure deprives “*structuralism*” of its sociological content, i.e. user participation as an implicit degree of freedom in project decisions, focusing only on its formal values. In addition it operates by depicting scenarios that exploit scale and complexity to become a new Utopia of form, a globalising vision that stifles true individuality. The uniformity of the built environment degenerates to a search for maximum flexibility and changeability over time, an end in itself that pays no heed to the collective and participatory dimension.

High Tech and this new Utopia share the car worship that dominates the system’s logic. The idea of architecture as a language is misinterpreted and reduced to that of a consumer item whose components have different levels of perishability and obsolescence depending on their nature. The theory of the ephemeral prevails over the search for constants; the idea of time intensifies the notion of the project as a process that involves markets and public authorities, eliminating contact with the user and impoverishing the very concept of transformability.

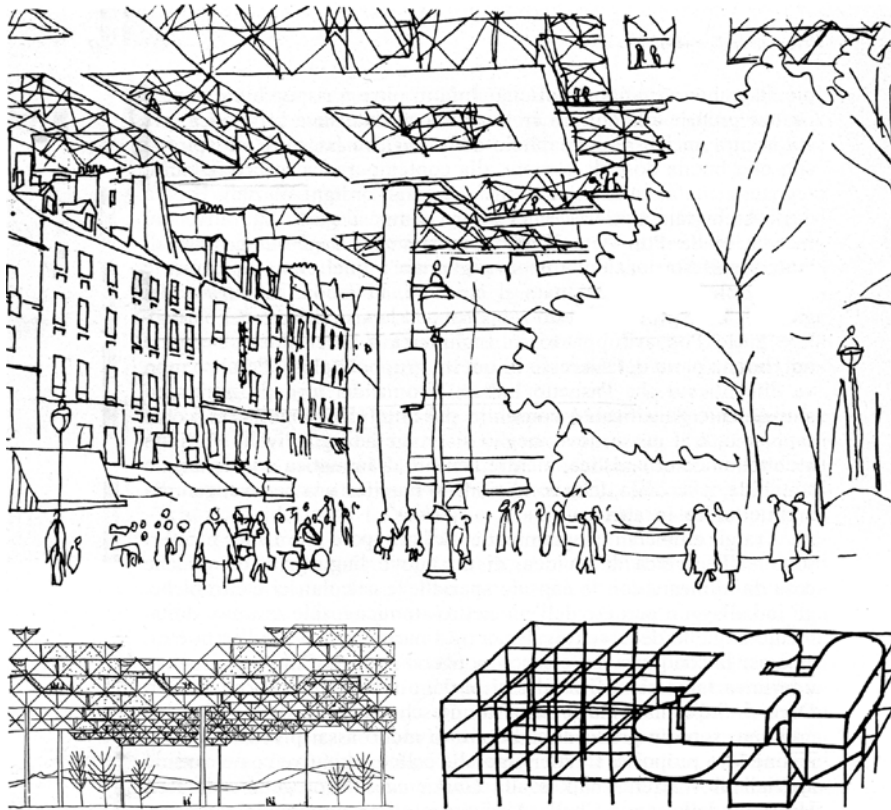


Fig 20. Yona Friedman's *ville spatiale* floating on Paris. The Structure in the sky versus the Structure on the ground. The tension between the field of unlimited possibilities evoked by the new *Ville* and the limited system of relation embodied by the structure of the historical Paris identifies in the condition of "suspension" a literal and metaphorical definition for Utopia: the endless deferment its own landing.

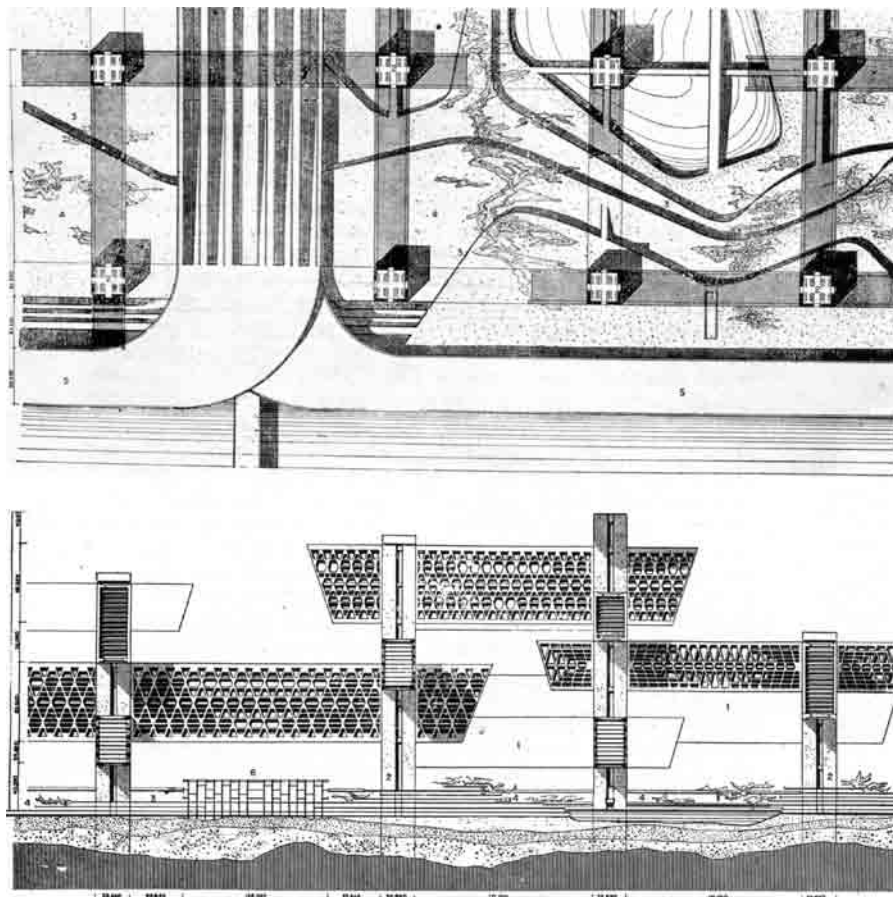


Fig 21. Kenzo Tange's Tokyo Bay plan, 1960. The Mega-structural imagination exploits to the extreme the power control of the structure into a twofold direction. Towards its out of scale size it evokes a power which is overwhelming any political capacity-referring to massive industrialization driving forces- while on the opposite direction it progressively reduce any individual degree of freedom to the minimum ramification.

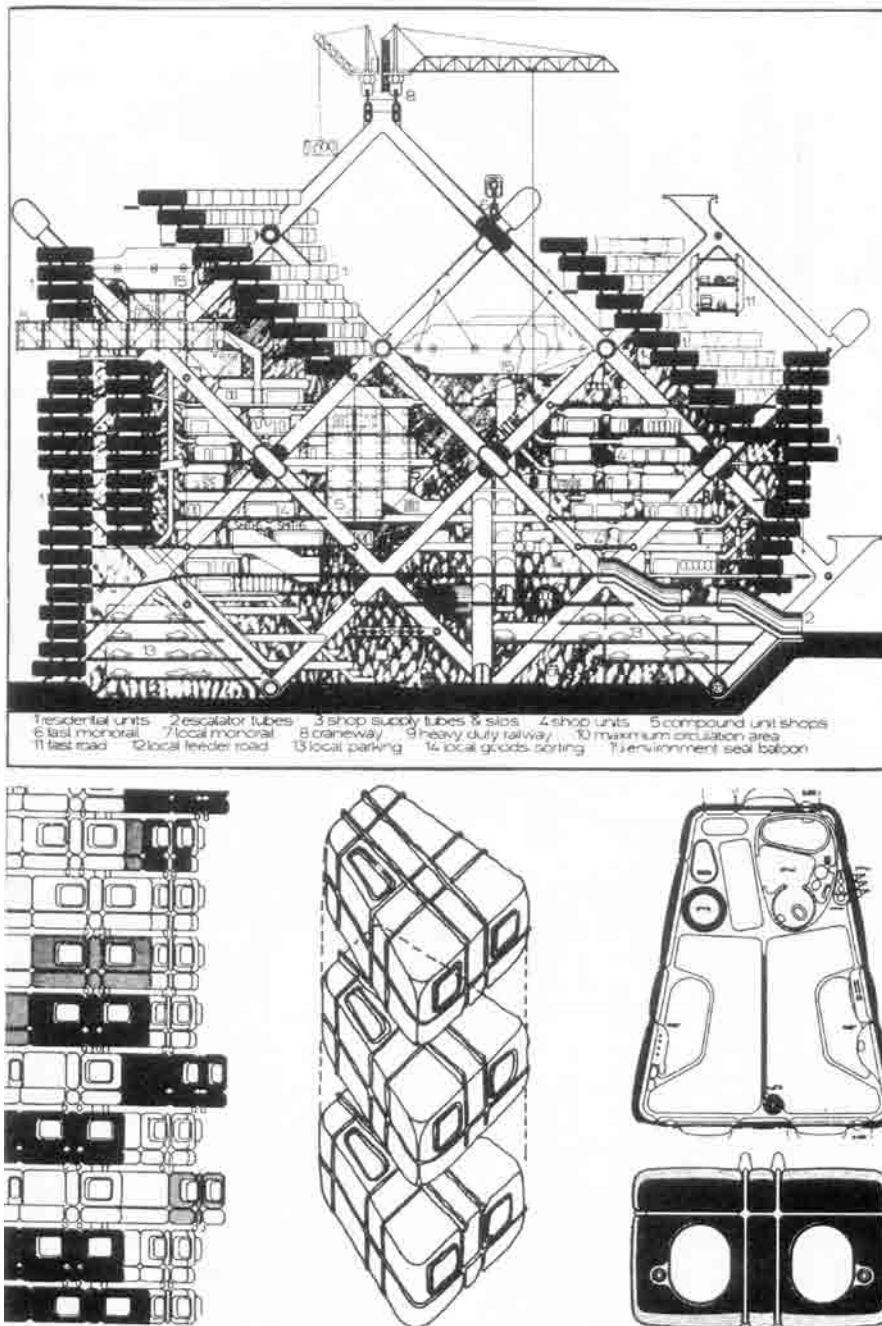


Fig 22. Archigram, *Plug-in City*, 1964. Industrialization takes command. An ironic pop culture imagination kit turns urban design strategy into a playful crane assemblage of pre-cast capsules into a flexible framework. The Anglo-Saxons change linguistic register to say the same of the Japans. Two different cultures approaching the same struggle: are still human beings having control over their environment?

4.1.5) The creation of architectural “*language*”

We have seen that structuralism places particular emphasis on the role of the architectonic code in the organisation of built space. This arises from the desire to modify drastically the scale of functional specialisation promoted by the architecture of the Modern Movement and to highlight, by contrast, the permanence of the rules and principles in a society's culture of construction, just as “*language*” is perfectly recognisable in the formulation of any “*symbol*”. Such a process, taken to the limit, can lead to substantial ambiguity of architectonic genres and categories, creating a type of widespread anonymity that soon draws criticism from many intellectuals.

Architecture as a “relational” space

Looking beyond polemics, reflection on the systematic nature of architectonic language has led to the restoration of values that had assumed a marginal role in the first decades of the 20th Century, when, with some notable exceptions, there was greater interest in the material aspects of architecture.

Apart from matters of a general kind, the architectonic language promoted by structuralism has well defined characteristics, even in the unavoidable interpretations of its proselytes.

From a strictly syntactical point of view it appears largely additive, paratactic, centrifugal and open. The process of constructing form is thus characterised by unfinished configurations that develop by a continuous process of reverberation from an original thematic nucleus. This explains the constant recycling of structuralist compositions within the limits of the area of intervention, which further strengthens the wish not to be constrained by factors external to architecture. In this sense they demonstrate clear derivation from the syntactical principles of Modernism.

The morphological dimension by contrast reveals a critical stance on Modernist theories. The constituent components of the city, like those of architecture, do not differ substantially in form, dimension, geometry or materials. Through a process of progressive abstraction they tend to be identified with repeated and largely interchangeable, simple modules. This explains the tendential seriality of structuralist morphology, its rejection of the differentiation of parts. From the morphological point of view it is appropriate to recall the substantial homology and interchangeability of occupied and empty spaces and of closed and open spaces, which allow space to be used with flexibility and justify criticism of Modernist specialisation based on the role and materiality of space.

Structuralist grammar is responsible for the differentiation of parts by making distinctions between factors of permanence (supporting components, distributive spaces, volumetric permanences) and aspects of modification and interchangeability. The relations governing single components are always mutually opposed with regard to the principles of orthogonality of spaces (vertically and horizontally). It should also be remembered that structuralist grammar restores the principles of Vitruvianism, that is, the substantial integration and reciprocal coherence of aspects of distribution, structure and volumetric articulation. This approach finds justification in the structuralist assertion that all manifestations of a language have the same structure, being subject to the same rules and principles.

The lexicon employed always tends to abstraction. The recognisability of architecture's traditional components - doors, windows, roofs, balconies, terraces etc. - is effectively reduced to a juxtaposition of surfaces that possess different levels of permeability and are thus able to meet all the requirements of traditional components without "*representing*" them. The process of spontaneous appropriation discussed earlier takes place within the realm of the lexicon. The so-called "*primary components of the building*" are those considered to be interpretable, or directly modifiable, by the user. Although such choice can be considered limiting in effect, it is nevertheless true that it can be justified as another consequence

of linguistics. In fact the lexical components constitute structuralism's words and it is through individual usage that the language gradually evolves over time. Moreover it is well known that languages have enough flexibility to absorb an innovative lexicon without problems. It is much more difficult for external influences and attempts to appropriate the language to modify its grammar, morphology and syntax significantly. Modification of the phonic substance of the language, which corresponds to the materiality of architecture and leads to dialectisation, is rather easier. Work performed on the lexicon reveals the debt owed to the language of Neoplasticism. Nevertheless it should be remembered that, from a lexical point of view, space, structure and volume are considered to be homologous components that form a weft tightly woven into the warp of the "*language*".

4.1.6) The role of "*type*"

All the codes of architectonics and construction have their own historically acquired structure of syntax and logic, or assume well defined characteristics to be pertinent and therefore distinctive features of the respective morphological classes and their own formal vocabularies and establish the compositional rules that govern the entirety of reciprocal relations. Based on its ability to acknowledge such distinctions, we can determine the code's association with a precise culture, as occurs in historical linguistics. If we limit the analysis to particular conditions of time and space we can assume the logical-syntactic system to be essentially static and conventionally acquired, although placing it in a living culture may expose it to continual updating and a consequent search for new internal equilibrium.

The aim of "*structuralism*" is nevertheless to create a language in tune with the times - what we might inaccurately call a "*style*" - that employs the basic premises of avant-garde Neoplasticism to achieve this objective. With the project, understood as an abstract process for constructing space, undergoing constant change, the real objective is to use this process to study the operations that make it possible to move diachronically to the definition of a language, or to analyse the universe that precedes every legitimate and conventional limitation, through constant experimentation.

In order to achieve this result it is necessary to use an impersonal, tool that is neutral for the purposes of the trial being conducted and capable of "*measuring*" actions performed in the process of construction of form. Such a tool exists in the concept of system, understood as logical-geometric space that allows a theoretically unlimited number of configurations based on a limited number of operations of differential value performed on arbitrarily chosen components. This premise explains the continual recourse to archetypal configurations that, being traceable to cultures of all periods, are considered to be universally valid primary matrices and thus unconstrained by limitations of space and time. The experimental and highly theoretical character of planning intentions justifies both a certain "*primitivism*" in the project and the

Prefabrication and the language of construction

emphasis placed by “*structuralism*” on an open and systematic design, given a loss of interest in repeated and shared decisions defined ahead of the planning process and assimilated in predefined models that can be used to resolve subsequent problems.

We have in fact been able to establish that “*structuralism*” views every project as an eternal new dawn, a process of refoundation that is necessary, but not sufficient, for constructing a clearly identifiable and recognisable language that can survive and evolve only with the active and enduring participation of everyone involved, in any way, in managing the built environment. With a character of abstraction that gives it something of a collective quality, the system thus assumes the role typical of every experiment that advances the formation of a language that is subject to limitations of a historical nature, particularly in its generality with respect to unpredictable events. Thus in both practice and in theory different experiences can account for the permanence of general archetypal themes possessing a simple instrumental function, in relation to which individual projects assume the value of variants.

It is no coincidence that there is constant reference to Noam Chomsky’s linguistic studies and the concept of “*generative grammar*” in the choices of “*structuralism*”, or of a system of transformational rules that would make it possible to derive, from one code, all the different languages, which would be historically-based interpretations from the start. This is the first time that architectonics has faced the problem of analysing the logical-formal mechanisms - a kind of atemporal logical-syntactic system, definable as a “*deep structure*” - that make it possible to derive a historically valid codification of architectonic urban planning language through a series of transformative operations, given certain generalisable (hence universal) initial conditions.

Referring the concept back to architectonic language, once completed by virtue of the contribution of end users, every project would in fact define a very particular code representing the interpretation and transformation of a versatile underlying archetypal system that is common to the different themes addressed. In this sense “*structuralism*” stands above the Modernist search for the establishment of a new language. The reasons for such a choice are easily identifiable. Modernism in fact defines a language that belongs to a mechanistic world and which therefore excludes individual participation in its formation. The impersonal, neutral and abstractive character of the industrial production system, expressed through prefabrication, provides an ideal testing ground for theory and practice that, while not rejecting new processes, does not seek to reduce them to all-embracing moments of urban expression.

When industrial production processes are given priority over that of language formation, the role of users employing such a process to give shape to their own artificial environment, adjectivising it of all the limitations of the case, is restored.

Within a single project - and not between different projects, as a culturalist interpretation of structuralism would imply - it is always possible to identify invariants in the constructional, volumetric-formal and distributive systems, whose rules of permutation represent the sole guarantee of achieving an order that can be recognised by future

generations and transmitted to them and also constitute the degrees of freedom provided for within the system. This therefore shows that expression of an urban architectonic idea through a given code has been abandoned in favour of research to evaluate the transformation process that allows possible order to be achieved, albeit within a particular cultural environment.

Another important consideration allows “*structuralism*” to distance itself from the question of style, or from the search for a language in tune with its times. With regard to analysis delineated by “*structuralism*”, the type, in the sense of an expression of a historically valid logical-syntactic code, should not be considered to lie within the associative relations between form and new functions, but instead as the fortuitous outcome of variations through which form can be adapted to continuing change of use. This has immediate consequences at the semantic level. In fact, in a “*structuralist*” configuration it is not easy to distinguish a block of flats from an office block, or a church from a community centre. This arises from the fact that every building is to be seen not as a working manifestation of codified architectonic language, but as an opportunity to repropose the very process of configuring the code, which is what determines the final result.

The low recognisability of the outcomes of a process like the one considered is the result of the emphasis placed on the open character – generative and transformational in Chomsky’s terms – of the proposals, on flexibility and adaptability and on the idea of visualising the system through demonstration of all its possibilities. In strictly linguistic terms the project is defined as a place of possible interpretations, variable in time and space, of its basic archetypal configuration, which involves both the planner and future users.

These premises, which are all related to the question of the language, are the starting point for the criticisms that were gradually to coalesce in the so-called Neo-historicism. However, it is unsurprising that “*structuralism*” shares many characteristics with modernist culture in its search for a new universal language and that the more significant figures in the debate over recovery of the city’s morphological dimension are nevertheless benefiting from a solid foundation of structural training. Linguistically speaking, however, we may take a positive view of the contribution of “*structuralism*” as it relentlessly examines the problems posed by the industrial city. What are the factors that influence the recognisability of constructions, their significance and their role within the urban form? Does there exist an iconic code without which the city landscape risks dwindling to a point where it becomes irrelevant to those who create it and those who use it? And if this code exists, what are its principles and components, the techniques and methods that enable it to represent the task assigned to it in a comprehensible manner? “*Structuralism*” has not given a detailed response to this kind of problem, having more of an interest in translating and reducing formal procedures to processes of an associative and hence essentially logical-syntactic nature, in a dynamic and metahistorical sense.

Nevertheless it is worth noting that the proposals of structuralism, with their implicit character of abstraction, which is emphasised even more obsessively than in modernism, strongly challenge the idea that

the significance of architectonic proposals should be sought in a literal interpretation thereof. This explains the difficulty of recognising the role and function of individual component parts through the image, which makes it impossible to identify the actual components themselves and the obsessively noted need to define value based on continuing relational processes, from which the concept of “*structuralism*” derives. The problem of meaning thus moves slowly from semantics and from the conventionality of primary and secondary meanings, to the logical-syntactic dimension.

In analogy to earlier observations on semantics, there is a certain obvious diffidence towards context which, because of its very existence, can reduce the degrees of freedom and the “*tree of choices*” implicit in the notion of “*structure*”. In fact the project is not rooted in the system of pre-existences, as it is to function, or to pragmatic limitations and the assonances seem more accidental than deliberate. Conversely, it can be seen that the choices of “*structuralism*” are always placed in clear antithesis to material constraints (for example, orientation in relation to the nature of site) in order to emphasise the unfinished character of the work and to highlight the impersonal nature of the system as a neutral medium between those who follow its rules and the end product.

This consciously translates into unresolved areas in contact with the Modernist city. Contrary to some initial assumptions, the margin acquires a basically passive connotation here. Although this is the desired result, it is the nature of empty space as an autonomous value that is substantially called into question. Viewed as peripheral space according to urban principles that are often conflicting and that negatively define its nature and margins, empty space is returned to a condition of apparent naturalness and neutrality, an abstract landscape of potential, virgin territory ready for new occupation in exchange for some return. This is the source of criticism of the rational plan. It is only through this interpretation of empty space that “*structuralism*” can express its full potential.

The choice of materials does not take account of local factors. The language is that of prefabrication and logistics and largely defines models, or situations, that can be exported and used in any circumstance. This versatility of adaptation is not interpreted as a limitation so much as confirmation of the method’s validity and its deeply rooted deference to universal and archetypal needs.

While the type, in its traditional sense, represents the system of repetition (at the constructional, distributive-functional and volumetric-formal levels), the generative configurations of structuralism establish the system of possible variations. Where the first tends to codify, thus reducing the risk of incomprehension or misunderstanding of the relevant theme, the second tends to guarantee maximum interpretability and modifiability, confirming the idea of substantial ambiguity in the interpretation of proposals as having value when theorematic clarity and apodicticity of Modernism’s propositions are being debated and challenged. The dynamicism of “*structuralism*” artificially reproduces the traditional city’s semantic vigour against the contrasting staticity of the industrial city, a clear indictment of the products of translucent architectonic “*crystals*”.

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4.2) The Neo-Historicisms

4.2.1) The cultural context

The feature that confers unity on the various manifestations which I have brought together here under the definition of neo-historicism consists in their recognition of the importance of history as a factor capable of crystallizing the identity of society and justifying choices of a collective kind. It expresses a complex reality, whose process of development reveals the contribution of the different parties that form part of the public body. Concretely, they are capable of expressing themselves through a clear and continuous participatory effort. Moreover political engagement becomes a constant shared by the authors engaged in the debate, and the subordination of architecture to politics sometimes leads to misunderstandings over objectives and aspirations.

More generally, the rejection of the modern tradition stemmed from the increasing awareness that architecture as a serial product did not meet the shared needs of the community, since the community is effectively excluded from the construction of those same needs. Participating in the collective life means contributing to its construction, while the attitude of the industrial system is to consider everyone as a consumer/user of a service supplied in powerfully mediated ways. There seem to exist no self-regulatory mechanisms between system and citizens.

Architectural structuralism seeks to intervene between system and users to ensure that the latter can, to some degree, become parts of that same system, its vital nerve centres determining its prospective development, though in ways that are still controlled by the system itself.

Neo-historicism continues the move begun in this direction by raising the issue of an increased social identification of the citizen with the transformation of reality. How can the individual make a direct and concrete contribution to the transformation of the collective present and future? By replacing industrial production as a process of transformation of reality with history as the agent of the transformation, understood as a collective and therefore participatory product. The architectural work is justified through its making, but its making is not exhausted in the system of rules that governs it as such, but in the history of language that produced it, without whose support and legitimation the work would be incomprehensible. In this way the neo-historicisms retrieve the idea of its importance in a wider horizon than that of the work as such, even though they accord it a relative autonomy, a grammar of the text which is partially the repository of its truth.

The Modern Movement subordinated the existence of form to the determination of a standard, namely an integrated set of standards based on needs, supposed to have a universal validity and covering housing, work, transport, education and leisure. The architectural product is required to meet these parameters in the services it offers, like a tool. In the logic of serial production, it is the industrial process that guarantees its broadest dissemination through the type, understood as a simple instrument of production, a matrix, as in the original acceptance of the term attributed to the ancient Greeks. The type, as a mode of mass production, is however always the result a posteriori of a series of reflections which have as their object the system of needs, hence the standard, in compliance with positivist philosophy.

The crisis of the C.I.A.M. is fundamentally attributable to the attempt to move beyond the quest for a universality implicit in the standard, a collective entity which is in itself abstract, since it is supposed to be acceptable in all conditions of space and time. The aim was to replace it with the notion of the individual and society as concrete realities diversified internally, capable of affecting reality so as to affirm their right to existence and their rightful expectations. The social dimension, and an understanding of it through political activity, become decisive factors which emerge forcefully from the new historical condition.

“*Form*”, understood as a material expression of an inherited conventional reality, acquired indirectly as an inescapable fact and not as a personal experience, is therefore regarded as not knowable or communicable to others. For this reason the term has been progressively abandoned, with an openly hostile attitude towards the concept. The industrial product, seen as incapable of embodying individual participation in an enlarged attribution of meaning to reality and its possible transformation, seems no longer capable of conveying the new emerging values.

Structuralism, above all its most radical and utopian expressive strands, concretely possesses an instrument – flexibility – through which it is capable of fulfilling the desire for personalization, for individualization while respecting a community frame of reference, namely the system of rules that guarantees its preservation.

In this new condition the type appears as a manifestation of a grammar

Autonomy of architecture and of urban form

capable of generating and controlling flexibility as it develops. It is an instrument of a wholly conceptual nature which defines the modes of a participatory production, generating richness through the search for an increasingly intense relational complexity which is unpredictable, just as the need for identity, which is manifested ever more strongly, cannot be programmed. In this way form comes to be identified with composition, while the material factors (which however continue, with rare exceptions of participatory self-build in poorer countries, to be produced in accordance with industrial criteria) are increasingly subordinated to the logical aspects.

While these attitudes represent the first significant steps towards the abandonment of an abstract and universal dimension of needs and expectations in favour of a growing concern for individuals and their uniqueness, the subject is the true protagonist of the new dwelling spaces as compared with an object whose legitimacy and integrity are thrown into crisis by being a temporary outcome which passively registers the operations of a process of constant mutation controlled by the system. Form is simply one phase of the working of a process of logical operations whose action is never exhausted in the given conditions of space and time. They are justified only as phases of a system that transcends them, offered by the institution to civil society with the mediation of the architect, a skilled “*installer*” capable of translating the public’s ambitions into an operative instrument. The system is thus identified as a generative instrument that makes it possible to obtain forms starting from a system of rules internal to form itself.

As part of this outlook, beginning in the ’60s there was an approach which focused attention on two new issues: the historicity of the system of rules and the quest for a new identity and individuality in the built object. The modes of production of the pre-industrial city was based on principles and rules closely bound up with given conditions of time and space. When it was progressively integrated with the contemporary city, the direct confrontation between the two set credible limits to the universal validity of the rules still followed by architectural structuralism. As architects progressively passed from the design of systems of industrial production to that of systems of organization of inhabitable space, they became scholars attentive to the modes of growth of the city in its entirety and its parts in historical periods other than those they were living in. In some cases they hoped to deduce an effective way of intervening in historic city centres and in others to find laws for the organization of contemporary space. From this there arose an awareness of the complexity of the factors that affect the urban organization and the importance of the physical form of the city as a factor constraining and directing urban transformations. Flexibility, though a property of the system, calls for the present of an intermediary who implements it in use and indirectly emphasizes its role. The term was progressively replaced as by convertibility, which shifts the emphasis to the capacity of the building to change its state and by virtue of its material existence to direct the conversion in a given direction. In this way the architect becomes the person who claims the ability to guide its conversion through a knowledge of the system of existing structures, understood as constraints, and its compatibility with the desired change.

Structuralism lays the stress on the system of operations which make it possible to manipulate space while respecting expectations of participation which are increasingly individualized and difficult to plan. The formal results are simply temporary phases of adaptation of the system to altered conditions of use, and so potentially they all belong to it. This assertion justifies a certain ambiguity in the decoding of the results attainable, which have difficulty gaining an iconic pregnancy and are recognizable only through use. All this is consistent with the idea that space exists through the mechanisms of its appropriation, so making it nameable and describable. In this way space acquires forms through use. Altering the conditions of appropriation transforms the sense of space itself.

The semantic richness of inhabitable space passes through the filter of a minimal reduction of syntax, i.e. the rules for articulating the architectural code and the constructs obtainable in this way, and of vocabulary, i.e. the components used to cope with the different needs to be satisfied, emphasizing the role of the practice of space, by analogy with the practice of language, by means of participation in the construction through the practices of appropriation. The social dimension, that of lived/spoken, prevails over every other manifestation of the spirit.

The neo-historicisms oppose the wholly syntactic richness of structuralism with the complex richness of a morphological and lexical repertory continually renewed through its continuous deployment of meaning in the course of history, the expression of a practice of appropriation of space which has succeeded in reconciling the legacies of knowledge acquired and the urge to experiment through the contribution of innovation. Hence a semantics of dwelling, closely bound up with the context of belonging and the dimension of convention.

Morphology

While the Modern Movement directed its efforts towards the definition of the processes of industrial production applied to the field of building and design, and structuralism had experimented with the creation of flexible systems for the assembly of industrial components, the neo-historicists were interested in the problem of the construction of urban places, meaning collective spaces and facilities capable of entering into a dialogue with the existing system. The congruity of the new projects is measured by their capacity to enter into a relationship with the system of constraints inherited from past urban seasons. This entails an analysis and a particularly profound knowledge of the history of the city in order to retrace its formative and transformative rules. In a strictly semantic perspective as well, the project acquires a significance depending on the ways it enters into the relationship with the existing city. Its truth is no longer a property of the system of rules that governs form as such, but depends substantially on the system of relations it creates with all the other objects of the same kind that have preceded or will follow it. The architectural object is no longer isolated from its historical and material context, as still plainly happened within architectural structuralism, by analogy with what was predicated by

The construction of place as the condition of rootedness

linguistic criticism of a Structuralist kind. Instead it becomes one element in a series and acquires a significance closely related to all the elements of the same series that have preceded or are to follow it.

Also for the Modern Movement, the architectural object, like any other industrial product, was one element in a series and its relations with the other components of the series defined its significance; but all the elements in the series belonged to the same production process, meaning they were homogeneous. But if the series consists of components produced in different conditions and circumstances to meet an equally wide range of specific functional requirements, they will no longer be homogeneous. Their significance will emerge through differences in behaviour and intrinsic characteristics. Social history and its significance emerge from the comparison between the different forms which have guaranteed the development of specific rituals associated with the same functions within the same area.

The ideology of Functionalism and the subordination of form to function in practice call into question, at least theoretically, the very idea of architecture as language, establishing a natural connection between the brief and the architectural object intended to embody it. This correlation has always been purely conventional in nature, the result of an agreement between parties in some cases, or the result of imposition by a more authoritarian group in others.

The significance of this passage is very important, because in substance it increasingly distances all those categories of people who lack direct access to the processes of industrial production from the governance of the city and the social pact which subtends it. The social contract was, in other words, a condition, though mediated, of participation in public life in all its possible forms.

Creating a crisis in the conventional nature of the relationship between architecture and its significance, and above all identifying the significance and task of architecture with its function, also calls in question the conventional idea of formal syntax, meaning the conviction that it can be the result of a continuous and sometimes adversarial negotiation between the parts, which repeats by analogy the same principles of industrial production. Within the same linear process with reciprocal implications, the type is the instrument that allows for mass production of the standard. Every standard is matched by a type, but the type is a conceptual and material product of the production cycles of industry, which *de facto* replaces society and its action.

Structuralism replaces this condition with a compromise between the requirements of the production system and those of the social system, which constitutes only a small part of the former. The neo-historicisms go even further, if possible, in this process of liberation from the system, which in this case is reductively a system of industrial production. They emphasize the scope of the non-industrial object, an image of the sociality of making, as the result of an enlarged convention invoked as an “*impersonal*” guide, by reason of its acquired plurality, in facing future challenges.

Archetype, type and model

The Modern Movement tackled the problem of the city in a scientific way, starting from an approach to the problem that it felt was correct as naturally involving different subjects. It developed the possible implications in all of them by the light of industrial procedural rigour, out of respect for a process of a linear nature which was substantially positivist in spirit. Out of respect for this same procedure it held that with equal naturalness the results of the process would also be accepted without direct participation in its management.

The true reason for the success of the neo-historicisms is that they identified in the inherited pre-industrial city a result, by wholly completed parts, which could be recognized as a product of the community, namely the city as the artefact that registers in its recesses the laborious work of a multiplicity of subjects who have continually extended and transformed it so as to adapt it to their changing and sometimes conflicting needs. Hence the idea of the city as a collective (though inherited) work was the slogan used to restore interest in the object, the urban form and its specific components.

If the study of the craft modes of production of pre-industrial urban form enables us to deduce the distinctive elements of its architecture and rules of association, or syntax, the immediate result is that the typology that derives from it will also acquire the role of a collective work, by analogy with the process in which *parole*, a contribution individuated by all speakers through a process of progressive conceptualization, enables us to deduce a *langue* or language of a collective kind. The type is the sedimentation of this collective work which becomes form, as the trace, the memory imprinted in the design of the city, and only through the design of it fully detectable, once liberated from the “*expressive*” encrustations of matter which weigh upon it by individuating it. This concept is distinguished from the model, which represents the eradication of that collective work from its concrete conditions of occurrence. The notion of the archetype remains on the horizon in order to justify the structuralist effort to identify a universal basis, a deep syntax that explains not so much the functioning of languages, which are an objective fact, as their birth and evolution. In this way type, model and archetype define three phases present within the same culture: the scope of history (distinguishing a craft culture that is identified as collective in scope); the notion of architecture as an operative “*society of materials*” - the privation of memory - with an industrial matrix (which replaces the specialization of the processes for the continuous negotiation of decisions; and the naturalness/universality of the original act implicit in the “*deep*” nature of Chomskyian innateness, capable of brilliantly resolving the dichotomy between the partiality of codes and processes and the tending towards participation extended to their implicit development in architectural “*structuralism*”.

The search for permanent factors within a perpetually changing urban structure is a conscious approach, consistent with the search for autonomous formal values independent of mutable historical events. The existence of primary elements, in the acceptance introduced by

Monument and fabric

Aldo Rossi, capable of acting as factors of promotion and organization of the urban fabric, first, and then capable of resisting the wear and tear of historical time and the changes in the built context, traversing epochs transversally without showing any signs of a possible loss of formal pregnancy, is the self-evident confirmation of the existence of values – peculiar therefore to form – which are preserved as such by resisting the semantic erosion produced by the continuous reattribution of meaning by the community.

It is therefore the presence of the monument that validates, through historical research into the city, the transmission of values that belong to the object as such. Its historicity derives from the fact that it is a model, a concrete entity which can be uprooted from its context without changing its form, though systematically subverting its significance. History thus exerts its influence through the continuous deployment in space and time of un formal models.

4.2.2) The ideas of authors: intentions and definitions

Aldo Rossi's text acquires a special value by reason of the extensive dissemination of the ideas brought together inside it through numerous translations. It can legitimately be maintained that the significance of the work lies in the motives behind it. These do not seem to have changed over the years, as the author himself recalls in his various introductions, and this means there was never any call for him to bring the text itself up to date.

The Architecture of the City,
Aldo Rossi, 1966

His essential idea is to question the theory of what can be called “*ingenuous*” Functionalism, which reduces architecture to the pure representation of its utilitarian functions through a one-way relationship of a causal kind. Rossi counters this principle with that of architecture as an autonomous discipline, endowed with a code of values independent of the indisputable pressures of an economic, political and social kind, based on the permanence of certain principles constantly verifiable in the course of history. These the author defines as the “*form*” of the urban artefacts, to distinguish their general aspects – and their implicit validity – as compared with their concrete manifestations revealed in precise conditions of space and time.

The purpose of his argument thus becomes to bring out, through reference to situations which have really occurred and are historically founded, the existence of closely correlated systems of laws and characters in order to try to create a theory of the city, an urban science. This science is intended to take De Saussure's linguistic theory as its methodological model. This explains the implicit identification between the city, understood as a system of rules to which every building and architectural manifestation conforms, and *langue*, as defined in precise terms by De Saussure. The text is divided into four sections: the structure of urban artefacts; the principal elements and the concept of area; the individuality of urban artefacts. The architecture; the evolution of urban artefacts.

The first section clarifies the hypothesis underlying the work. The city

is considered as an artefact, a work that grows in time in accordance with a logic of continuous adaptations of the existing patrimony to changing needs. In this way the city is modified in keeping with criteria of an artisanal kind, namely by piecemeal adjustments made in real time. Hence it is essential to recognize the individuality and uniqueness of urban artefacts as the starting point for any reflection on the future of the city and its transformation.

Nevertheless, we can succeed in defining the constituent modes of every individual architecture or urban manifestation only through a series of successive abstractions from the data with which the book starts, namely the concreteness of urban artefacts. Rossi defines the result of these operations as the “*type*”. The “*type*” for Rossi is therefore a constant, namely the underlying “*form*” of urban artefacts. In Rossi’s interpretation of the city there thus coexist a platonic image, the idea of the city, and an Aristotelian vision, the whole set of urban facts in their concrete materiality as an occurrence, and these factors are always closely correlated, to the point where, out of respect for De Saussure’s linguistic formulation, the urban artefacts become the “*words*” through whose historical sedimentation “*languages*” are renewed. *Fig 1*

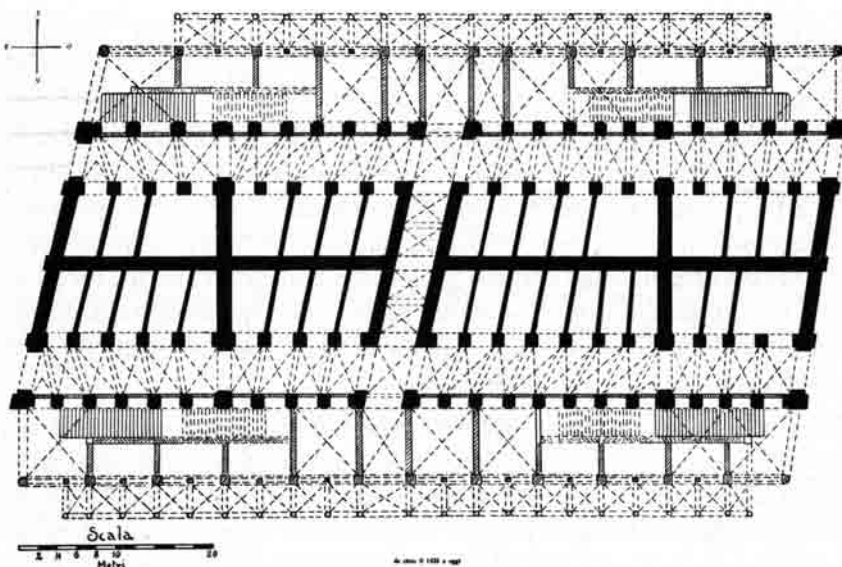
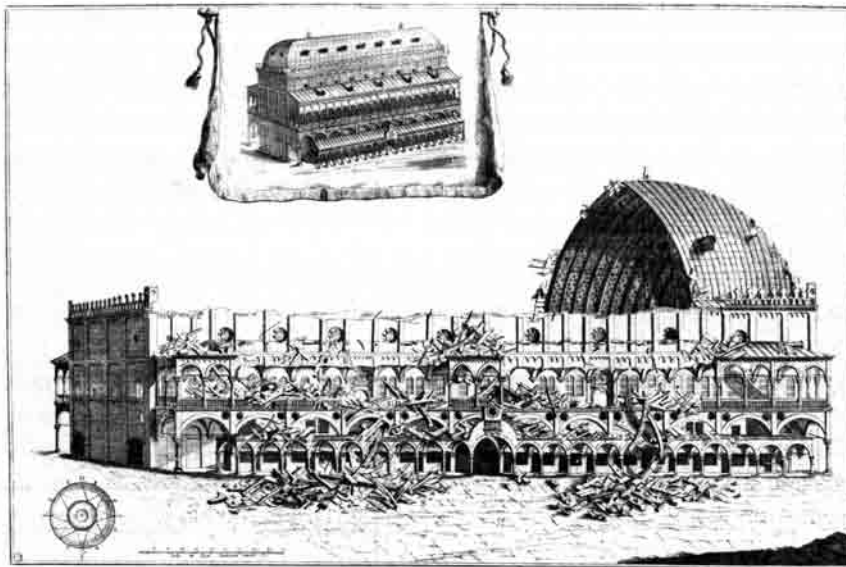


Fig 1. Padua, Palazzo della Ragione. Rossi identifies urban artefacts as pieces of the city which underwent deep functional transformations in the course of their life, because of their form persistence. The form is therefore assimilated to a metahistorical essence, the platonic εἶδος landed onto the urban soil.

Seeking to define architecture as an autonomous discipline, Rossi identifies it with Composition, out of respect for the cultural revolution begun by the Enlightenment. As the art of composition, architecture is pure rationality, it has its own lexical elements and its own rules of syntactical-grammatical articulation. These elements and rules do not belong to history but to the world of forms. In this way Morphology is concerned with concrete urban artefacts, typology with their constructional logic. The “*analogue city*” concept introduced by Rossi to support this hypothesis displays concrete artefacts – the theatres of Arles and Nîmes, the fortress of Split, the Palazzo della Ragione in Padua, etc. – to express idea of the recurrence of elements and relationships which underpin the city and its architecture, independently of the use made of them in any given conditions. However his recognition of the existence of “types”, understood as schemes with a metahistorical validity, does not follow from a structural analysis of the reasons for their existence. Fig 2 Fig 3

This position is shored up by Rossi’s decision to apply the architectural concept of the “*type*” to the building and the city, rejecting the humanistic distinction of the “*scale*” of the project. In this way the “*type*” becomes the unifying factor of a logical kind which ties up all built manifestations, regardless of their dimensions and the complexity of their interrelations. In this way Rossi identified the type with *langue*, so superseding certain ambiguities present in the definition given it by Saverio Muratori and his school, which prevented the concept from acquiring an analogous unifying function. In practice they limited the term “*type*” to defining the historically ascertained concept of the house.⁽¹⁾ The analysis of urban artefacts, hence of urban morphology, confirms the existence of logical principles, namely “*types*”, which transcend morphology while comprehending it.



Fig 2. Córdoba, the Mezquita. The transformation of an original Islamic Mosque into a catholic cathedral witnesses, according to Rossi, the permanence of the form within an urban artefact which simultaneously acts as a monument and as an *Elemento Primario*. The latter concurs to the definition of the architecture of the city together with the *Area Residenza*. The explicit transformation of the previous spatial configuration unfolded by the successive monument seems to be absolutely irrelevant.

1. This point was explored in a paper I presented at the seventh IASTE conference held at Trani from 12 to 15 October 2000. The paper is published in the Working Paper Series n° 136 under the title *The Dialectic Between Tradition and Innovation in the Italian Typological Studies*.

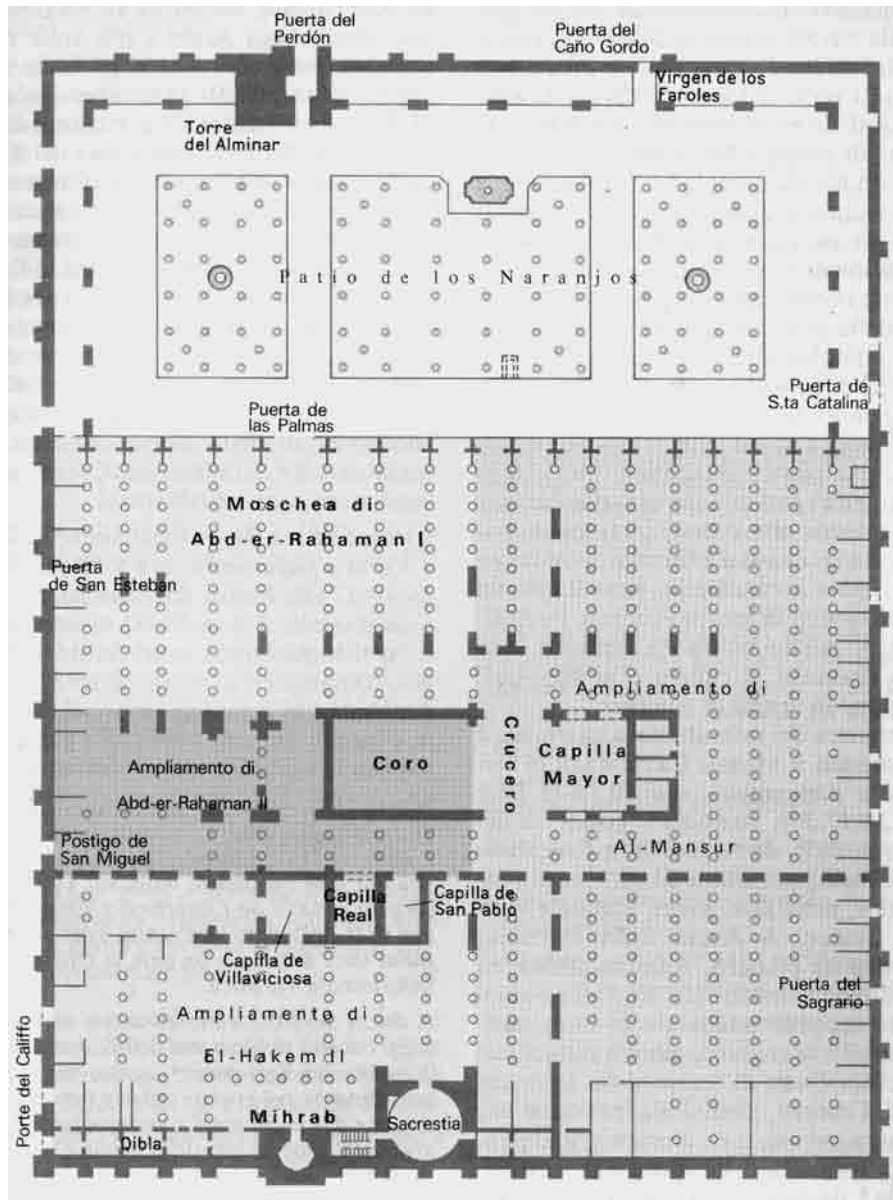


Fig 3. Córdoba, the Mezquita. The ground plan clearly shows that the internal perspective of the space has been completely subverted by the construction of the cathedral. The original Mosque acts as an endless field interrupted by the presence of an architectural object which also introduce a different orientation. The architectural matter has been subtly reused, but the overall form structure and significance has been highly altered.

The general validity of these principles is not undermined by the fact that they are embodied in widely different situations; in fact this constitutes the foundation of their truth. This same fact jeopardizes the functionalist assumption of form as an organ which is developed and modified in relation to its function. The concept of the house as a utensil is a slogan that does not do justice to the permanence of specific organizational principles in strongly differentiated programs. If anything, says Rossi, it is the type that is the organizational model of this function.

Function does not lend itself to becoming an effective parameter for the analysis of reality, though the Modern Movement made excessive use of it. Other parameters that had a considerable success were those that had an economic nature and social content. Though these analyses helped comprehend important aspects of Morphology, they are not capable of explaining it in its entirety. The city by its nature defies any all-encompassing interpretation which excludes recognition of the existence of purely formal categories endowed with their own behavioural autonomy. Only Marcel Poète and Pierre Lavedan

introduced criteria of analysis – the identification of persistent elements in the urban organization – capable of penetrating the form of the urban artefacts from within their morphology. For example, verification of the existence of elements of the plan of the city which retain their force through successive urban transformations, and which may actually consolidate it, is a confirmation of the autonomous validity and effectiveness of the principles regulating them. *Fig 4*

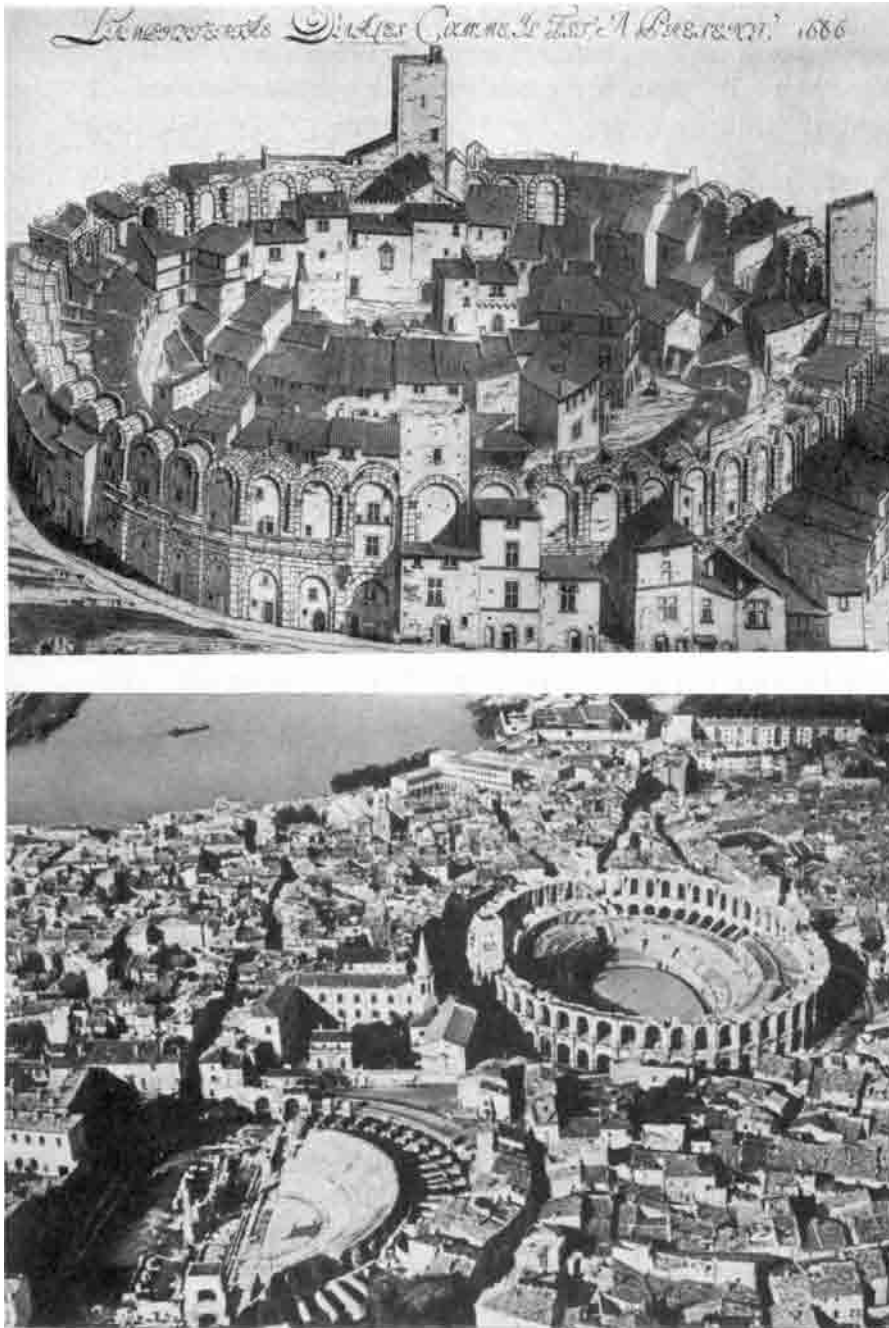


Fig 4. Arles, the Roman Theatre. Through the dynamic of the Urban Artefacts Rossi recognizes the permanence of the *Elementi Primari*. In particular the evident scalar shift from being originally a public building to becoming an autonomous and self sufficient city, because of the shrinking urban phenomenon occurred after the Emperor decay, *de facto* seems to confirm the author's thesis. The more Rossi collects cases-history coherent with his intentions, the more one rises the legitimate doubt that what he intends as form does not correspond with the rational foundation of the type, but with the imaginative creativity of the symbol. In fact only symbols are confirmed and strengthened by the unexpected ambivalence of sense Rossi seems to be interested in.

Rossi, however, never doubted that the persistence of these phenomena was not necessarily a synonym of choice but rather the effect of an inertia to change, due in part to the nature of the materials employed. Would the destiny of the theatres of Arles and Nîmes, in the early Middle Ages, have been the same if they had been built of wood and not stone? Couldn't respect for certain alignments be explained simply as less laborious than their alteration or cancellation? This would help

understand why the *cardo* and *decumanus* of Roman cities are better preserved than all the other signs of lesser importance. It is therefore difficult to interpret the preservation of material elements as an implicit recognition of the validity of their underlying principles. *Fig 5*

Logic and economy are categories of the spirit that need to be kept distinct. According to Rossi the inertia to change in these elements derives not so much from their material presence as urban artefacts as from the timeless logic that governs relationships and transmits their survival to future generations, almost as if they were some sort of DNA of our built patrimony.

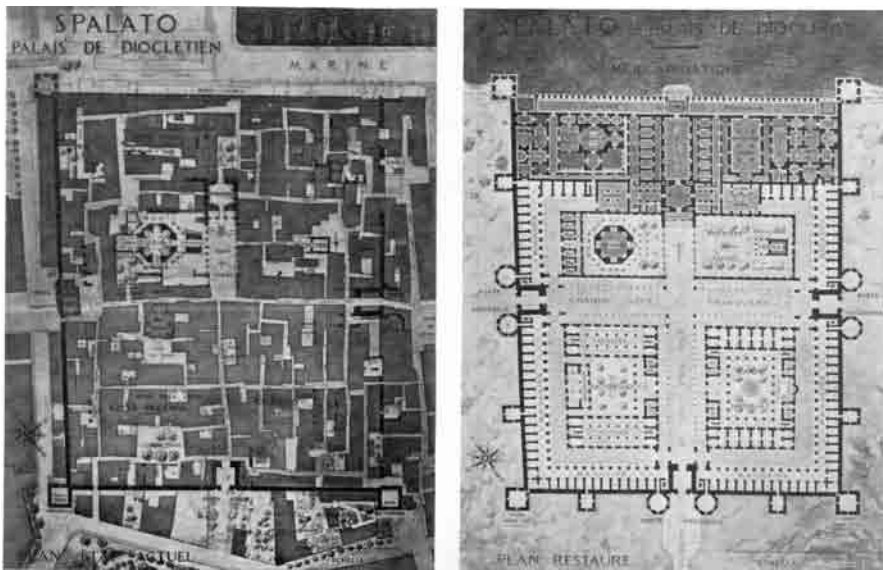


Fig 5. Split, the Diocletian Palace subverted into a city. The *Elementi Primari* act as rhetorical devices in a sophist perspective. The more they tell about the city transformation, the more they confirm their role into it. However this statement demonstrates the evident aporias of a definition which is not grounded on that rational basis Rossi is aiming at, but belongs to the domain of the processuality.

These are central themes dealt with in the chapter on “*The Primary Elements and the Concept of Area*”. The former have the capacity of to resist the processes of urban transformation, while the housing areas are the object of a continuous alteration which, according to Rossi, renders substantially illegible their original characters. The issues bound up with the architecture of the city are defined as the set of principles and rules that govern its construction. Among them prevails the idea of the “*city by parts*”, that is the observation, through the analysis of urban artefacts of different origins and kinds, that the city is characterized by the co-occurrence of clearly recognizable and identifiable areas that belong to different periods of its construction and that, within the processes of continuous urban revival, were saved for contingent reasons from change, so acquiring a marginal role despite forming an integral part of the new urban configuration. This is a differentiation that acts not between functions – the zoning of the Modern Movement – but also within the pre-industrial city or in the ambit of a thematically homogeneous area. The example he gives is of residential districts which are strongly stratified within a city by the presence of absolutely unique types and associative logics. The concept of the area in Rossi is not comparable with that of the neighbourhood – though he goes into specialized housing estates like the *Siedlungen* in German Functionalism – and even less of scale (Rossi denies its existence among urban artefacts), or that of “*perception*”, as theorized by Camillo Sitte in *The Art of Building*

Cities. It is simply the area as characterized, variable in relation to the type of growth that produced it or the collective significance attributed to it. The important point, however, is that, in introducing the concept the author writes of specialization as a character intrinsic to form and not to function, while also recognizing the existence of the latter, the principle of its constitution. In other words he excludes the possibility that this specialization is a result acquired in the course of time of an adaptation to changed conditions of use, hence a state. Opposed to the residential areas, which integrate different possible functions within them, are the primary elements, a term Rossi uses to define the factors of permanence of urban artefacts: those morphological principles of organization that, precisely because they belong to all periods, have a coherence within themselves. Their validity, in other words, is due to the fact they can be generalized. The city therefore becomes a field of continual tensions between primary elements, whose significance is that of elements capable of accelerating the process of urbanization of a city, and its residential areas. The primary elements are not just the monuments, but also the plan of the city itself and in some case even residential areas (think of the housing estates in Bath, England). The morphology of urban artefacts is thus extremely diversified inwardly because of the high level of specialization of its parts, hence of the historical occurrences that determine the alternating succession of the building plans. In this way the city cannot be related to a single basic idea because within it there continuously coexist fragments belonging to different periods.

The other strong idea in Aldo Rossi's book is the "*analogue city*". These are urban artefacts that, in their individuality, show how the principles of the organization of form, meaning "*types*", indiscriminately characterize objects of architecture like cities in their entirety, and in this way they allow for a continuous fluctuation between the different possible themes by defining their transversal relationships. The idea thus seems to be a direct result of Rossi's reflections on aspects of permanence and the implicit application of the concept of the type to all levels of articulation of urban complexity. Fig 6

In the section on "*The Individuality of Urban Artefacts*" Rossi analyses the factors of morphological characterization which supplement those of a typological kind and make their existence manifest in the construction of the city. Among them, the "*locus*" effectively expresses the relationship between elements of permanence and specification. The "*locus*" identifies the unique and unrepeatable character of urban artefacts, namely the moment when the formal principle implicit in the notion of "*type*" modifies the natural artefact by transforming it into a cultural phenomenon. This gives a precise significance to the "*performative*" character that Rossi ascribes to architecture.

Architecture can be legitimately defined as a performative activity when its significance is identified with the action it produces on its "*referent*", meaning on the natural site in every act of original foundation and on the artificial site within every process of transformation.(2) The architecture of the city should devote special attention to such individuating relationships, because they are essential in grasping the sense of the transformation of the natural fact into an artificial



Fig 6. Joannis Blaeu, perspective of ancient Rome, 1663. This vision, according to an iconological interpretation, seems to unfold Rossi's vision of the Architecture of the City: an archipelago of *Elementi Primari* which are responsible of the Project of the City.

2. I dealt in greater depth with this aspect in a paper presented the seventh IASTE conference held at Trani from 12 to 15 October 2000. The contribution is published in the Working Paper Series n° 136 under the title *The Dialectic Between Tradition and Innovation in the Italian Typological Studies*.

element achieved through the process of anthropization. But Rossi is more concerned, in the economy of the text, with focusing on issues related to the formal principles of organization. The emphasis placed on monuments and “*primary elements*” in general leads him to state that monuments are never altered by the transformations of neighbouring areas. In other words, even though Rossi never says so explicitly, urban fabrics change constantly while the primary elements remain stable.

Here we can cite a passage from the book which effectively sums up his thinking about the city and its principles of inner organization. It is a comment on certain observations by Marcel Poète, who describes the importance of the city of Athens as the result and expression of a multiplicity of elements that generate the city: not only temples, but also the buildings housing the organs of political life and those used for the requirements of social life:

“In the structure of Athens, those elements which we have called primary urban artefacts here are effectively defined as the generating elements of the city: namely the temple and the organs of political and social life, variously located and in continuous evolution within the residential areas. The house too participates actively in the formation of the Greek city and constitutes a basic design through which we can account for the city’s principal artefacts”(3)

When in the previous chapters Rossi sought to give a definition of the principal elements, he described them as “*specific elements that functioned as units of aggregation*” or “*elements capable of accelerating the process of urbanization.*”(4)

So it is interesting to observe that when called on to explain why elements exist within the city capable of polarizing the growth and transformation of the city itself, he defines them with a tautology, without providing a convincing explanation.

The other interesting point is that in this process of the evolution of the city Rossi attributes an active role to housing – it could hardly be otherwise, given its quantitative preponderance over the other components – but only as a background which, in a relationship of a gestalt kind, enhances by contrast the emergence of the primary artefacts. This passage invites a number of comments. Firstly, his observation that there exist “*primary elements*” capable of determining the process of transformation of the city is not an explanation of their origin: it is the simple acceptance of a fact – often but not always verifiable – that tells us nothing about how it came about, hence about the nature of the primary facts. In addition, the continuous distinction between primary elements and residential areas is debatable. Once again, though it is a verifiable aspect of reality – a state of reality – it does not bear out the hypothesis that these relations may vary in time or in keeping with certain possible laws.

I believe that these two aspects have a common root in Rossi’s refusal to accept the idea that the primary artefacts, as Rossi calls them, can be very closely related to the residential areas, and that there are very strong ties between the figures and the ground. Rossi never gives an explanation of how the “*primary elements*” come into existence or how they evolve, while he tends to recognize dynamism as a hallmark, an intrinsic character, of the residential areas. In this way he seeks to differentiate the as far as possible the nature of that which persists in

3. Aldo Rossi, *The Architecture of the City*, Boston, The MIT Press, p. 136

4. Aldo Rossi, *The Architecture of the City*, Boston, The MIT Press, pp. 86-87.

time and that which changes.

A plausible explanation for the oppositions introduced by Rossi lies in the definition of “*type*”. This metahistorical concept is a factor of continuity within the mutable historical vicissitudes which lead the various urban themes to acquire a precise morphological conformation, in which the traces of the underlying typological code persist and can be seen by reading it in depth. The “*type*”, in this line of thinking, is translated into *langue*. As such, according to De Saussure’s interpretation, it is a synchronic state whose rules of functioning we can understand without this necessarily enabling us to trace the rules underlying its process of formation. In this way the “*type*” expresses a mode of organization of space, in its distributive, structural and volumetric interrelations, which belongs to every genus of building without distinction, both public and private, and to every species of building, hence to the various functional manifestations of the built. In this respect we can affirm that the multiplicity of the building patrimony produced by a society constitutes *de facto* a different interpretation of a single genetic code, or of a single type in Aldo Rossi’s acceptance.

If we were instead to accept the idea, confirmed by many studies of the city, that there exist very close ties between building, architecture and primary elements, many of the misunderstandings stemming from Rossi’s specific interpretation of the concept of type would be resolved. Misunderstandings that, as noted above, stem from having applied a concept from architecture to all fields of building. From this point of view we can affirm, for example, that the possible connection between “*primary artefacts*” and “*residential areas*” is represented by the idea of “*fabric*”, an idea that is so strong in the history of the city that not even the theorizations of the Modern Movement succeeded in entirely eliminating it, but simply weakened it in certain specific circumstances. It is no accident that Structuralism’s critique of Modernity started from a renewed consciousness of the potential of the urban fabric, which is elementary yet capable of bringing the germs of regeneration back into the landscape devastated by the processes of industrialization, reactivating a process of growth by the application of concepts bound up with aggregative logic to architecture and the city. Significantly, in Structuralist experiments the building is treated as a small city and acquires all the characters of a modular urban fabric polarized by “*monumental*” landmarks.

What escapes Aldo Rossi in his reading of the pre-industrial city is that the conceptual and material connection between residential areas and “*primary artefacts*” is actually the dimension of the fabric, the aggregative system which becomes the true unifying factor in the various manifestations of building. Above all, this logic is the conceptual framework of the primary facts, which guarantees its survival even following profound transformations of the context, defining a point of departure from which to rethink the meaning of the artefacts themselves, even though the form identified seems not to be substantially altered. The term fabric never appealed to Rossi, because it evoked certain associations with the applications of the organicist theory of the city, and therefore of its possible implications in function and form. This original misunderstanding prevented him from getting

to the bottom of the questions he raised. All the same, he had the merit of seeking in *langue* for the transversal factor which connects urban phenomena, regardless of the period when they were built.

The role of the urban fabric is moreover fundamental for another reason. Within an evolutionary theory of urban artefacts (laden with all the historical individuality they deserve, and which should certainly not be neglected), the fabric makes it possible to provide a foundation for the emphasis placed by the author on the processes of “*specialization of urban structures*”. We have already analysed the question of the “*city by parts*”, but it seems appropriate in this case to return to its essential features. The fact that there exist formally complete parts within the city, polarized around the primary elements which coexist by virtue of their reciprocal specialization/complementarity, tells us nothing about their origin and possible evolution. What seems to be a given fact, viewed in a spatial perspective, is transformed into a state within an evolutionary temporal perspective. In effect this “*specialization*” always conceals within itself an elementary logic, of which it is an increasingly marked hierarchization. Precisely as a function of this presence, this deep structure, we can suppose that, with the exception of the original conditions which caused such a marked specialization, it is possible to restore the original conditions capable of adapting the primary elements to a new role. There would be considerable risk in a “*specialization*” which did not presuppose development from an elementary logic as its origin. It would suffer the fate of being left derelict and unserviceable. The principle that makes it possible to restore a relationship between apparently isolated facts is the elementary logic of the fabric which, through successive “*speciations*”, comes to define the construction of highly complex architectural and urban artefacts.

In the section titled “*The Evolution of Urban Artefacts*” Rossi deals with perhaps the most interesting issues in the text. The central theme is the identification of the factors causing change in the city by identifying the nature of the forces responsible, their modes of application and range of consequences. A particularly important role is played by unpredictable events, such as wars, famine and natural disasters. The history of urban artefacts is affected by a multiplicity of events of this kind, and the consequences in terms of the organization of the city have been extremely significant. The most general aspect is the observation that such events play havoc with the concept of the linearity of history, the historical cartographic series and the system of property ownership.

If we exclude factors of this kind, decisions with an economic origin seem to have a significant weight, above all through the role of planning, expropriations and the structure of property ownership. Rossi dwells in particular on the theories of Maurice Halbwachs and Hans Bernoulli. Halbwachs analyzed urban transformations in relation to expropriations. Such phenomena are unlikely to affect the whole city and rarely involve a community in its entirety. The problem of ownership and its transformations is surely fundamental. It is an essential factor in understanding the rise of the bourgeois city. But the factor that most interests Rossi is to show that such processes

cannot explain the form of the city, hence it is irreducible to them. Many formal facts remain autonomous with respect to the economic nature of plans, and the history of the city is rich in plans that, after being conceived by one administration in accordance with precise guidelines, are then continued by subsequent administrations even though the conditions may have changed markedly. So this again seems to confirm the persistence of certain organizational principles as factors capable of escaping from historical contingencies, regardless of whether they are definable on the basis of types - in the acceptance given to them by Rossi - or aggregative systems. Rossi points to the example of Foro Bonaparte in Milan as confirmation. The expropriations of Church property had already begun in different political conditions under the Austrians, and the nascent bourgeois state applied them to its own needs. But Giovanni Antolini's project for Foro Bonaparte seems to be independent of this process. Rossi's reflections would have been more convincing, in this respect, if he had introduced the question of scale and the different incidence of scale of specific choices. It is in fact certain that on the urban level construction of Foro Bonaparte would have greatly altered the form of the city, regardless of the properties of the architectural solution adopted.

It is, however, more important to again reflect on the continuity of the plan which, drafted in given political conditions - and therefore reflecting a specific idea of the city - is not modified substantially even if the political judgment that gave rise to it is superseded by the course of events. Rossi seems implicitly to confirm that no correspondences exist between the modes of formation and transformation of the city and its formal principles of organization, hence between its signifying structure and its historical significance. This is a useful fact because, in the light of correspondences with de Saussure's linguistics, which constantly provide a frame of reference for Rossi's arguments, it sheds light on a central issue. If Murati's plan for Bari, dating from Enlightenment times, still provided a guiding principle in 1918, we have significant confirmation of the phenomenon. The significance of the city and its form are related in ways that are not causal but conventional.

The city has a persistence of its own because it probably follows its own principles of "*economy*" of language, and these are different from those - which do exist - of a political, economic and social kind. But this debate is still open. If we want to briefly sum up the essential objectives of Aldo Rossi's work, we can say that he sought constantly for a logical foundation for architecture outside history - even though the history of urban artefacts served him to find confirmation of the existence of first principles - even though his definition of the city as an "*artefact*" presupposes the existence of an artisanal logic of continuous adjustments. Rossi therefore denies that history can act in time through forces of a compositional kind which form part of it; and he identifies the new path to be taken with a method of composition, clearly derived from the Enlightenment, intuiting that this approach will lead to the linguistic eclecticism implicit in the thinking of Durand and confirmed in its subsequent application. This explains the more general outlook of the *Tendenza* movement. Be that as it may, Rossi's importance is

confirmed by his recognition of architecture's autonomy as a discipline through the codification of Composition, whether architectural and urban, without distinction.

This text is a theory of the evolution of urban artefacts from the original elementary matrixes to the most complex and mature last configurations which, though unrepeatable in their material and historical individuality, in certain circumstances manifest characters of reciprocal correlation independently of their dimensions and nature. But, more generally, it is an articulated and conscious attempt to reconcile an idea of progress, inherited from the culture of the Modern Movement, with that of history, an expression of the new cultural climate that began to emerge in the 60s, above all in Italy. This attempt is established through a twofold analogy: with nature through the concept of the inheritability of characters, the biological and evolutionary life of species; and with history through the notion of a descriptive code of building and the life of forms by the use and successive modes of meticulous adaptation to changed cultural conditions.

The correlation between the idea of progress and history presupposes that without the intervention of external factors capable of irreversibly changing the life of forms and the societies that inhabit them - natural disaster, economic crisis, plagues etc. - reality naturally tends to increase its degree of inner complexity, whether natural or artificial. The parameter through which urban artefacts are investigated is therefore that of an evolution in ideal conditions of relative isolation from different contexts.

The authors of the text are architects and so direct their understanding of urban and architectural artefacts to the determination of the rules for affecting reality and consequently transforming it. This interpretation therefore starts from the characters of the places where building develops, with the aim of showing there exist certain recognizable connections between the "*species of buildings*", the historical periods when they developed and their spatial context. In this sense the authors' interpretation is strongly historicized. They therefore seek to overcome the limits of the Functionalist reading of reality, which deliberately tried to wrench building choices from their context by identifying parameters that were valid in all conditions of space and time and hence universal. By selecting the instruments of reading it is thus immediately possible to identify their degree of coherence with the object of the reading itself. In this way certain concepts and definitions become decisive.

The definitions "*spontaneous consciousness*" and "*critical consciousness*" serve to restore the nature of the choices to their context, to establish a correlation between conventionality and place, to the point where the two terms become almost synonyms. "*Spontaneous consciousness*" expresses the state of the agent who in working is not required to choose between different possible alternatives but fosters the legacy of knowledge acquired by the community before him, and which he inherited from it as the result of continuous adaptations of the local customs to changed conditions of use. The agent who has lost the

*Lettura dell'edilizia di base,
G. Caniggia and G.L. Maffei, 1978*

guidance of tradition works in different conditions. He can choose between alternatives that embody different values from those to which he is accustomed. The knowledge that he is working in accordance with his "*critical consciousness*" leads to the loss of a spontaneous consciousness. The only possible way to restore an active relationship with the tradition is to understand what would have been done if the path of tradition had not been abandoned. The objective of this book is thus to teach ways of interpreting the evolution of human structures so as to work in compliance with the relevant laws.

A knowledge of these structures is essential if one is to avoid acting in ignorance of the inherited legacy. The concept of *rendimento* ("efficiency") expresses the greater or lesser effort made necessary by an environment already structured if it is to absorb a human action and thus achieve a state of equilibrium so as not to alter the existing built structures. These structures are defined as "*types*" and are characterized by being related to clearly defined spatio-temporal conditions. In particular, the building type expresses the historically given concept of "*housing*". Though today we identify it through a work of classification *a posteriori*, it is always present as a mental project in the agent, in a state of greater or lesser awareness depending on the historical circumstances.

But the concept of "*housing*" changes in time; it adapts to changes in the cultural context. The typological process thus expresses the evolution of the concept of housing within a homogeneous area and is subdivided into phases, each of which corresponds to a new order of housing easily recognizable *a posteriori*. Postulating the historicity of the type does not mean negating the uniqueness and unrepeatability of every individual building act. By analogy with linguistics, the type constitutes *de facto* the *langue*, that is the conceptualization of *parole* which in definite conditions of space and time characterizes a specific society. Just as *langue* is recognizable only by starting from speech and is the result of a series of progressive abstractions from it, in the same way the building type translates, in Caniggia and Maffei's theory, the *langue* which is specified in every building act.

Having postulated a close correspondence between the rules governing the development of the built patrimony and the physical-morphological features of the territory where this patrimony is manifested, one would expect an identification between *langue* and the spatio-temporal setting in which the community represents itself through the forms of built space. But here we are forced to note a first inconsistency. By identifying *langue* with the type the authors determine a basic conscious restriction. Concerned as they are to isolate all the elements of intentionality present in specialized building from the notion of *langue*, as a collective product, they do not ascribe to language itself that unifying function which it should have. On the contrary, language, precisely as the locus of a practically inexhaustible potential, must be capable of governing all the manifestations of building that characterize a social context which has developed historically.

The language of building thus has to account for all orders, genera and species of buildings. Only as such can it acquire the significance and role of language. The types can have at most the role of simple "*signs*" with a conventional character within individual social structures

of different degrees of complexity, depending on whether they conduct analyses at the lexical, morphological, grammatical or syntactic level. So a definition of language that is limited to the analysis of the housing structures entails a sharp restriction on the field of analysis. This is unacceptable, even if one admits, as the authors do, that housing is the largest segment of construction, hence of *parole*. The points I have raised are important, though the authors themselves felt obliged to return to the subject in greater depth in the text which complements *Lettura dell'edilizia di base*, by distinguishing the concept of the language of building from that of the architectural language: “We use the term ‘language of building’, seeking to distinguish it from ‘architectural language’, a term which has been distorted by applying it to intimate personalized formulations related to designer products and which we will have to return to in dealing with specialized building in the forthcoming volumes. But the language of building, without equivocation, is closely related to basic building, to the products of spontaneous consciousness, the most extensively collective and unhesitating codification; while critical rethinking and strictly individual versions represent the mode of interpretation of processually developed buildings embedded in an anthropic culture ... Linguists distinguish further, and rightly, within every individual language, between *langue* as opposed to *parole*, with the first of these terms indicating the code of the community, the whole set of rules codified in time by the community of speakers, while the second indicates the individual ways of using that code by each speaker, subject to variations within the restricted limits imposed by *langue* itself. In building, therefore, language clearly cannot be limited to a smaller and minimal scale, of the fittings or decoration: *langue* is the type, *parole* is the building constructed according to the dictates of the type, but with all its limits and also its possible contradictions, derived from the particular version produced by the agent who works on the construction of the building itself ... Nevertheless, what is true of the basic building is not identically true of outstanding works, of architecture. In these works the broad margin of intentionality, as we have already observed at a number of points, obscures the true, processual language, with the contributions of languages of a literary type, which we could improperly term intentional idiolects, peculiar to each artificer, individual but not for this reason unaware of or isolated from the architectural *langue*, which continues to be based on the processual nature of basic building.”⁽⁵⁾

By contrast I feel that a system capable of regulating the process of formation and transformation of reality cannot be assimilated to the concept of *langue* as it has been historically configured, unless it is capable of justifying these processes in relation to the whole patrimony of building, independently of the scale and complexity of the projects. This would not, however, jeopardize the importance of dividing the built patrimony into different scales, which could represent a multiplicity of texts of that *langue* variously and reciprocally correlated, while the degrees of interrelation between the various components (elements, structures, systems of structures and organisms of systems) could easily represent different levels of complexity of the signs, from the individual word to the phrase, from the sentence to the increasing complexity of chapters and sections. The authors return to the issue and clarify their original observation: “Language, generally,

5. Gianfranco Caniggia, Gian Luigi Maffei, *Il progetto dell'edilizia di base*, Padua, Editori Marsilio, 1984, pp. 50-54.

is one aspect of the spontaneous codification due to the whole set of acts of building performed in a culture: the aspect that we have called legibility. As such, it does not admit limitations of scale: an anthropized landscape is language; the detail of a stucco window surround is equally language. And yet it is necessary to admit a distinction of scale, when we seek to explain the reciprocal weight between langue and parole, which is like saying how far parole is affected by the system of constraints on individual experiments connected with the concept of langue.”⁽⁶⁾ Here we should observe that the emphasis placed by the authors on the concept of housing within the process of articulation of built space can be justified on the one hand by recognizing that basic building constitutes the most imposing quantity of built manifestations present in the city and on the other by remembering that non-residential building is classed as specialized, since it is produced through the process of progressive specialization of the former. But this observation is a further reason why the search for linguistic factors of unification necessarily has to identify its field of application within processes that, by defining certain elementary lexical or archetypal configurations, explain its permanence or recurrence within the different built manifestations through a repetition of serial operations, adjustment of scale, polarization, correlation, etc. Within this theoretical territory I feel we can reconstruct the continuity and unity of langue capable of justifying the different degrees of complexity of its manifestations.⁽⁷⁾

The authors maintain that in conditions of progress – hence apart from situations of “*crisis*” which undermine the unity of the social structure – a built-up area tends to become more complex compared with an original state of simplicity. This complexity is matched by a greater articulation of language, starting from a basic code recognizable in the matrix of the type. If the evolution of building types is closely related to the evolution of a clearly defined society, we can postulate a convergence between history and structure. On this point there is a split between the school of Muratori and that of Aymonino and Aldo Rossi. The latter claim that the validity of types is independent of the historical specifics which codified them and they are therefore identified with logical principles of universal validity that govern architecture. According to Caniggia and Maffei history and structure coincide, based on the notions of “*co-presence*” and “*derivation*”, by reason of the historicity itself of the concept of language. The former expresses the awareness that between objects of different kinds which coexist in space there exist certain relations by virtue of the condition of proximity in which they naturally find themselves; the later expresses the consciousness that between objects of the same nature belonging to the same spatial setting there exists a temporal relationship of continuity, meaning a relationship of derivation on the basis of which the latest building products are the result of the revision of the earlier ones through their necessary updating according to new parameters.

The concept of derivation acquires an important significance in the work of Caniggia and Maffei, because it inverts the traditional Functionalist conception which sees function as the cause of form. In their “*historicist*” perspective, the cause of form is form itself, related to a superseded level of complexity by the new historical conditions

6. Gianfranco Caniggia, Gian Luigi Maffei, *Il progetto dell'edilizia di base*, Padua, Editori Marsilio, 1984, pp. 56.

7. On this point see the contribution by Nicola Marzot, *The dialectic process as intentional device to build an organic Typology: the contribution of the Muratorian School*, in AA.VV. “*Transformations of Urban Form. From interpretation to methodologies in practice*”, Florence, Alinea, 1999, pp. T-21/T-25.

and so the matrix for a subsequent renewal which works on the object to comply with the new standards requisite. In this respect their description of the process of development of a simple table provides an illuminating example: "*We discover, in short, that the existence of this table is made possible by the succession in time of other existences of other tables, without which this one would lack its formative characteristics, a certain way of functioning of the whole and the parts, which shows it has inherited, together with these characters, the reasons why the previous ones were made and so shaped. It is, therefore, a sort of cause-and-effect relationship, in which the effect is the present table, the cause is not the need to have a table, to invent a table top set at that particular height to be used by the seated person: this could be its remote matrix, but in reality the cause of that effect is the specific experience that led to the making of the previous table. The cause is the preceding tables.*"⁽⁸⁾ This is an extremely innovative element in the field of architectural criticism, and restores the debate to the artisanal dimension of work. History as the matrix of future experiences, the product of a slow accumulation of experience in time as the beginning of a practice projected into the near future. Every built object is the result of a historically given correlation in space and in time, a point of intersection of two coordinates.

The consciousness that history can be identified as structure presupposes a unified purpose; the conviction that this identity can be detected through the analysis of the conditions of "*co-presence*" and "*derivation*" means the dialectic between object and subject which should interpret it becomes central.

A structure is none other than a system of "*differences*", meaning a system of relations defined between discrete elements endowed by a clearly identified nature and position. As such the structure is a simplification of reality, since it is interpreted from a single viewpoint, inevitably reducing its real scope. Identifying history with structure means that both are analysed by accepting that single viewpoint, but it also means that the conceptual operations which I carry out to produce a structure are supposed to be homologous with the real operations that govern the facts that we are analysing. It is for this reason that Caniggia and Maffei's structuralism can be defined as "*ontological*". The point of view chosen to unify history and structure is the development of built artefacts, the system of rules followed in order to build and transform the anthropized forms. The identity of structure with history thus becomes the supposition of a homology of principles in the evolution of social, political and economic forms and those of buildings.

Having clarified this fundamental point, the utility of the reading/interpretation of reality by a subject will depend on the greater or lesser concurrence between the purpose of the reading and the capacity of the object to be analyzed in that perspective. If the point of view chosen for the construction of a structure through which to unify/equate structure and history is the development of reality, the historical-building reading of reality will produce the greatest utility if history and architecture prove capable of being interpreted in the perspective of the relative development and the purpose of the subject is to explore historical-critical reality in accordance with the principles of its development. In other words, to again quote the authors themselves, it is necessary

8. Gianfranco Caniggia, Gian Luigi Maffei, *Lettura dell'edilizia di base* (Venice, Marsilio Editori, 1979), p. 62.

for there to be a correspondence between the purpose of the reading and the instruments available to promote it, on the one hand, and its capacity to be read and the rules of organization-construction on the other.

To attain this objective the authors maintain it is necessary to play down the statistical aspects, the history of the effects and that of the architects, in other words to tend progressively towards a sort of “*depersonalization*” of the products of building. In the most general possible terms, a structure, understood as a system of “*differences*” between discreet elements, is definite if we know the number, nature, dimensions and position of its components, their relationship with the other parts and their relationship with the whole. Still remaining in the most general terms possible, a built structure can vary from a maximum degree of organic unity to a maximum degree of seriality. The first case is that of structures whose components are clearly distinguished by their characteristics and reciprocal roles; the second case is that of a system whose components are strongly homogeneous by their characteristics and reciprocal relations. There exist intermediate positions between these extremes. According to the authors’ definitions we can have Total Organic Structures and Systematic Serial Structures, Random Serial Structures, in which the intrinsic characteristics of their components present some degrees of difference, or Episodic Organic Structures, in which the components are in part reciprocally interchangeable. The analysis of the structures would be simple if the nature of what they call the whole did not change continually depending on circumstances. These circumstances or logical contexts, which present a reciprocally increasing level of complexity, are elements, structures, systems and organisms. Each of these contexts of analysis represents a different level of interrelation and complexity, and in the reading it will firstly be necessary in each case to understand the context; subsequently to understand which components are assigned in relation to that context. Not only are history and structure identified, but also structure and context. The context thus becomes a system of differences between components whose intrinsic features and relations are closely congruent. The difficulty of the reading thus lies in defining in each case the context in which we act and to relate the nature of the parameters to it, with the consciousness that every interpretation of reality will always be a reduction/simplification of its values.

The reading of anthropic structures proceeds through diversification by area and historical period, i.e. by comparing the products of different contexts, though homogeneous by scale, with the purpose of recognizing the relevant traits of each frame of reference. The result of this comparison defines the “*base type*”, which is the concept of housing that unmistakably distinguishes a specific reality. In this operation of recognition we can push the level of our reading in this way to extend the number of parameters necessary, to the limit until we identify a single building with a single typological class. In this case we will say that it is necessary to arrest the “*level of typicality*” of the analysis at the point which we consider most useful for the type of inquiry we are conducting. The adaptations of existing buildings to changed historical conditions are the first step towards a transformation of the building

parameters. In this way new necessities will find full and conscious expression only within the new developments, as the existing urban fabric always offers some form of constraint.

Since every building product a reciprocally correlated complex of interrelations, i.e. a system, we can deduce from this – and, according to the authors, find confirmation for it in reality – that the growth of the primitive organism will occur by successive duplications. The intermediate stages represent phases of acquisition of a maturity which, in a progressive vision of reality, represents its objective. It is actually respect for this principle of progressively tending towards a maturity identified as constant adaptation to changed conditions of use that leads to the recognition of the existence of a primitive, elementary stage of the evolutionary chain in the “*basic type*”, namely a unicellular built organism, which is still recognizable in its constituent elements in certain economically marginal contexts. *Fig 7*

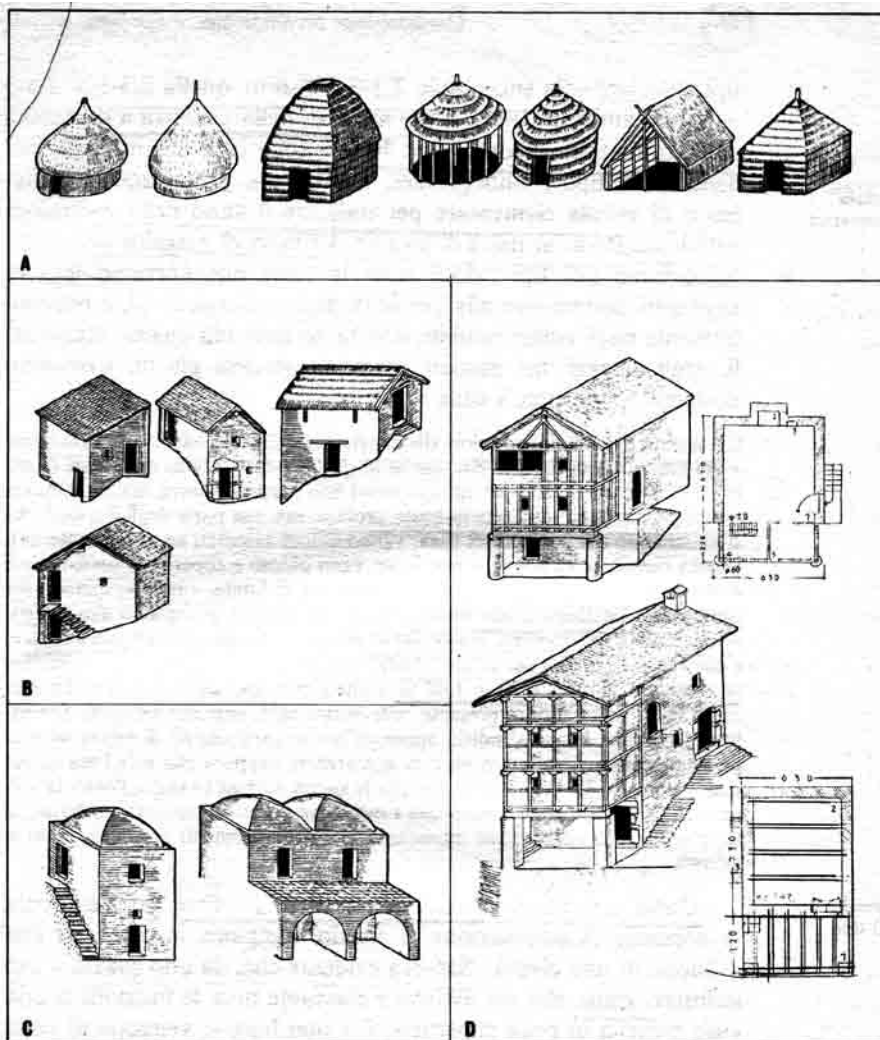


Fig 7. A collection of basic building surveyed in Italy, 1940-44. In opposition to Rossi, Caniggia and Maffei identify in the elementary one room buildings the collective products which are responsible of the city construction and transformation over space and time. In this case the permanence is not related to form, but to the process of transformation modality itself which always implies co-presence of the existing buildings into the new ones and the latter derivation from the former. The process describes the way the tradition acts through the change, without questioning the real significance of it.

So the impulse towards the growth of the type is identified in the progressive specialization of primitive unicellular organisms which are subjected, in an evolutionary parabola, to a continuous articulation and increasing complexity of their structures, unless traumatic factors intervene from outside to reverse the trend. This phenomenon of specialization is also the cause behind the process of budding off specialist buildings from basic buildings. It is a verifiable fact that

whenever a new need arises, without any close connection to housing, the structures of the residential typology are adapted so as to house the innovative factors. The phenomenon of progressive specialization of the building structures is what determines the transition from the “*basic type*” to the “*base type*”.

This again confirms the rule that the cause of a new building is the building of the same species that preceded it as an answer to a problem that was analogous, though different as having preceded it historically. In this way the idea of a “*processual typology*” confirms our consciousness of history as a producer of forms. It contrasts with enlightenment and positivist thought in which the type, in a neo-Platonic interpretation, exists independently of the experience of erecting buildings in a specific context. As Durand explains unequivocally, the type is a product of composition, meaning of method, a method that is available to all and does not presuppose any specific skill in architecture. The composition is a self-referential system and the Enlightenment sanctioned the divorce between structure and history through the abstractions of method.

The authors explain very lucidly the mechanisms by which history becomes the producer not only of meaning, through the definition of communicative conventions, but also of forms, through the availability of a set of technical-formative experiences accumulated in time. But less clear is their affirmation of a supposed coincidence between the type and the building, pursued conceptually through a constant exaggeration of the level of typicality of the reading (see Caniggia G., Maffei G. L., *Lettura dell'edilizia di base*, 1978, p.111). The question, posed in these terms, contradicts the postulates of a linguistic nature that are the foundation of the text in question. De Saussure justifies the existence of langue subordinated to the practice of parole, which is unique and unrepeatable, in relation to which langue is a system of abstractions, reductive yet necessary. Hence it is clearly impossible to identify building with type. This raises a problem of a gnoseological nature, which arises from the “*historicist*” interpretation of the type. I only know what is comparable, already exists and is repeatable, i.e. already codified. In other words I only know what already has a significance. This negates the possibility of comprehending the quality of a building on the basis of its inner rules of organization alone, hence as an autonomous system, apart from the existence of others, their presence.

A second question, again related to the possibility of knowing only what is codified, what we have given a significance to because it is shared with others, is that the type is identified as language (langue). Postulating that all the building genera (abattoirs, exchanges, hospitals, markets, courthouses, churches, etc.) are derived by progressive affiliation from the residential building, and so from the building type, secures for the authors that conceptual unity which language requires. But this process of derivation is not sufficient to enable us to recognize in the rules that govern the production of the building type the unifying power of language. As I have already observed, language has to codify a system of differences capable of giving rise, at a given historical moment, to the whole of anthropic production, not just that of the building genera (the differentiations between basic building and specialized building)

and the individual species (the differentiations within the individual type). The type is more properly a “*sign*”, or rather a signifying form or self-referential system. In fact the signifying form refers only to itself, unless we credit it with a conventional significance. As a medium it becomes a “*sign*” only through a conventional and shared choice. From this moment on it will “*stand for*” something, it will indicate a referent. Distinguishing type from langue is a conceptual step that makes it possible to understand the existence of principles and rules that change in time with a slowness capable of superseding the “*historicity*” of the type – i.e. by correlating a specific signified with a definite signifying form – so as to survive transversally the contribution of history. Language therefore has a historicity, but its intervals are abbreviated compared with those of the type. If we accept this distinction we will also understand the relation that exists between architectural grammar, which establishes the rules that govern every linguistic form (and each building, urban fabric, district or city will have its own) and those that at a precise historical moment relate the different forms to each other, hence syntax. In this sense urban Morphology defines the possible manifestations of the architectural-constructional language, while grammar defines the reciprocal principles of articulation of the formal components, and syntax establishes the reciprocal correlations between the different morphological classes.

The type, in this sense, takes on the value of a sign only when the complex network of lexical, grammatical, morphological and syntactic relations is made to interact contextually. This terminological specification further clarifies the theoretical area which we need to research in greater depth, as was clearly anticipated above: this is urban syntax, meaning the system of rules that establishes the modes of correlation between the different morphological classes with the task of identifying their nature. Language thus becomes the factor, i.e. the organism as a unifying whole, that absorbs within it all the building vocabulary, the grammatical structures, the morphological classes and syntactic systems.

This distinction (which, I feel, can be usefully introduced) also succeeds in explaining the negation of the type, which conceals a rejection of its totalizing interpretation. When dealing earlier with the Modern Movement I recalled that its aversion for the type was one of its most significant “*internal*” justifications, probably the strongest. This aversion was directed at the eclectic-historicist interpretation of it in the second half of the nineteenth century, through the identification of a language with a type. The same term seems recognizable in the work of the “*neo-historicists*”.

The historicist interpretation is clearly undermined if we carefully analyse those phases of the building process in which the materialization of a new need rests on the experience accumulated in another field, when there exists a building structure that serves to satisfy different functions without this having yet entailed specialization. At this fleeting moment it is possible to grasp the role of language, which compensates, through its rules, for the absence of a word which has still to be coined. (See what Tullio De Mauro says of neologisms, the creation of new words). The creative capacity of language emerges here.

Comprehension of the characteristics of a building type (to be understood no longer as language, but as a simple sign produced by the synchronic action of the lexical, grammatical, morphological and syntactic networks) is not exhausted in the comparison with types differentiated by area responding to same needs, but is clearly achieved through the evaluation of the same types in relation to contexts more complex in scale, namely belonging to aggregates. The fact of coexisting with analogous building types within a structure superior in scale entails some constraints that are immediately reflected in the organization of the building types themselves. The fabric is to the aggregate as the building type to the building, namely its conceptualization, the mental project that pre-exists actuation and which guides it to fully respond to shared needs. The change of scale thus involves an expansion of the quality of relations between the parts, just as every part of a discourse endowed with a complete meaning gains a further semantic depth if it is inscribed in a more complex articulation. In the case of the aggregate, its form is the lot, subdivided internally into the built part and the buffer zone. The buffer zone defines the aggregation of a number of lots along a path. The path is the other essential structure to comprehend the logic of the articulation of the urban fabric. Building lots are arranged sequentially along the path itself in buffer zones, clearly laid out orthogonally to the path itself. Depending on the role they are given in the organization of the urban space, they are subdivided in accordance with different categories. The matrix path is a path of extra-urban importance which predates building and normally links significant urban centres in the territory following its morphological features. Installational paths are those that guarantee construction behind the buffer zones along the matrix path. Connecting paths guarantee a direct connection between installational paths, while the paths of reorganization intervene on built fabrics already consolidated due to changes in roles which occur within the urban structure. The path naturally connects one place with another. In the terminology used by the authors, the node identifies an intersection between two or more paths and a pole is a point where various paths begin or end. *Fig 8* Just as there exists a basic type, meaning an elementary configuration to which all subsequent specializations of the residential building structures are reduced, so we can recognize a basic fabric in the path flanked by two basic types of buffer zones limited by two successive intersections with other paths.

The notion of fabric enables us to understand the meaning of the synchronic variation on a basic type, meaning the concept of housing which applies to a specific spatial-temporal coordinate. The synchronic variant expresses the idea that the residential standard, which has its optimal solution in the basic type, may become less efficient by being reduced to conditions of the fabric which impose dimensions and orientations of the lot which diverge from the ordinary. Typical synchronic variants are those that, for example, are placed at turns in the fabric on paths perpendicular to each other; those occupying buffer zones facing onto the connecting paths; and those that progressively occupy empty spaces created by restructuring paths. The notion of synchronic variant thus makes it possible to recognize the existence



Fig 8. Florence's building survey at Santa Croce and San Frediano districts. Samples of medieval building fabrics. The underlying building tissue acts as the concept which is historically responsible of the fabric construction. The tissue expresses, at a specific level of complexity, named scale, the collective intentionality which establishes its set of rule, or its structure. The structure itself is questioned by modifications which constantly occur and can eventually lead to its transformation. The authors emphasize the material continuity of the process, uncritically assuming a continuity of values as well.

of variants on a set theme. We can also verify the existence of a law of successive doubling in relation to the fabric. Related to the basic fabric we mentioned above, it determines the formation of an urban block, i.e. of a built fabric bounded by four streets with a differentiated hierarchy. *Fig 9*

The scales of reading, as we have already observed, constitute increasing levels of complexity of anthropic space, increasingly articulated signifying forms, as is the case in linguistics with words, clauses, sentences, tales, etc. Naturally every signifying type/form absorbs into itself simpler signifying types/forms, which receive a specification of role, an enrichment, by belonging to more highly articulated structures of language. Again by analogy with the pragmatic dimension of linguistics, each term acquires nuances of significance from the context of the discourse. It is for these reasons that when the field of analysis is enlarged to urban structures, the building types not only undergo certain variations but the fabric also becomes more specialized, tending to take on a special character depending on the role it has within the urban structure. As an immediate consequence, the simplest urban structure, defined as an elementary built-up nucleus in its development and a basic urban organism as a pre-existing concept in the mind of the artificer, consists of a basic fabric whose two extremities are subjected to specialization into centre and periphery. A similar specialization affects the paths, defined as centralizing where the two buffer areas face each other and dividing at the boundaries of the lots. But the basic urban organism somehow represents a specialization of more primitive structures of settlement. In this respect the authors introduce three different stages: the settlement, the protourban nucleus and the urban nucleus. The first consists of an aggregate of houses that have a direct relation to the productive territory they belong to; the protourban nucleus is a sublimation of a settlement which, by reason of its potentially barycentric collocation, contains within itself some facilities common to other settlements; finally, the urban nucleus is the sublimation of a protourban nucleus in relation to the other nuclei with an analogous role through the acquisition of more highly valued shared facilities. On the level of the urban organism, an inverse reading of the historical phases of formation and transformation of the fabric similarly entails the determination of the underlying primitive urban structures and the critical redesign of their progressive hierarchization as a function of a changed context to which they belong. It is clear that at the urban level the condition of relevant nodality or polarity of structures is decisive to understanding their subsequent transformations. Similarly fundamental is the distinction between centre and periphery, which has a relative value as it is continually superseded by the dialectic of urban growth. A settlement rises to the higher level when it constitutes the functional centre of a larger territory than that to which it is strictly relevant, which houses within it structures of the same degree of complexity. The dialectic of centre/periphery is established not only between forms of the same degree of complexity but above all in relation to their reciprocal boundaries. The terms nodality and linear polarity indicate the points of contact between different surfaces, potentially equal in scale but distinct within themselves by topographical features. The

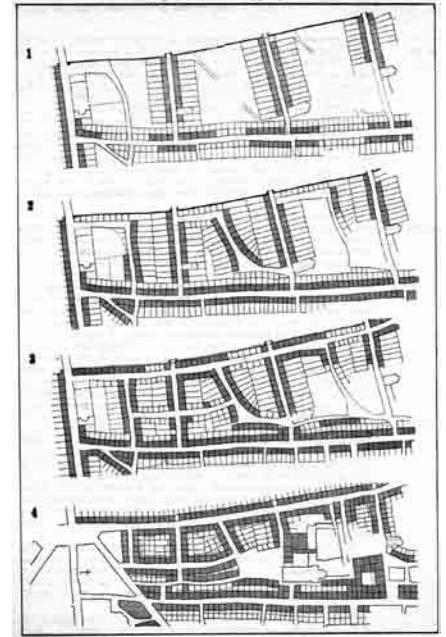


Fig 9. Roma, Tor di Nona. Theoretical model of the building tissue development. The process identifies with the project implicit within the underlying building tissue. The urban phenomenon is turned into a design strategy according to a supposed conventional time sequence.

understanding that the margins of the single modules autonomously understood can acquire a central role once they come into reciprocal contact once again confirms, also on the urban level, the persistence of the law of successive doubling, naturally with a series of corollaries which take account of the specifics of the territory they belong to.

The centre/periphery dialectic also affects the characters and position of specialized buildings, the facilities whose presence establishes the level of specialization of a structure at parity of degree of complexity within an assigned context. In fact we can recognize antinodal building, which seeks to be located marginally in relation to the context, generally occupying an extensive surface area, as also happens with the antinodal building fabric, while the nodal fabric, by contrast, has notably circumscribed dimensions and tends to occupy the centre of the context analysed. In this way we can recognize a general criterion within processes of urban transformation: in an organism, the component parts tend always to restore a role of complementarity as a condition of reciprocal equilibrium. So if one part tends to be particularly specialized, another will tend over time to do the same so as to achieve a uniform dimension. The same process of specialization is underpinned by the same service structures.

The urban context also confirms the authors' conviction that it is not possible to comprehend an anthropic structure unless it is related to what immediately preceded it. Since every form is the resultant effect of the transformations made to the previous form in order to render it adequate to a new society, one gets the impression that the content of architectural form is form itself, the representation of a previous settled community. There is a clear correspondence between form and social structure, which tend to be identified; but this relationship is always mediated by the role of history, meaning by the patrimony of inherited experiences. This attitude is common to all forms of neo-historicism. It is equivalent to affirming that the value of a language depends on the difference it establishes with respect to the signs that are the expression of the preceding language.

The reading which Caniggia and Maffei offer of anthropized reality tends to recognize the autonomy of architecture, meaning its capacity to present itself as a language. It remains implicit that this language, though analysed in its categories of formation and transformation, remains potentially anchored to a clear correspondence with its referent, hence it manifests itself as a direct product of the economic, social and cultural drives of the community that uses it. But one also gets the feeling that the referent is not just society in its existing state, but above all the existing building patrimony of which the city is the memory. *Urbs* and *civitas* are closely correlated, but the lesson of a historicist interpretation of anthropic space is evident. To really be language, grammar and vocabulary would have to be absolutely self-referential and not depend on the society that inhabits them. In this we detect a regression compared with the contribution of modernity, and in particular with the concept of the arbitrariness of language. This arbitrariness derives from the lack of correspondences with the real referent. Towards itself language responds to precise choices of coherence. Language is, in fact, an open and coherent system of

morphological, lexical, syntactic and expressive relations whose arbitrary nature derives from the lack of correspondence with its true referent. Only in this way can it be translated into a system truly representative of contemporary society as autonomous from it.

The text is located historically at the end of a long period of reflection on the form of the city - its formation and transformation in the course of time and its relationship with architecture - and the results of this theoretical output in the construction of urban space. As such it is a fundamental contribution to the comprehension of part of the state of things in which we still live.

Ungers' principal objective is to stress the importance of architecture as an autonomous language, capable of expressing ideas, that is themes, which precede it and condition it in its choice of elements and its rules of inner articulation. In this way Ungers seeks to express his criticism of ingenuous Functionalism and the consequent subordination of architecture to purpose, technology and the reasons of the economy, which have made it an applied art. This urge to attribute a communicative capacity to architecture, regardless of the question of interdisciplinarity, was typical of the 1960s. It was also consistent with the principles of scientific research, in which the initial working hypothesis defines the direction of thought in the analysis and quality of the results obtained. Themes, precisely because they are not natural or spontaneous aspects but the result of conscious choice, are partial. It is only as such that they succeed in ensuring architecture has the linguistic function which the author seeks to attribute to it. But for the same reasons the choice of these aspects, to be widely shared, a collective choice and not a personal poetic inaccessible to most people, should possess a historicity of their own: i.e. they should clearly represent central aspects of the cultural debate at a specific time, a question that the author seems not to grasp unequivocally.

As the immediate result of choices not shared, the language of architecture will prove in various cases to be conditioned by the nature of the theme, so being translated into a catalogue of codes, meaning strongly specialized languages. The fact that the different themes/languages can coexist within the work of a single author reveals its partiality and that it belongs to the field of the poetic. The '80s thus opened under the aegis of linguistic particularism, following the heroic season of the '60s and '70s, which sought to refound architectural language on more solid bases which could be widely shared through emphasis on aspects of active participation in its formation. The individual was thus the author and beneficiary of the choices made. With Ungers, individuals delegate a brief to the architect who, by virtue of his poetic abilities, succeeds through his mediation in finding a form for the needs of the community.

The theme of transformation or the morphology of the Gestalt is defined by Ungers in a multiple way. It can be understood as the expression of endless individual variations by which it is possible to express a general concept like "*entrance*" (by analogy with the distinction made in linguistics between the acts of parole, which are endless and

Architecture as Theme,
Oswald Mathias Ungers, 1982

unrepeatable, and langue, which is finite in its grammatical rules and components). But the theme can also express the transition from a state of order – the layout of a planned city – to its abandonment because of a change in the general context which seemingly alludes to a state of chaos. An example is the early medieval city, which developed on the earlier system in continuity with its most elementary aspects. Finally, the theme can be expressed through a continuous transition from the natural element to the artificial and vice versa, hence by simulating a clear change of state. Each of these strategies, says Ungers, makes it possible to clarify the theme of transformation through the language of architecture, making architecture the language of transformation, enhancing the idea of a possible variety within the unity of the system. Ungers supports this thesis with the examples of the projects for the Museum Morsbroich in Leverkusen, the student residence at Enschede and Grünzug-Süd in Cologne.

The theme of the assemblage or coincidence of opposites enables Ungers to remind us that Western culture has educated us to consider a lack of unity in the whole as a limitation for the attainment of beauty in a work. His purpose, on the contrary, is to show that the composition of contrasts is sometimes the only strategy available for coping with a design problem and, as such, it may be the source of aesthetic reverberations. The theme of fragmentariness is also taken as an act of freedom from the often dogmatic imposition of unity. Aldo Rossi's conception of the "*city by parts*" emerges clearly from these words. The city lives by the richness of discontinuities, of contradictions, unlike the village, which emphasises unity. This passage is perhaps one of Ungers' most important observations, as it prompts reflection on one of the principal themes of criticism of the bourgeois city in the late nineteenth century. Discontinuity, complexity and specialization have become synonymous with the modern condition and the big city in particular. The ideas contained in the model of the garden city were defined in opposition to them. *Fig 10*

But the theme of the assemblage also becomes a metaphor for the language of contemporary architecture as the place of the fragmentation. If architecture is the visualization of an idea, which by virtue of its partiality enables it to be communicative, the simultaneous presence in the same space and time of opposed themes, i.e. of fragments that are not composed into a single whole, becomes the expression of a Babel of co-occurring codes. This is due to the fact that architecture as a language presupposes specialization, a drastic reduction of its semantic potential by emphasis on a single aspect. But this very choice in practice decrees its rapid obsolescence. Codes, by definition strongly specialized languages, afford less flexibility to change of context. To confirm his thesis, Ungers cites the projects for the Tiergarten Museum in Berlin (significantly the ideal context to emphasize the theme of fragmentation, at which Daniel Libeskind has recently tried his hand), the Stadtparkasse in Berlin, the Wallraf-Richartz Museum in Cologne, the restructuring of the Frankfurt trade fair and the Berlin courthouse.

The theme of incorporation, or the "*doll inside the doll*", is the description of an approach that can be developed, according to Ungers,

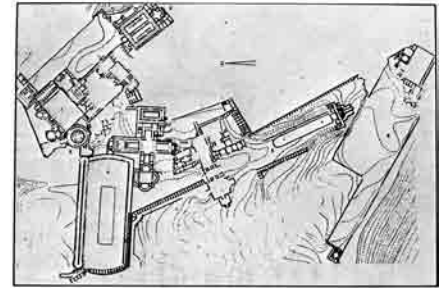


Fig 10. Tivoli, Villa Adriana. In Ungers the articulation of the architectural reflection into themes becomes an implicit rhetorical device. In fact each theme is a "*topos*", or a deposit, from which it is possible to extract the arguments to convince the reader about the legitimacy of the author's position. In this case, the argument into question is the roman imperial villa, as a challenging case-history of the assemblage technique of historical fragments to reach an unitarian composition. Independently from the result, Ungers position reveals a latent ideology: to substitute the type as a project with the discourse on the type.

in two directions, formal and conceptual. The first approach entails the existence of compositional analogies between objects on different scales, which for this reason are comprised one within the other – like the relations that existed in the mediaeval city between the town wall and its contents, squares and inclusions, the city lot and the building within it – and have close points of contact with the idea of the “*analogue city*” already fully developed by Aldo Rossi. The second is with the existence of simple organisms, unicellular by nature, which remain incorporated in more complex spatial structures by a process of growth, as in the case of the ancient Greek temple in which the naos, the innermost cella accessible only to the priests, is the operative memory of the primitive form of the temple.

This theme is of particular interest because, in his various explanations, Ungers seems to be suggesting that in the processes of future transformation of the architectural object it is essential to recover the original matrix and begin again from this to find a new meaning in the work, suited to the changed contextual conditions. This hypothesis is confirmed by the projects for the Landstuhl Solarhaus, the Deutsche Architekturmuseum in Frankfurt and a hotel in Berlin. *Fig 11*

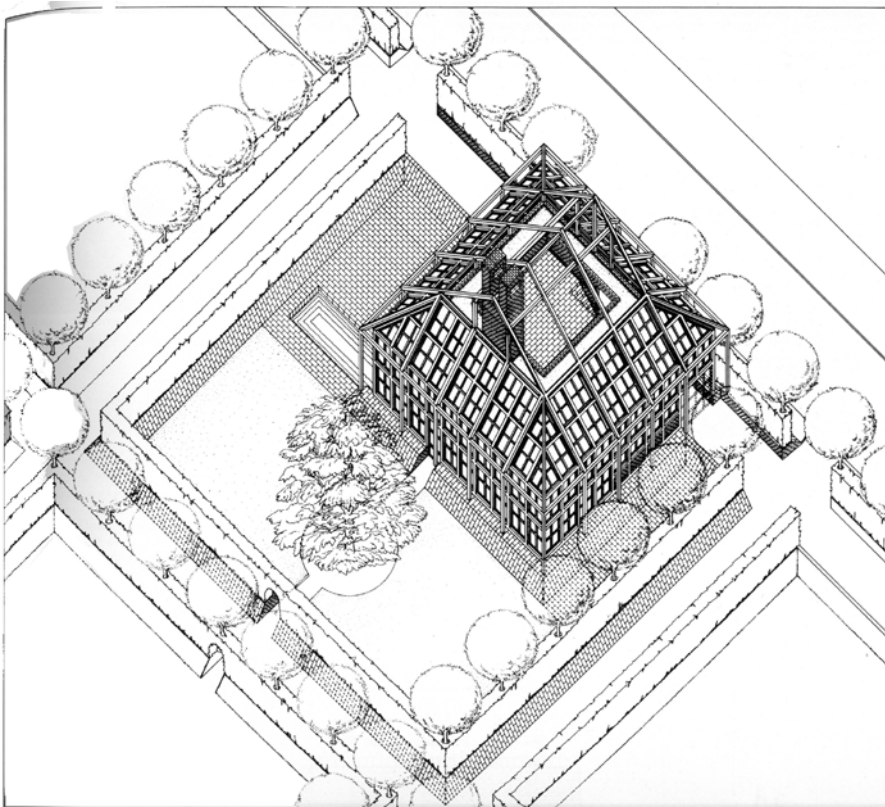


Fig 11. Ungers, project of the Solarhaus at Landstuhl. The theme of the “*inclusion*”, or “*The doll within the doll*” technique, clearly expresses Ungers position. The house hosts its archetype and the design process identifies with the story-telling of its thematic core development until its ultimate configuration. The discourse on the type is literary translated into the design strategy. So doing, Ungers betrays the definition itself of the type.

The theme of assimilation or adaptation to the “*genius loci*” was definitely the one most fully developed in the debate in the ’70s, and is the most difficult one to define and systemize. In absolutely general terms it represents the idea that architecture, to be translated into a language, should draw its references unequivocally from the location in which it is set, and that the old and the new should therefore become reciprocally interdependent elements in the organization of existential space. So the way the subject is interpreted not only varies

from context to context, but should explicitly state this differentiation as its distinctive trait. With certain clear references to the concept of the “*analogue city*”, but much more highly specified, adaptation to the context seems to allow for the citation of elements of local architecture, though they are embedded in an original system of relationships, which bears witnesses to the evolution of the times. Seemingly implicit in Ungers’ arguments is the idea that architecture can be translated into language only if it recovers elements of the tradition by relating to them in keeping with rules of transformation. The significance of the innovation emerges from a comparison between what pre-exists the architecture and what is added within that interval. Innovation and tradition are therefore complementary. The context is therefore fundamental to any understanding of the significance of a work.

From these considerations derives an important observation: in order to alter the existing state of things, architecture has to “*comprehend*”, in the twofold etymological sense of the word, firstly as understanding through analysis and secondly as assimilation/inclusion through the operation of the project. The emphasis on syntax should not make us lose sight of the relationship with the existing structures, understood as a rich repertory of reciprocally interrelated forms.

Modern architecture therefore has to include traditional architecture within itself, if it is to supersede it with full awareness, in such a way that this superseding can be not just felt but also seen. Architecture is above all a language in images. Even though Ungers does not tackle the issue explicitly, it seems we can say that the idea of architecture as a language presupposes its being rooted in a context, and that every form of distancing, including a conceptual distancing, from this position, entails shifting the question to the criteria of the formation of languages, i.e. on a syntax and a vocabulary so general that it offers a level of abstraction which makes it an instrument applicable to different contexts. But it is necessary to remember that this level of generalization is not a language, but only a generative grammar which seeks to provide a rational explanation for the variety of languages, which is not negated by starting from a basis in rules that are common, since these are innate, hence not a product of culture. To confirm these hypotheses Ungers cites the project for a group of homes at Marburg, the project for the residential area on the Schillerstrasse in Berlin, that for the Badische Landesbibliothek in Karlsruhe, the project for the restructuring of the Hildesheim Marktplatz and the project for a building in the Braunschweig Schlosspark.

Ungers interprets the theme of the imagination or “*the world as representation*” in two different ways. The first is implicit in the general title of the text. It holds that we can talk about architecture as a language only if we decide to analyze it in accordance with an interpretation which will govern its transformation subsequently. The way we understand the world, and so build it, clearly depends on how we perceive it. The nature of the parameters or themes chosen is decisive in relation to the results eventually obtained. The second significance of the theme is that the language of architecture is language by images, a figurative language. In other words there exists a rhetorical use of architecture, which is related to the use of “*figures*” analogous to the

literary figures - metaphor, allegory, metonymy, hyperbole, etc. - which sometimes help to say what on a purely conceptual level (perhaps here we glimpse an attempt to move beyond the iconoclastic Structuralist positions of the '60s and '70s) it is impossible to convey in a specific historical period.

In this respect some Enlightenment experiences clearly attempt to express new impulses, which it was not possible to convey in the language of the Ancien Regime. Among these figures of speech, synecdoche (the part for the whole or the whole for the part) and metaphor have been the most widely used in the history of architecture. In particular synecdoche seems to offer the possibility of verifying the quality of a form which, through a condensation or rarefaction of the image, leads to a new expression not contained in the original. This reflection is present in the projects for a house at Berlin-Spandau, the construction on Welfare Island in New York and in the project for the Fachhochschule in Bremerhaven.

At the end of his book, Ungers explains the underlying objectives of his work. Positing the definition of the theme as a priority for the construction of an architectural language and its recognition means stressing the role of whoever makes this choice, namely the individual, desirous of fulfilling values and meeting expectations that go beyond the primary level. This declaration confirms the doubts that emerge from the reading of the text: if the idea of architecture as language is closely bound up with the nature of the themes chosen in the act of formulating it, and if this choice is not shared in some way, what guarantees will exist in the future for the comprehension of the message? The subsequent development of Ungers' architectural works has implicitly provided a partial answer to this question, which still remains substantially open today. At the same time the structure of the work, namely its "*text*", confirms that if the partiality of the theme is a necessary condition for architecture as language, it is equally true that the idea or theme translated has to be a category belonging to the development of architecture and the city. Only in this sense can architecture aspire to obtain the status of an autonomous discipline. So the idea of a strongly symbolic architecture, in which significance is one of the attributes of the signifying form, seems to be the extreme limit of a rhetorical interpretation of architecture itself. In fact the categories of "*modification*", "*assemblage*", "*incorporation*" and "*assimilation*" are all attributes of architecture as a signifying form, and by emphasizing the weight of one rather than the others leads to a semantic reduction in favour of this same category.

The category of the "*imagination*" is different. Some figures are introduced here which do not seem to be attributes of architecture: the image of a ship evoked in architecture does not communicate a value/category of its signifying form, but only one of its possible outcomes, without the architecture entailing their construction. As such, architecture as language seems once again to be given a subordinate role, not an autonomous one, no longer with respect to the function but rather with respect to the spoken language.

In conclusion Ungers' book - clarified metaphorically through the definition of "*Architecture as Theme*" - poetically reveals its "*Structuralist*"

origin, which the author knew well, having practised it fruitfully in the '60s and '70s. In fact the theme defines from time to time that special point of view through which different realities can be unified, and which leads to the construction of a "*structure*" or, as Umberto Eco defines it, a "*model*". Architecture as a theme is thus equivalent to architecture as "*structure*", a simplification of reality that yet makes it possible to deal with heterogeneous situations and above all to render architecture communicable, transmissible - in other words language. A structure is the result of a series of operations that I perform in order to render homologous realities which are different from some particular point of view. Naturally I can continually alter this point of view. Ungers is rightly defined as belonging to a "*neo-historicist*" current, because different points of view coexist and cohabit simultaneously and harmoniously in his poetic. And it is precisely this harmony that excludes him from the strand of deconstructionist post-structuralism.

4.2.3) Projects and works

*"The construction of block 270 in an old zone of Berlin should be considered as a consistent and serious first attempt since the war at a building aligned on the street, and becomes an element of discussion in the polemic under way since the '20s about the open or closed type of construction, forming a row or block."*⁹) The words of the designer justify the attention aroused by the project in the panorama of international planning culture. The project was located in the area of Wedding, a typical residential district built between the late nineteenth and early twentieth centuries. It was incorporated by the City of Berlin in 1861, in a period when the steady growth of German industry was attracting workers from Pomerania, Silesia, Brandenburg and Saxony. In the course of the 1960s the whole district was declared a reclamation area. Among its most distinctive elements, besides the dense urban fabric, which was partially marred firstly by the war and later by property speculation, notable features to the south were the "*Humboldt-Hain*", an urban park of considerable quality, the AEG industrial complex and the Vinetaplatz (1861-63), a public garden which possesses considerable planimetric qualities. *Fig 12* In 1963 a first competition was announced for the whole area. Invitations to make submissions were issued to all the lecturers holding chairs in town planning at the city's Schools of Architecture.

The winning project, never implemented, proposed systematic demolition of the whole district, with the sole exception of the AEG industrial complex, and its replacement with a "*meanderform*" building which only partially recomposed the alignments on the street front, without a precise criterion for deviating from the general rule. The outcome of the competition was disregarded, a start was made on the reclamation plan and Josef Kleihues was commissioned to redesign two city blocks bounding the district to the northeast. These were the only ones to survive the war out of the four that had defined the original cruciform layout of the Vinetaplatz complex. However, their blighted

Block 270 at Wedding, Berlin, Josef Kleihues, 1977

9. Josef Paul Kleihues, "*Edilizia chiusa ed edilizia aperta*", in *Lotus International*, n° 19, June 1978, pp. 62-63.

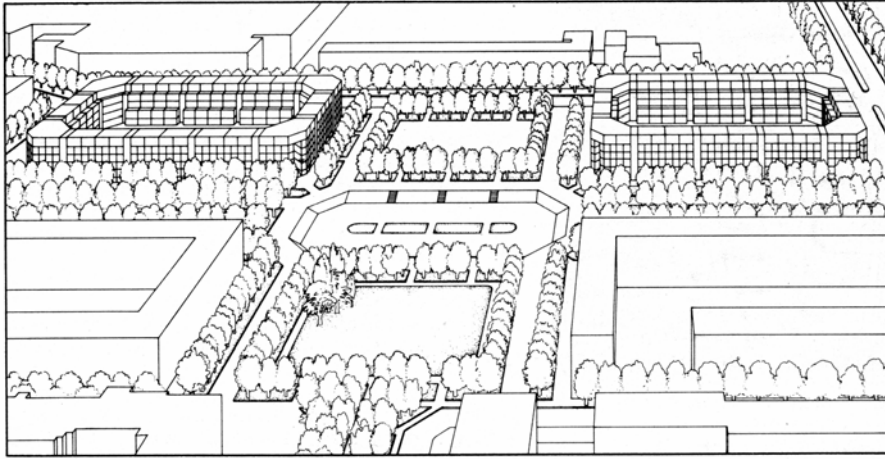


Fig 12. The bourgeois' urban block is the starting point of the design process. Its type is therefore assumed as the rational basis of the urban proposal. The analysis of the morphological context leads the author to assume a critical position with respect to the modern legacy of the open building fabric, opting for a conceptual renewal of a fragment of a different world which, once metabolized, seems to fit into a new cultural horizon.

state meant they had to be demolished.

The designer's objectives were to rethink the theme of the building, enclosed around its perimeter, seeking to adapt it to the standard of living of contemporary Berlin. This theme has a long tradition in the city, which goes back to the transformation of Berlin from a Hanseatic colony into a residential city, with its phase of consolidation during the Baroque period, principally between 1640 and 1786. The city was open to immigration with the purpose of consolidating its role. The extension of the mediaeval city along the Dorotheenstadt and Friedrichstadt constituted the first examples of housing enclosed around the perimeter, which responded to precise architectural indications of control. So the private housing arranged along the newly built streets became part of a continuous system covered by a single roof with two planes. The entrance portals, pillars and windows thus became the elements on which to intervene to restore the logic of the mediaeval city block to an architectural measure. This gave rise to the "*block building*", a term used to indicate the jump in scale from an aggregate of home units, in which each preserved its individuality and specificity, aggravated over the years by the various processes of pervasive mutation, to architecture on the urban scale.

Eventually the processes of multi-family occupation of the newly built residences and the progressive erosion of the buffer zones to cope with the rising demand for urban land on the real-estate market, together with the effects of the building code of 1853, led to the construction of "*rental barracks*" (*Mietskaserne*). City block 270 was also occupied by these "*rental barracks*", five storeys high with the dimensions of the base measuring 54x108 metres. It was precisely the runaway densification of the residential areas made possible by the "*rental barracks*" that aroused the violent reaction of architects during the Weimar Republic and the replacement of the perimetric housing with an open design. *Fig 13*

In this way all the principles that had hitherto underlain urban planning were completely undermined. In particular, housing and gardens coexisted one beside the other in an equal relationship, where previously there had existed a clear subordination of housing to street and garden to housing proceeding from the outside towards the inside of the block.

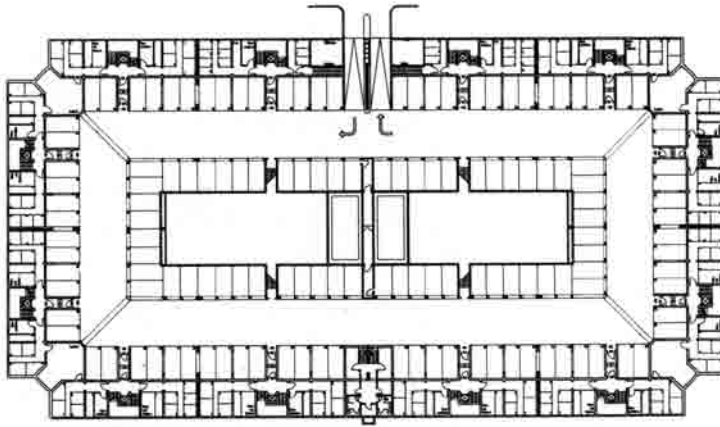
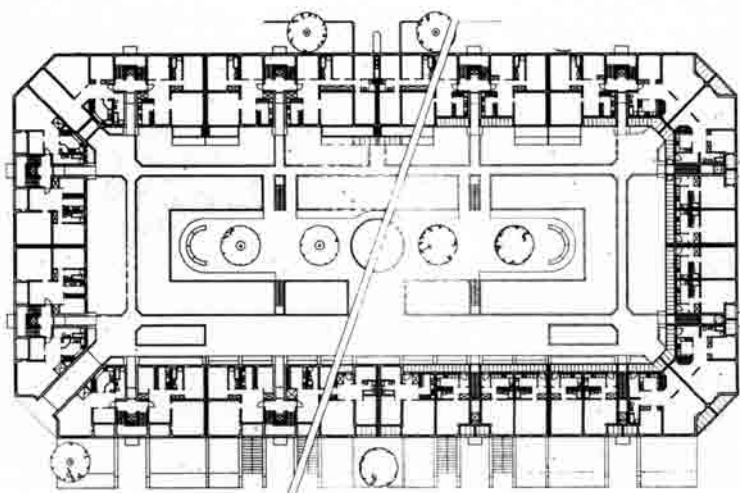
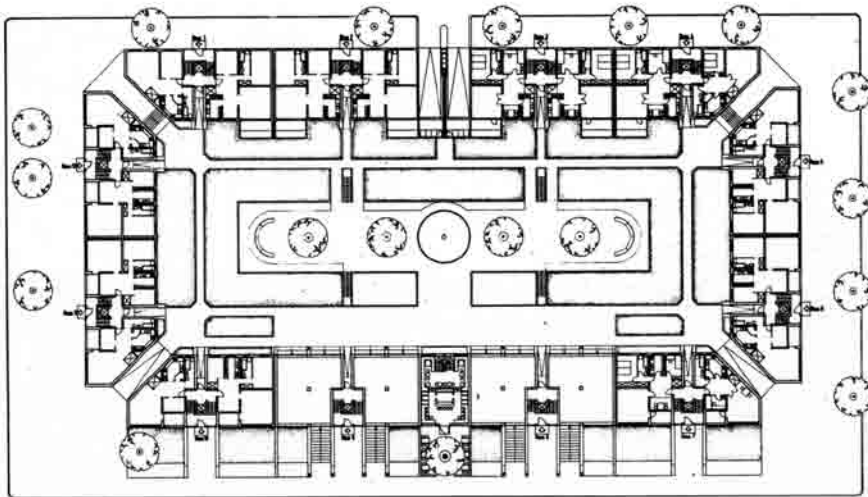


Fig 13. The floor sequence immediately expresses the process of conceptual selection among the old bourgeois' urban block characters and the modern housing tradition, to combine them into a different arrangement, which implies a new set of values of which the author is the interpret. The final results therefore expresses the importance of a critical activity on the past to trigger into the present the project of the future.



Kleihues's objective thus became not only to rethink the theme of the enclosed building but above all to recover a syntax, a morphology, a grammar and a formal vocabulary that would allow him to restore a relationship of continuity with the district, without losing sight of the residential standard now reached by the most successful residential projects of the postwar period.

To achieve this, Kleihues drew on certain projects from the nineteenth and twentieth centuries, which had already been meant to cope with the effects of the increased density of residential development in Berlin by devising alternatives in continuity with the historical tradition. They included Messel's project for the Weisbachgruppe in 1898-1904, where the system of shafts for bringing air and light into the rental barracks was replaced by a single large courtyard planned as a collective facility housing a number of shared services.

The housing was therefore disposed only along the perimeter of the street, guaranteeing satisfactory views and ventilation and lighting. Another project for Berlin that was cited as an example of far-sighted urban planning was the Miethausgruppe Goethepark designed by Geldner and Voigt in 1902-03. Though the proportions of the complex were appreciably enlarged (the lot is only 34 metres wide by 244 long), again in this case they attempted a compromise between the high density guaranteed of the rental barracks and the total openness of the inner courtyard, due to the fact that the project area was inserted within an existing city block of large dimensions.

When Kleihues obtained the commission to reclaim block 270 the culture of the city had changed notably. The open building no longer constituted the legitimate answer to the deterioration of the city driven by bourgeois speculation. Paradoxically it was the failure of the open building to create a sense of the city, contrasted with the new speculation's satisfaction at the absence of constraints that it entailed, which led to a postwar crisis. The fabric of the traditional city thus acquired the significance of spaces with a strong level of socialization. In the same way there was a return to the sense of the street as a point of social focus and complex interchanges, one which could not be reduced to a mere roadway used by traffic. The conditions were thus ideal for a recovery of the concept of the city block and its original significance, guaranteed by the ritual it made possible. Nevertheless, it was impossible to revive the structure of the nineteenth-century block without a timely updating of its contents. Kleihues therefore took the perimeter of the earlier block as the boundary of the building, which occupied its whole plot. The street was the element to which he subordinated the composition of the other elements. Along its perimeter he disposed a prevalently closed curtain building. The space so delimited was defined on the inside by a single jointly owned courtyard, slightly raised above the level of the pavements outside, with a fairly wide section, laid out with green spaces, playgrounds and zones with benches for recreational purposes. In this way the characteristic envelope of the nineteenth-century block was freed of its central portion by ideal extrusion.

A single principle of clear subordination, from the exterior towards the interior, determined the relations between the parts: the street, the nature strip – consisting of green buffer zones and entrance steps

leading to the courtyard – which mediate the difference in grade, the building block containing the courtyard space and finally the courtyard itself, articulated into thematic sub-zones. In this way the typical syntax of the nineteenth-century block was restored without necessarily repeating its forms. The permeability of the block from the street is strongly articulated with respect to the earlier models. The corners are chamfered to forty-five degrees (in compliance with the Berlin building tradition of the second half of the nineteenth century), providing access to the courtyard on the diagonal. At the front on the boundary of the neighbourhood are two sunken entrances with internal steps reserved for pedestrians; on the internal front two other portals four storeys high provide access to the vehicles of the emergency services by means of ramps. On the southeast front the ground floor is partially freed to guarantee a greater visual permeability between interior and exterior and it frames the sole original linden remaining, which casts its shadow over a small restaurant. On the opposite front a further portal marks the entrance to the underground garages.

As already observed, the recovery of a traditional syntax, typical of all nineteenth-century residential developments, does not necessarily entail the preservation of the same morphology, which is intended to take account of the alterations existing in the standard of housing, whose rituals cannot be set aside simply by invoking the restoration of recognizable urban conventions. The curtain building in fact consists mainly of linear elements which preserve the height of five storeys of the previous building. Each module is characterized by an implicit classical measure, as in the tradition of the metropolitan blocks in Renaissance style in Berlin at the end of the century.

The tripartite division of the plinth, elevation and parapet is thus underscored with a modern language but one that is respectful of tradition. The principal type is distinguished by the presence of a condominium staircase expressed in the façade by means of the axis of symmetry, which accesses two home units on each floor, with the daytime quarters always facing south, regardless from the segment of building in which they are inserted. This choice constitutes a further divergence from the nineteenth-century type of block, in which the better apartments always faced the street. It is a legacy of the open German building of the 1920s, experimented with in the working-class *Siedlungen*. Despite the change of front, due to the need to meet higher housing standards than in the nineteenth century, Kleihues was able to maintain the continuity of the curtain building and the design of the corners. *Fig 14*

The linear type of building underwent a series of synchronic variants in correspondence with the principal points of the city block. This gave rise to four corner situations, in which the home units set in proximity of the entrances on the diagonals acquired a trapezium-shaped configuration. A further synchronic variant on the standard floors consisted of home units by the entrance to the basement level and restaurant. These changes to the form of the units also entailed a replacement of the basic building type. On the short front facing southeast and part of the corresponding long front are installed a series of walkways (reached by a simple flight of steps which starts from the

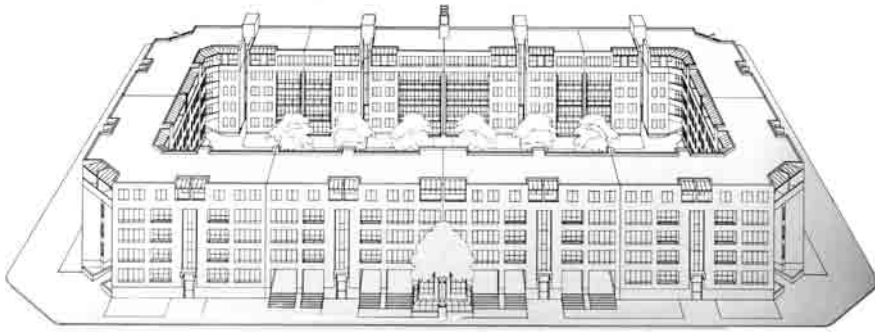


Fig 14. The aerial perspective of the building block becomes a new conventional stepping stone for the foundation of the IBA experience in Berlin.

condominium stairs and traverses the whole floor). While retaining the modularity of linear buildings, they make it possible to cope with their increased longitudinal development due to the presence of the rooms extending across their whole width below. This produces a great variety in the sizes of the units with smaller alterations to the typological form itself.

Unifying axes of symmetry and dividing axes of specularity control the combinations of the various elements on the grammatical level: balconies, terraces and windows (differentiated depending on the nature of the rooms they subtend). The elements distinguish the daytime quarters (terraces or balconies/covered roof terraces, depending on whether they face the street or the inner courtyard and windows running the width of the walls) and sleeping quarters (windows with double shutters). At points where the principal types are diminished to adapt to the polarities of the fabric, the general law is also dispensed by inserting windows with a single shutter.

From the expressive point of view the use of bare brick as a facing material, combined with a strip of concrete running around the plinth, marking the difference in level between interior and exterior, endows the mass of the whole block with a strongly sculpted quality, a unity that derives from the way its elements seem to have been hewn out of a single building block. In the choice of the materials, Kleihues also succeeds in evoking a considerable linguistic unity in the codes of the local building tradition, as always greater on the syntactic level and more adaptable on the lexical level.

This building is an effective example of the way architecture as a language can easily be manifested when its significance, the idea that endows it with structure, is actually one or more of its categories. Language acquires a substantially self-referential connotation and architecture becomes an equally effective instrument of communication when it expresses its own creation. The theme was to design a museum of German architecture in the interior of a late nineteenth-century villa. At first Ungers considered replacing the existing building, which possessed little intrinsic value, but its symbolic significance for the community rapidly dissuaded him from this initial purpose. Hence the plan to absorb the existing structure into the new museum. *Fig 15*

*Deutsches Architekturmuseum,
Frankfurt,
Oswald Mathias Ungers, 1978*

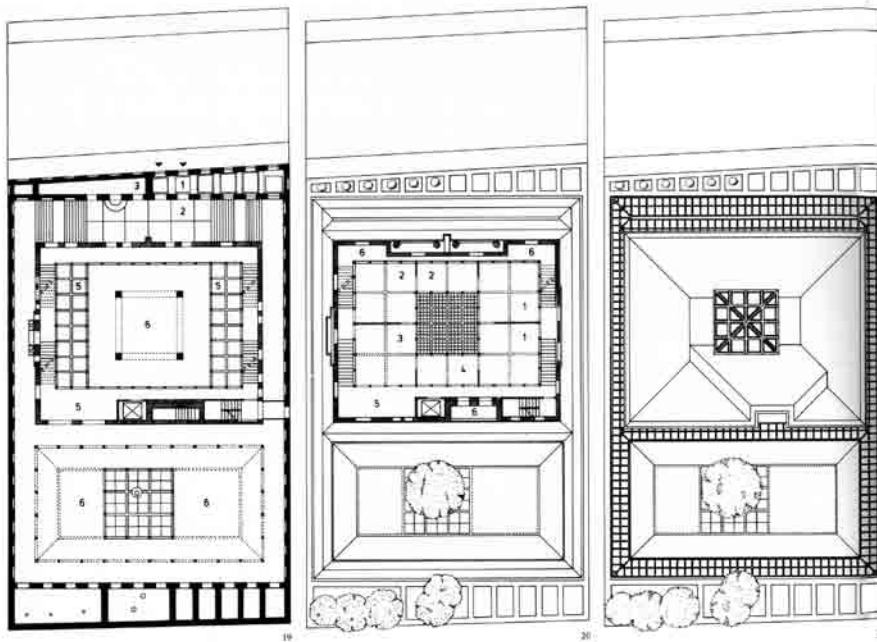


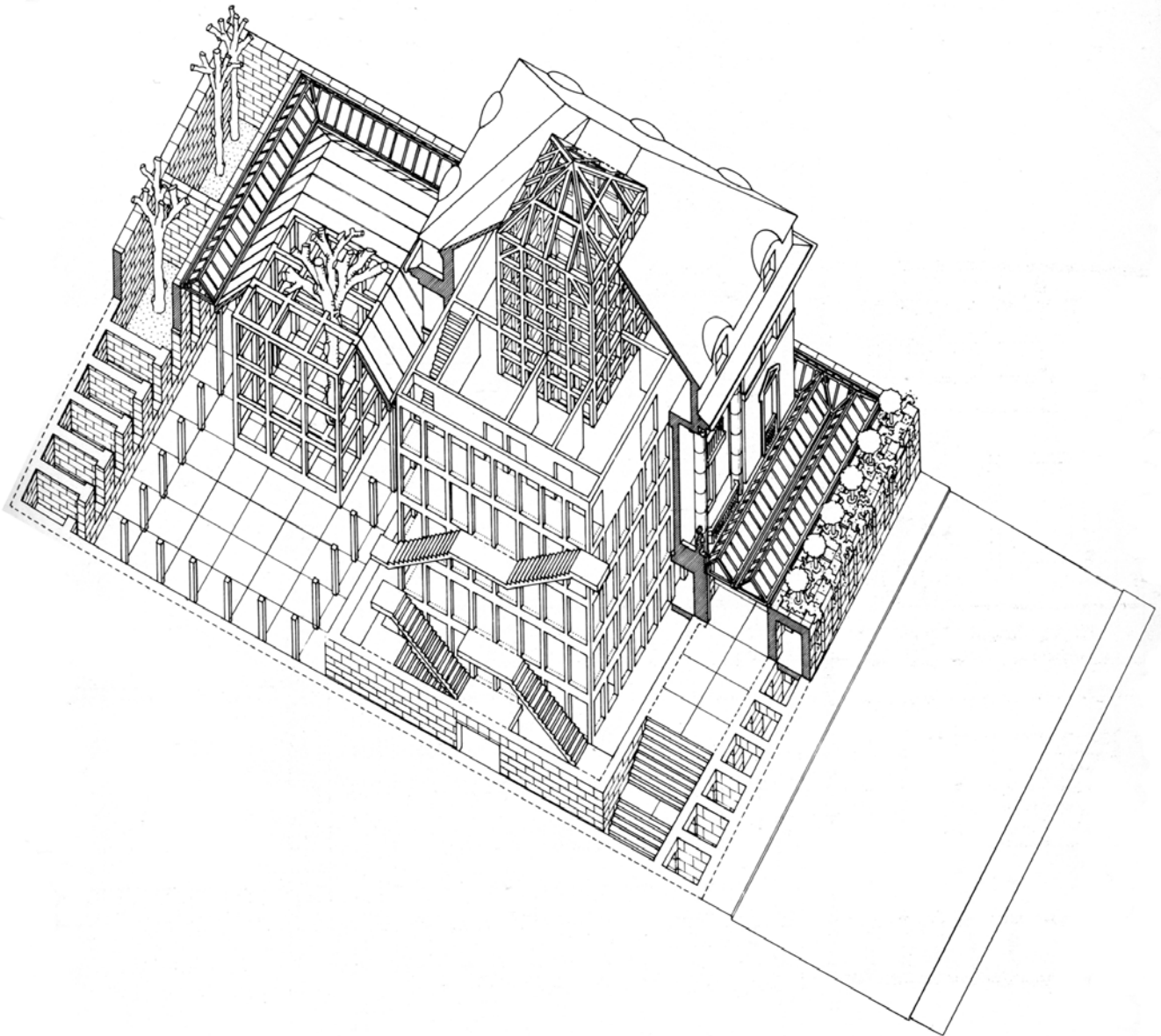
Fig 15. The floor articulation of the museum identifies the spatial experience as a sequence of threshold we are invited to cross through. Each of them represents a real or a fictional stage of the transformative process imagined by the author. The final results is an intriguing *mise en scene* of the design strategy as such.

In this way, one of the commonest categories in historical architecture, the inclusion, here an effective technical instrument to deal with a problem of a cultural nature, is presented as a theme that architecture has to express, a designed reduction of the range of possibilities inherent in it. Signifying form and signifier are identified. The building is set on a lot in a city block comprised between the banks of the Rhine and a street parallel to it. The language of the building vaguely recalls the Tuscan manner, particularly Michelangelesque, to the degree that the order and building it subtends do not clearly relate as *langue* (of the order) and *parole* (of the individual architecture) but tend, not without some uncertainties, to be integrated to the point where they find a new unity in matter.

The first operation performed by Ungers was to invert the hierarchies implicit in the building, controlling the reciprocal relations between voids and solids. The interior of the villa was completely emptied and reduced to the thickness of the façade alone, while the garden was “*mineralized*”, becoming a dense, enfolding architecture. With a rhetorical device – metonymy – the base of the primitive building, reduced to a dematerialized trace within the conceptual grid of the order, regains its primitive significance as a primary, archetypal act of architecture, as the perimetration and interclusion of a sacred space. The masonry thickness of this perimeter identifies two different spheres: the original building, now a collective courtyard deprived of contact with the sky by its roofing, and the garden, also covered as if to simulate a greenhouse. In this way the house and its garden become public spaces, qualitatively homogeneous, onto which face the private ambiances of the residence-compound. As a first effect of the inversion of the hierarchies of the original situation, the type of the detached house is translated into a modern interpretation of a courtyard building. At this point, while following an overall strategy, Ungers enters into the merits of each specific case to give it a finished form. The original villa, now converted into the built perimeter that contains a domain

awaiting a new attribution, houses an archetypal architectural structure, a trellis building that seems to simulate in the variety of its apertures, inside and outside the facade, certain characteristics of the commercial tower buildings found in central Frankfurt. *Fig 16* In the same way the garden-greenhouse carves out and incorporates a three-dimensional grid structure which contains a tree and, like a cloister within a secular architecture, relates it to the sky. The repeated inversions of interior and exterior, public and private, enclosure and openness, continually call in question the principles on which the project is organized, so accentuating architecture's properties not only as the language of inversion but also as the expression of incorporation - through the sequence of houses and empty spaces absorbed one into the other - and of speciation, i.e. its capacity to manifest itself in ever different and strongly individualized forms, starting from quite elementary formulations.

Fig 16. Each layer represent an εἶδωλον, or a "figure" corresponding to the design idea, intended as one of the fictional stage in the design strategy, representing the transformative process, until the identification of the original archetype, acting as the principle of architecture itself, or its foundation. Only the rhetorical language makes it possible to ground on a rational basis what cannot be encompassed by the rational: the processuality itself.



James Stirling always had a penchant for paradox. He claimed to be essentially a classical architect, when actually, down to the '70s, his language was openly indebted to the teaching of Le Corbusier. In the project for the Neue Staatsgalerie, Stuttgart, we can say that he achieved an authoritative synthesis, perfectly in sync with to the contemporary architectural debate. The brief called for an extension to the existing Staatsgalerie building and the addition of a theatre for chamber music, a music school and an administrative building with a library annex. In terms of its urban layout, the site was notable for the presence of numerous buildings from the late nineteenth century with an institutional character, which created an “official” atmosphere that Stirling did not wish to disregard. Moreover, the administration required the project site to be traversed by a pedestrian route linking the quality residential areas on the nearby hills with the city centre. It further requested that the whole complex should be given the character of an urban fragment integrated with the existing structures, and not an enclosed building with an excessively specialized character. The program thus contained, though latently, an ideally “democratic” justification both with respect to the theme of the museum, which was meant to be formally open to the whole city, and to the urban substance in which it was embedded. *Fig 17*

*Neue Staatsgalerie, Stuttgart,
James Stirling, 1977–84*



Fig 17. Stirling transforms each functional partition of its program into an image evoking its role within the ensemble. The final result is a monument to eclecticism and historicism, tempered by the authors great irony expressed by the continuous contamination with pop art and fake materials.

The constraints of the brief and Stirling's awareness he was designing for a city where postwar reconstruction had probably done more damage than World War II suggested his strategy of dealing with the theme as a city within the city. The densification of the urban functions within a single complex is a feature common to many projects in the so-called neo-historicist period, and yet Stirling's interpretation managed to be particularly convincing because of the subtle irony with which he tackled the theme.

Stirling's modernist formation is revealed by the effort to break down a complex program into a set of homogeneous functional components associated with a distinctive and recognizable form, hence proceeding with a strongly paratactic project syntax. The museum, chamber theatre, offices and school were treated as formally autonomous episodes, though within a united project, morphologically endowed with a strong figurative identity. The morphological components, independently of their degree of relative permeability compared with the external spaces of the city, are arranged in accordance with principles of proximity and not continuity.

The need to provide a path through the site even for those not directly involved in its activities meant that all the external spaces were treated as a strongly integrated system of urban "*promenades*", squares and real and perceived connective axes. However Stirling did not limit himself to a morphological differentiation of the various parts of the city-museum. A specific "*figure*" was assigned to each morphological theme, as if to match the theme with a period of linguistically differentiated "*gestation*". In this way the building housing the offices and library was transformed into a parodic reinterpretation of Le Corbusier's system of pilotis and the museum into a reinterpretation of major museum facilities, with the forecourts typical of the German neoclassical tradition, with the Berliner Museumsinsel as an unattainable summa and the adjacent old Staatsgalerie providing an immediate frame of reference. The music school recalls the Expressionist tradition of the early twentieth century; the theatre evokes Loos's elegant modernism in Vienna or the house of the poet Tristan Tzara in Paris, while the system of the external spaces consisting of the ramp rising from the Adenauerstrasse and the central sculpture court seems to be an allusion to the Roman spatiality of Praeneste.

These direct, ironically "*eclectic*" correspondences are then undermined, being distorted with respect to the models by certain small-scale choices such as the handrails and entrances and the use of materials, which recall certain Constructivist experiments, though deprived of the subversive charge of the masters, and certain examples of Pop Art. The general image evoked is of historicism expressed and immediately contradicted, in which the typological reference - the rotunda of the sculpture court, the entrance ramps to the museum terraces, the configuration of the squares - evokes different historical periods, projected into contemporaneity through a common tactile treatment that gives everything a notable degree of implicit cohesion. *Fig 18*

The internal spaces confirm the image of the exterior - an enfilade suite of rooms for the museum, open plan for the offices, an apsidal layout for the theatre and plastic spatiality for the school of music. In grammatical and lexical terms, each morphological theme has different features, which allude to the language of the corresponding periods. The composition as a whole reflects and multiplies the possible significances of the project.

In conclusion a modern global syntax, related to the whole museum, coexists with the "*historicist*" syntax and grammar of the individual episodes, whose autonomy from the whole is not explicable in solely morphological terms. The vocabulary is extremely rich and articulated,

differentiated for each individual functional sub-theme. There is no attempt to supersede the individual expressions with a common linguistic denominator, and not even an excessive persistence in recovering the historical roots of the different languages, concealed in their original systematicity from the openly ironic attitude of the designers. It is a Postmodern work of outstanding quality which brilliantly solves the problem of the co-occurrence of styles through the reconstruction of history as a “*linguistic game*” of unresolved conflicts.

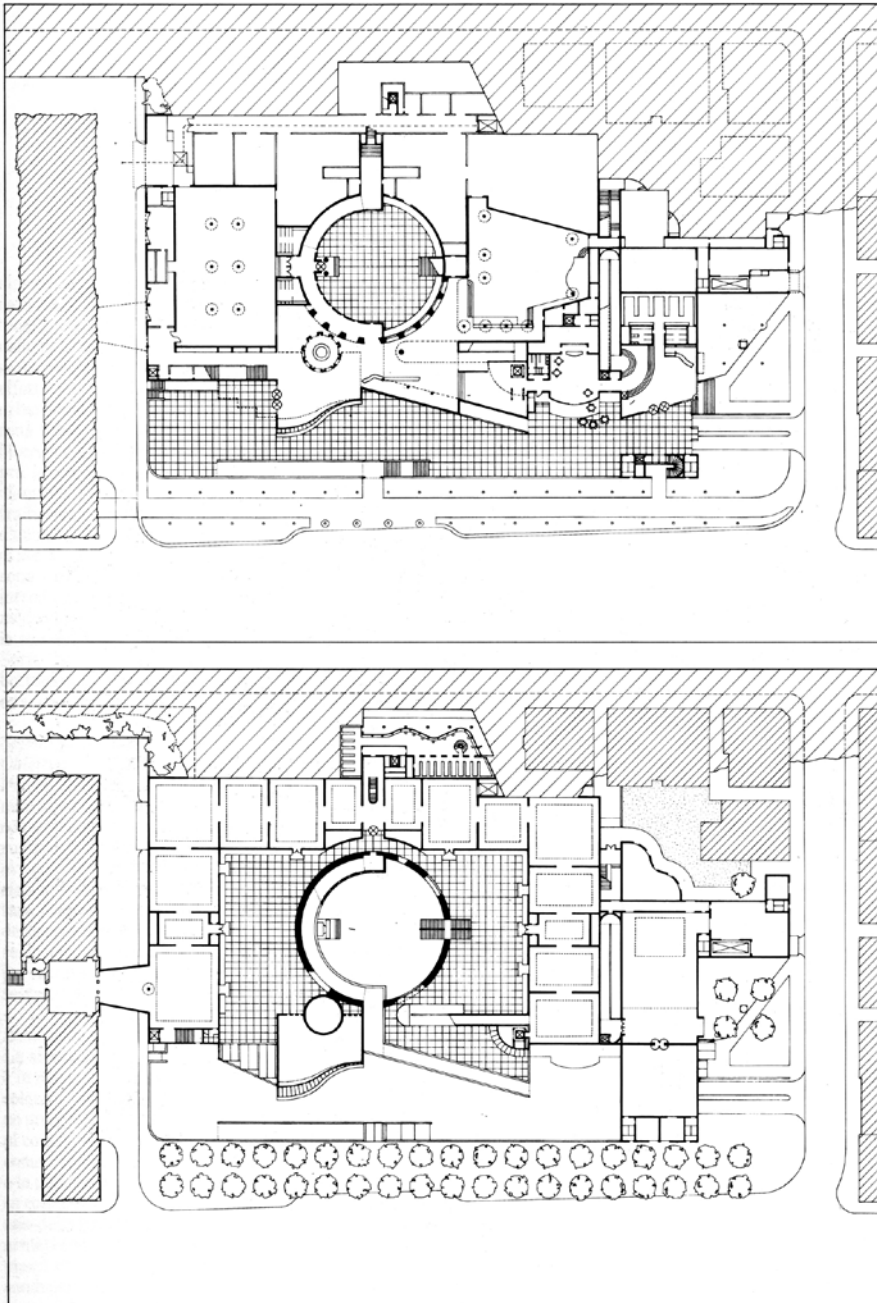


Fig 18. Stirling's rhetoric use of the ensemble becomes a way to think about the technique of the “*assemblage*” as a rational foundation of any design process.

4.2.4) The phenomenon interpreted: analysis of the sources and spread of themes

At a number of points I have observed that the notion of type itself, though within an articulated spectrum of meanings, is based on an implicit “*partition*” of architectural and constructional discourse, so that, in terminological analogy with Morphology, which identifies the parts of speech and the roles they play reciprocally within it, we should speak not only of urban but also of architectural Morphology. I say “*should*” because almost all authors use the term to identify the architectural facts in accordance with their concrete modes of occurrence, inevitably generating a series of misunderstandings.

Morphology, as an act of distinction which seeks to make the parts of urban and architectural speech recognizable and nameable, not only renders it possible to recognize the role of that which we speak of but above all, in a first approximation, to bring together many forms of building performance under a single denominator, a category that guarantees its comparability by completing its uniqueness in a communicable form.

Morphological categories are the “*operators*” that act in urban discourse, guaranteeing development and crossing, just as in speech the traditional linguistic divisions describe the actions that have to be performed in its construction: insert a subject, combine it with a predicate, etc.

This first division of operations, strongly abstract in nature, has more than any others an existential significance, and recalls archetypal operations such as connecting, enclosing, traversing, etc. By analogy with linguistics, architectural Morphology is temporally the first operation that is taught in learning a language and the most difficult, as it associates a strong conceptual level of abstraction – the logical analysis of the problem – with a great precision to recognize the parts of the urban and architectural discourse.

In its preliminary project acts (whether in architecture or discourse, the problem being equivalent), what elements does Morphology order? Inevitably a vocabulary, starting from the base vocabulary, all the way up to the most complete levels of knowledge. The problem of the vocabulary is between the most important, as from the choice of the elements already the speech takes on an its first space, no longer only logical, how much historian. From the choice of the lexical elements it is understood implicitly in what context there we are motive, an information that the Morphology, with its degree of particulars is not in a position of to offer us.

Typology is strongly influenced by syntax, meaning by the morphological-lexical rules of articulation. In written and/or spoken speech as in architectural discourse, it is a very delicate procedure, capable of substantially modifying the sense of what has been said.

Therefore, in the most general conditions, all the operations that we have to perform to produce architecture entail a specification, meaning a sort of specialization of the parts on all levels of discourse. But this is simply the potential of language. We can decide, to the degree we consider most suitable, to simplify this subdivision: to reduce

*The architecture of the
Enlightenment*

vocabulary to a few elements, morphology to limited operations, syntax to constructs of an elementary nature. In the architectural use we make of them, vocabulary, morphology and syntax can undergo drastic reductions. For this reason we are called on to make choices, and it is within this intentionality that there emerges forcefully the idea of architecture as signifying form capable of conveying the themes expressing the patterns of the city.

The description I gave of architectural-building language by partitions is significantly typical of Enlightenment culture. This requirement can, however, be explained by the partition mentioned above. The art of composing is the art of the organization of an architectural discourse in all its complexity. But precisely because it has to foresee linguistic complexity in all its components it lists them. Durand's treatise is fundamental in its capacity to clarify architecture as discourse, identifying its possible articulations.

But that list is not neutral. Reading it we observe that the design procedure is a procedure for controlling and specifying all those components to ensure they will be recognizable. In this purpose, never before so stubbornly expressed, emerges the distinctive and apparently neutral trait of the Enlightenment: it passes off the list as natural. The list is not natural: it is part of a vision of knowledge as an operation of continuous specification, determination and distinction by categories, which replaces specification by material qualities. The idea of architecture as a language is already a choice that entails specification as a criterion of selection, even though in the reality the distinctions can be reduced to the interior of a field of broad variability, which takes account of the history of architecture until then.

This lesson is plainly present to the neo-historicists, who, while going beyond it, rehabilitate the specialist position of the Modern Movement to work with logical entities more than with material characters.

The Enlightenment replaced the purported rationality of history by the rationality of method, hence the certainty of logical rules through which the architect becomes the interpreter of the requirements of bourgeois society, which delegates its representativeness to him – instead of the adaptive and transformative capacity of a city understood as a continually changeable artefact by virtue of its being a collective work.

Traditional architecture, and the anonymity that distinguishes it, due to the sedimentation of skills acquired through time and justified by the implicit confirmation of their validity in the historical judgment, is founded on an awareness of the historical reach as the preliminary act from which to start for the advancement of society and its needs.

The life of buildings, a metaphor for the life of the society that built them, dwelt in them and adapted them to their changing needs, testifies in stone to the stratified transformations, the advances of knowledge by repeated trial and error, and the solutions – however partial – that survive the time of innovation. The project thus has its foundations in the existing logical and material system in which the genetic code of architecture persists, working on which it is possible to find answers to

The architecture of tradition

the problems of the present condition.

The rediscovery of the architecture of tradition thus passes through a recognition of the role of history as the agent of transformation, a constraint that guides the evolution of needs to take one direction rather than another, an indirect confirmation that form is never subordinated to function but only to itself, as happens at every conscious manifestation of language.

4.2.5) The role of architectural “*language*”

The emphasis placed by Structuralism on the nature of the architectural “*code*”, and on its substantial identification with the significance of architecture – particularly evident in the experiences that coagulate around the IAUS of Peter Eisenman, underlies the neo-historicist experiences, but with a substantial difference.

While Structuralism unequivocally draws on Chomsky and generative grammar to explain the formation of codes as an innate mechanism which functions on the basis of archetypes, the culture of the neo-historicisms draw on a rereading of Ferdinand de Saussure, which postulates the substantial historicity of the codes themselves.

There is nothing “*natural*” about architectural language; it is the result of a convention between the members of the community that share it. Its arbitrary nature, historically founded, of the language not only explains its birth but also the absolute lack of causal relations between “*signifiers*” and “*signifieds*”. The associationism that underlines the sign is therefore arbitrary.

By contrast, one of the factors that were emphasized by Structuralism was the influence that language has on the signified, due to the way thought itself, in its formulation, is totally determined by the structure of the language that “*speaks*” it. This aspect is especially clear in Hertzberger and Eisenman.

The substantial historicity of the code carries so to recognize the foundation of the urban codes in the same city, in their material structure. The objective becomes so that of to include, with a different degree of consciousness between the individual authors, how much of the linguistic structures belonging to the city still can be employed and what, to the opposite, one should be replaced.

This explains the syntactic, morphological, grammatical, lexical and expressive eclecticism of the different currents that traversed the 1970s and '80s. Each designer drew the cue for his reflections from the context. And this was not an expression of *pensiero debole* (“*weak thought*”), except in the rejection of totalizing metanarratives and the desire to be systematic, starting from the detailed, the fragment, the linguistic individuality of every limitation and not from a generalizing ambition.

These introductory remarks also explain the difficulty of defining the characters of the language in this period.

Historicity of the code

4.2.6) The role of “*type*”

Neo-historicism forcefully revives the idea that architecture can regain its autonomy from ingenuous Functionalism by presenting itself as language, namely as a system of rules and given elements that go beyond the lack of precision of the conceptual categories that regulate it through their application to specific cases and circumstances, individuating itself and so making itself unrepeatable. In this way architecture is freed from the constraints of Functionalism by making it simply one of the possible ideas to be communicated through its rules. In other words neo-historicism relativizes it not as a necessity of architecture, but as an idea of architecture historically determined but now superseded by new needs.

This form of relativization thus supersedes the categories of Functionalism, but it also implicitly confirms the idea, typical of Modernity and the philosophy of progress that accompanies it, that specialization is an end that architecture should pursue if it is to be communicative as a language of images. A specialization, note, that is plainly implicit in the initial assumption, i.e. in the partiality of the choice of themes and ideas that architecture has to communicate and which should be an artificial criterion of selection of them, made in terms of the fittest elements and rules of organization. Reading and project are absolutely inseparable and no author of the period has the least doubt about this implicit relative dimension of knowledge. In this way relativization becomes the mirror of the times and an attempt to supersede the generalizations implicit in the experience of “*Structuralism*”.

Architecture as language

Though architecture understood as language, which manifests itself through its specific formulations, is a factor common to the debate in those years, we can certainly not say that the theme was tackled in the same terms. By analogy with what happened in linguistics in the second half of the '60s, where there was debate over the priority of speech over writing as the expression of language, also in the architectural field the different positions could be related to two prevailing approaches. On the one hand there were those who considered architecture an autonomous figurative expression, with a strength capable of modifying or at least suggesting the categories of thought. On the other there were those who claimed it was the application of the categories of thought to the ambit of construction.

Just as “*language*” defines the system of rules that governs a spoken expression of language, the “*text*” defines the system of rules that governs the written expression of language. The definition of the city as a “*text*”, even though not clearly expressed in these limits by any author, seeks to express the idea that the city with its materiality, its modes and its different expressions, produces forms and relations that are a stimulus to thought to grow, to grasp phenomena in their concreteness as occurrences. So the form of the city, in the act of its gestation, has to be as neutral as possible, because only its formation and distortion,

The city as “text”

because of the different and contrasting forces in being, will determine its significance. In other words this image of the city, which not all forces share, does not translate ideas that pre-exist it and which do not belong to it, but simply builds its own concepts by making and superseding itself. At most it seems acceptable to think - but there is not sufficient evidence to confirm this hypothesis - that the sole ideas that architecture can translate are those that are already inherent in it. The city as a text expresses a materialistic interpretation of reality - the significance that is identified in its becoming, its coming into existence which is translated constantly into significance - within which the partiality admitted in the choice of point of view from which to analyze reality can only be comprehended in the aspects of its becoming, and not the outside it.

The type as artifice, not as a product of nature, represents the common denominator of the different experiences cited, and clearly defines its significance as a conventional, collective act, which precedes any attempt to understand reality and its rendering through a construction of the world in which to live. In these terms every anthropic act is a ritual action, the evocation of myth as a shared explanation for the universe.

In this way the type loses all its sacred connotations, it is secularized by being relativized, but in this sense it gains in rootedness in the history, in truth in terms of sharing a system of ideas related to a time and a history. In this sense the history of the city and architecture is the history of the mutable significance attributed to the type. The secularization of the term, that is its desacralization, also means the loss of an interpretation of reality as a whole, the loss of a mythological vision of reality and the reduction of this image to a set of questions which, translated into the definition of the types, systematically find their confirmation in its operative answers.

The type as social "product"

The debate that arose from the ashes of the neo-historicist contribution enables us to make some general observations about the definition of the type and its possible inflections. The emphasis on the type, which emerges clearly from the enlightenment period on, is clearly distinguished by the need to bring order into a more complex and highly articulated society. It is no accident that in all historical periods when it is sought to stress the significance and role of specialization, the type acquires a special significance in the debate about the city; likewise in all the periods when there is the opposed tendency to diminish the value of specialization the type is banned or at least comes under fierce attack. The reasons for this correspondence seem fairly clear and I will try to provide a rationale for them. A system is defined as complex, in the natural sciences as in the human sciences, when its components have a precise and reciprocally differentiated role within it and when it is easily identifiable by virtue of these characteristics.

So it is not a question of completeness but rather of characters, possibly one, prevailing over all the rest, which are however present. Each

The type between elementariness and specialization

component, in other words, is a small system within which there exists a considerable variation between the average values present in a certain number of characters and those corresponding to a single one of these characters. The complexity of the individual component and the whole system is thus attributable to the variation in value of specific characters, each time different, with respect to the average characters present within the system. The characteristic hallmark of the individual component, or distinctive trait – to use a terminology current in linguistics – is what connotes it, distinguishes it from the others which, however, we can suppose it shares. This character communicates the role that it acquires in relation to the others. In a complex system, co-existence is conditioned by the capacity to exploit and express the set of specializations existing within it; the clearer these specializations, the more the force of the whole will emerge in terms of complexity. The type is the distinctive feature of every individual component, which makes it recognizable by comparison with the others.

In an elementary system the relations between the components are characterized by a substantial competitiveness: all are potentially capable of doing everything. There are no characteristics and consequently specialized roles that depart significantly from the average values of the system. All the characters of the system are distributed within every single component and also the rules have a specific level of interchangeability. In these systems it is difficult to speak of the type, as no character emerges above the others as a possible parameter to determine a description/distinction. From these considerations it derives that first of all it is thus possible to talk about type in relation to the system, and not in relation to one of its parts; secondly because there exist characters present in unique and unrepeatable quantities in accordance with unique and unrepeatable modes or rules of assemblage. In simple systems these conditions do not exist, because – to exaggerate – everything tends to resemble everything else. Naturally the examples I have given are simplifications instrumental to an understanding of the phenomenon; there really will always exist intermediate conditions of coexistence between the two, which are undoubtedly closer to reality. From the analysis of the different contributions it emerges that the two systems cannot be placed on the same level; in other words that the first is the result of the speciation of the second. In fact strongly specialized systems are the result of an adaptation to the altered conditions of the context, which however have to exist for a sufficient length of time to enable the systems to adapt to them. But as precise answers to specific problems, they are also the first to be dropped when the contextual conditions change. Strongly specialized systems oppose a potential inertial to change.

By contrast, elementary systems possess an intrinsic flexibility and adaptability that enables them to adapt far more rapidly to changed conditions in the context. Subsequently it is time and history that establish the modes of a necessary specialization. The types, meaning specialized systems, thus represent the most satisfactory response to a specific order of problems, but for this very reason they have the greatest difficulty when faced with the need to change.

The non-types, which of the former represent the generative structure,

clearly do not offer the optimal conditions of adaptation; but they possess the capacity to adapt to any mutation and create the conditions through which, in the course of time, it becomes possible to achieve a new speciation. In other words both systems need continuous interrelation.

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4.3) Deconstruction

4.3.1) The cultural context

The paradigms that best describe the current post-modern (1) situation appear to be complexity, fragmentation, plurivocal rationality and semantic redundancy. The dissolution of ideologies, accurately defined by Lyotard as the great metanarratives century used by the power that be to legitimise their political, economic, cultural and other policies in the course of this century, has led to an irreversible breakdown of the unit of knowledge, with disastrous effects on the very notion of consensus that allowed culture to be transmitted, guaranteed and communicated. Among the more obvious consequences of this momentous development we may note the loss of a social contract between individuals, which is now systematically subject to constant renegotiation by methods and timeframes that are not conducive to institutionalisation and consequent recognisability. As we shall try to explain, this is the source of the most significant consequences on the subject of this study.

The state of crisis that now afflicts the notion of type is closely connected to loss of authoritativeness and significance in the concept of identity (linguistic, political, cultural, social, etc.), and finds ready confirmation in the discordant plurality of the attributions of the term. This concept systematically brings to mind the community's shared ability to recognise its collective nature in the association of an object (or a phenomenon) with a particular behaviour, without this implying any need for a conscious assessment of value. It should be made clear that such identity is not a property of the object, but rather the result (or presupposition) of a relation that is established by convention between the object (or phenomenon) and the semantic property that we tend

1. This matter is discussed in *La Condizione Postmoderna* by Jean-Francoise Lyotard, Milan, Feltrinelli 1981, and Marc Augé's *Non Luoghi*, Milan, Elèuthera, 1993.

to attribute to it. Similarly, recognisability is not an intrinsic property of the object, but a correlation operation that we tend to establish, that presupposes a general expanded consensus on the part of members of the collectivity so as to be comprehensible as such. In this sense, identity and recognisability are synonyms that imply a correspondence between objects/phenomena and meanings/behaviours, which becomes of prime importance in the communication and the transmission of ideas. Ferdinand de Saussure correctly interpreted this process in his study of the problems of linguistics, which he classed as part of a more general theory of communication that he hoped would see rapid development. Drawing a distinction between form/signifier and content/signified he established that qualities are not properties of phonic material but attributes that the speaker assigns them with a certain degree of freedom. This freedom finds a limitation in the historically defined conventions through which the correspondence between meaning and object (or phenomenon) is shared, communicable and therefore transmissible.

In order to express the nature of the social contract that sanctions the correspondence between form and content at a given time, the author speaks of the “*sign*” (that which stands for something that is not present), while the convention that allows correspondence between form and meaning is expressed through the term “*code*”.

The discovery that there is no automatic correspondence between form and content was of key importance, insofar as it established the artificiality of man-made language, freeing it of any positive attribution that might aim to demonstrate its assumed naturalness.

As an immediate consequence, relational activity becomes a creative activity that takes account of the requirements of each individual and of the need to communicate, and thus share, values, or rather the relations between the objects and behaviours permitted in collective life.

According to De Saussure, if we want the relations established between objects/phenomena and behaviours/meanings to be understood, they must be part of a culture, i.e. of a collective knowledge and domain. The existence of a heritage of experiences shared by all members of that society that quantitatively corroborates those correspondences, is a necessary condition.

Indeed, if I am able to communicate the idea of a church to a hypothetical interlocutor without fear of being misunderstood, it is because we are both able to associate a particular architectonic form that is codified in its internal grammatical relations, to an equally circumscribed ritual function or behaviour that is in turn clearly codified in its internal semantic relations. The established relation, to be understood as shared heritage, and hence as value protected by the community, is thus of crucial importance. In analogy with the notion of sign as linguistic value we shall conventionally consider such a social accord as type. I cannot discuss type without referring to established and shared codified relations (just as it would be impossible to speak of values in economic, political, cultural or other terms outside of these same conditions of constraint). In line with these premises it is inappropriate to employ such a term outside a particular historical time that legitimise that same relation as a value in itself. In analogy with the content of

De Saussure's linguistics, the type, involving the experience of ritual forms and functions at a particular historical moment, represents the conceptual transcription thereof by giving itself a value.

In a similar way we can recognise and identify a building as a house only if and only if we knowingly accept the correspondence between the adopted form/signifier and the ritual/signified of living in a family that connotes us as members of a historically established community. Such knowledge is continually checked through a process of comparison, in the past as in the present.

The concept of identity is therefore linked to the possibility of building relatively stable relations between form and content, in both space and time, that are recognisable and therefore shared, conceptually and materially. Since such recognisability arises from a convention, from a social contract between members of the community, it is limited, paralysed by the very existence of the accord, and non-existent outside it.

These definitions, which lend themselves to interdisciplinary use, are an extremely useful aid to understanding architectural developments since the 1960s, in Italy in particular. Although the motivations differ they have all contributed to establishment of the concept of type as a notion that is central to the architectonics / town planning debate and to the project.

The need to transmit a full and culturally differentiated heritage of acquired knowledge has made the type the ideal medium for ensuring communication within the community of speakers. The application of structuralism, to be understood as a method, to the problems of communication and to the definition of a semiology of architecture, has thus represented an important stage in the understanding of its contents and meanings (2).

It is also the case that since the late 1950s, public debate and journalistic activity have created increasing awareness of a serious loss of identity and recognisability of increasingly significant parts of our cities as a result of modernist interpretations and renditions. This begs the question of what needs to be recovered to rediscover lost values. Recognised as such, according to structuralist language, as relations that simultaneously risk the relational activity of both individual and collective subjects, the question becomes one of a search for correspondences between forms and meanings, primary and secondary alike, in the built environment. The notion of type has thus become central as a concept capable of expressing the nature of the social contract as an operating condition of self-awareness of the collective dimension. There has clearly been no univocal stance, and the various schools of thought have sought to put forward their own interpretation of the problem. The concept of type has replaced that of linguistic sign, that is, the conventional relation that is established between what we call form/signifier and content/signified. We refer here, of course, to a level of elementary signification, which is identified with the codified ritual associable with a function that is defined and therefore expressible as denotative meaning. The need for this clarification arises from the clear knowledge that there are multiple semantic levels, which we can in general define as connotative meanings. While important, such meanings are not attributable to

2. The centrality of the concept of typology is discussed by Franco Purini under "*Alcune considerazioni relative alla nozione di tipologia edilizia*" [*Some considerations regarding the notion of typology in construction*] in *L'Architettura Didattica*, Reggio Calabria, Casa del libro Editrice, 1980, pp. 59-64.

the notion of type, and are therefore intentionally excluded from this discussion. We shall examine the correspondence between architectural form and content expressed through the notion of type, while restricting ourselves to the level of primary signification.

The hypothesis of correspondence between urban morphology and building typology, central to 1960s and 1970s debate, thus arises from the idea that there is a historically verifiable relation that codifies, and hence generalises, associations between form and prime meaning, allowing us to nominate, and thus clearly recognise, the constituent parts of the urban organism, such as libraries, abattoirs, hospitals, town halls, etc.

Without recognisability of relations of correspondence, we cannot discuss type. Typology, like language, is thus a creative activity and has all the characteristics of an operation linked to the production of "*signs*". Such creativity is not solely expressed through the possible associations between form and content (pertaining to the typological ambit), but also through experimentation on formal structures at the grammatical (and hence morphological, syntactic and phonological) level, and on semantic structures at the lexical level. During the course of this discussion we shall see how the logical dynamics in which the typological debate developed in Italy and beyond, led to each of these aspects and instances of communication being attributed a role and a reciprocally variable importance.

Generating types means generating recognisable relations between form and content/meaning that allow objects and collective behaviours that surround us, to be recognised. But it is important to bear in mind that, on the basis of De Saussure's teachings, there is no causal relationship between signifier and signified, between constructed forms and the ritual behaviours that occur within them. The relationship is purely conventional, and the concept of type as a historically based value is established on this arbitrariness. With regard to Functionalism in Architecture and Town Planning, this distinction was to be essential to understanding the nature of the debate and the consequent distortion of the nature of typification and of the type. This step is also fundamentally important to understanding the reference to thematic typology which, not without reason, became increasingly insistent as reconstruction came to an end in post Second World War Europe. In fact, in its eagerness to achieve total (and therefore linguistic) reform, Functionalism, being the operative ideology of mechanised society and the city-factory, rejects the idea, implicit in the notion of type, of a conventional relationship implicating a continuous negotiation between the social parts, and further refutes the hypothesis of a possible subversion thereof in the search for a new equilibrium. This is replaced by the concept of standard, as the product of an optimisation process of the requirement/performance relationship in which, in contrast to the type, the relationship between form and function is causal, and thus assumes the full character of a natural process. Type planning means planning based on codified associations between conventional forms and ritual behaviours. But in order to do this, it is necessary for forms to be defined just as there are meanings, and for such forms to represent polarities that are pre-existent to language. Neither of the

two parts must be subordinated to the other; content must be able to exist without form, and form without content. In the absence of such oppositions, value, as a relational concept of linguistic stamp, is diminished.

From this point of view, typology can describe the functioning of urban architectonic language in a particular historical period, but tells us nothing about how it developed. This further limitation must be kept in mind to aid understanding of the value of theoretical proposals that aspire to more advanced positions regarding the concept of type, without however rejecting it, and which we shall examine during the course of our study.

Type planning, as it has been defined so far, is clearly linked to the concept of legitimisation and to the evolution of power relationships within the community. At the moment in which a society's values, and with it its power and control relationships, change, such relationships translate into new associative relations that sometimes involve grammatical and/or lexical transformations. New relations are consequently established between form and content. They will at first be barely recognisable but, but will be accepted and given identity once distributed around the urban area. In order to be recognised, the relationship established must be repeated and become embedded in the community. The concept of type, like that of sign, is thus closely linked to the stability of power, its longevity, its recognisability and its systematic search for consensus. Put another way, typology operates as a medium of metanarration through the action of an ideology. Tracing the different occurrences in terms of the events surrounding typology also means tracing the evolution of the political and cultural system that generated it, and understanding its strategies of legitimisation.

Berlin's urban reality can be used as a reference to understand Europe's political and economic situation from the mid-1980s. Two different economic systems which always used the threat posed by the other as an argument through which to recognise their own identity and legitimacy, suddenly found that they had to coexist, raising the question of the integrity of their boundaries, their economic decisions and their social and political structure, which had a meaning that was mutually opposed to their own. A situation that was in some respects excessively simplistic, involving the coexistence of capitalist and communist systems that provided a choice of allegiance and with respect to which one's recognition could be defined, suddenly became a condition in which differences coexist rather than merge with a loss of uniqueness in respect of the reference system from which they drew legitimacy. The city immediately registered the change. Paradoxically, the Berlin that we know today owes its identity to the presence of the wall, however impractical it may be, and loses meaning in the absence thereof, such were the consequences of that sign on the city and its future. The fall of the wall also resulted in the collapse of countless economic and psychological barriers that helped to build identity, albeit within the limitations inherent to any extreme nationalism.

Who can possibly deny that East Berlin's identity is attributable to the

*Margins and urban interstitiality:
the in-between*

glaring contrast between the buildings of the old Jewish ghetto and the pompous monumentalism of the “*workers’ palaces*” on Karl Marx Allee, or to the juxtaposition of tranquil residential districts boasting urban, turn-of-the-century villas and the imposing mass of industrial centres? Themes such as interstitiality and urban marginality assume symbolic value that transcends specific planning possibilities, expressing the sense of unease arising from the loss of boundaries and differences at the level of social, economic, political and cultural ritualities. This has developed into a field of experimentation that is now, perhaps inappropriately defined as “*globalisation*”.

The city of neo-historicist imagination is an organism of strongly integrated constituent parts, characterised by a series of transformations in the sense of continuity, that is, that projects what could yet become a historical term of reference, a guide for directing the contribution of innovation, into the immediate future. A great sense of unity permeates space and its rituals, albeit in the variety of specific manifestations.

The past is a living process that is constantly re-implemented by means of the widespread updating of its existing features. From a teleological standpoint, the principle of sedimentation of the traces of the various cities whose images are inscribed in the present city offers guidance to new generations. The deconstructivist stance recognises this picture, but gives it a different interpretation. The hermeneutic approach, in which only a shared code of common values and ritualities enables individual fragments of the city to be reconstructed in a uniform framework, is in fact taken to extreme lengths. What happens in the community when conflicting values coexist and reveal themselves in the diversity of social, economic, political and cultural rituals? What happens in *civitas* when it loses its roots and shared values, or rather, when its members are suddenly confronted with “*the other*” and, recognising the relativity of their position, are forced to live side by side with cultures and ethnic groups that jealously guard their own identity? Each micro-society will attempt to mould space in line with its own expectations by projecting its own values into it. It is a spontaneous process, similar to the process that took place in the traditional city following times of crisis. The main difference is that the energies once contained by various forms of nationalism have been released into the society that has been slowly but surely forming since the latter half of the 1980s. Such energies “*interpret*” the city’s sediments according to their own value systems, gradually obliterating its roots, origin, authenticity and history. Paradoxically, the end result is the calling into question of the very concepts of originality, authenticity and truth, since each point of view tends to impose its own. Relativism and a collapse of absolute values are thus the immediate consequence of a new way of understanding society. A reality where differences fail to merge into a new unified synthesis, because no single component is sufficiently powerful to prevail over and absorb the others. The city immediately registers the effects of such conditions. The phenomenon is naturally more marked in those prime peripheral realities that now occupy a new centralised position. Open and closed systems no longer exist, having

Traces and sedimentation

been replaced by a state of equivalence and overlap between open and closed systems.

Reassembly of the fragments in a unitary system appears impossible. For disciples of deconstruction this situation has some decidedly positive aspects, including recognition of the relativity of choices and values, and the abolition of all orthodoxy and all revealed truth. Regarding architectonic language, Peter Eisenman observes: "*However, if the laws of architecture correspond to a set of conventions, and therefore are not in any sense "natural", it means that there are other truths that can be expressed beyond the natural truth of the classic object. Only when architecture will have demolished this conception of a natural truth, removing the repression contained by the concept of "natural", it will significantly become a part of the post-Hegelian project.*"⁽³⁾ Even more important is the author's reference to the culture of classicism that considers "*natural*" the assertion that architecture is the "*art of constructing*", the postulates arising therefrom being the correspondence of structure, distribution and volumetric articulation, the tripartite morphological separation of base, elevation and crown, and the concept of originality and authenticity of the place in which the architecture is created and from which its materials originate. The "*relativisation*" of these principles has led to better understanding of the historical significance of these choices insofar as they are historically based. The sense of these reflections can be correctly applied to all political, social, economic and cultural fields. The crisis of the so-called meta-narratives passes through a relativisation of values, the rediscovery of their conventional meaning against belief in a supposed "*naturalness*". But such a condition is not necessarily recognised as a liberation or as a cultural and intellectual growth by all. Many find it simpler and less stressful to live in a fairly restricted domain of definitions, certainties and values. This is why the condition of coexisting and cohabiting with conflicting points of view can be interpreted as a restriction of one's freedom rather than as a beneficial opportunity, however natural or conventional it may seem.

People therefore take markedly different views of system dissociation, depending on their social background, political views, age, sex and personal history. Pluralism can create dangerously unstable situations if not contained within a framework of global legitimisation. The questions posed by the transformations of the 1980s, which were not easily foreseeable even just a few years earlier, raise complex questions.

Non-places are the natural consequence of an urban condition that immediately registers the lack of a firm rooting of values to the actual reality of occurrence, the dramatic dissociation of meaningful forms and related meanings, the other side of the fragmentation and dissolution process of unitary systems. The very concept of authenticity is called into question when there is no longer correspondence between a social, political, economic and cultural ritual and the context in which it takes place. This is something that we experience in everyday life and that has been further exacerbated by the logic of the network.

System fragmentation and dissociation

The non-places

3. Peter Eisenman, "*The Blue line Text*", in Pippo Ciorra, Peter Eisenman, Milano, Electa, 1993, p. 213.

Market liberalisation and the collapse of every form of protectionism and barrier, often more apparent than real, against others, in the many manifestations thereof, place us in a position to experience different values in our contextual conditions.

The term non-place thus expresses an aspiration to achieve a state of ubiquity, of equivalence that exacerbates the realisation of contextual microsituations in which to reproduce the authenticity of the meanings. In this sense, deconstruction registers the new condition and attempts to translate it into the driving force for a new sociality. But more than offering solutions, deconstruction raises important questions, and thus appears to make a beneficial contribution.

In a situation in which the dissociation between signifiers and signified, and between contexts and the rituals that take place within them is evident, it is almost inevitable that space should acquire an “*evenemential*” character. Permanence, presence, continuity, unity, solidity, etc. are no longer the categories that assume value, these now being transitoriness, absence, discontinuity, dissociation and interruption, multiplication and reverberation, and precariousness. Architecture and the city increasingly assume the nature of ephemeral simulacrum, which in extremely rare cases can be recalled to mind, in the same way as the linguistic register of advertising. It is man, more often analysed in an individual than collective dimensions, who constantly nullifies architecture’s capacity to give form to his rituals. The only solution left to architecture is to turn itself into a simple self-referential mechanism, a metaphor for rather than a “*representation*” of shared values.

Architecture as an event

The possibility of experiencing an apparently unlimited number of meanings and rituals in the same spatio-temporal conditions determines a kind of hermeneutic and factual congestion and hypertrophy of the traditional categories through which architecture and the city have always been judged. There has been too little reflection on this aspect. Such redundancy is inevitably transformed into a form of disorder, of interference in the comprehension of the city as a space for the “*representation*” of society and, above all, the crisis of the space itself as a medium to which a clear communication function can be attributed. A form of rejection may arise in the face of such a condition, due to the incomprehensibility of the messages that are communicated, as well as a form of full and enthusiastic adhesion, a state of febrile acceptance that is dependent on the conviction – which must nevertheless be demonstrated – of being able to share any form of emotion with any person at any given time.

Spatio-temporal congestion

The concept of congestion inevitably has repercussions on the articulation of the plans. Since the second half of the 1980s it has become increasingly commonplace to hear of complex polarities, in which rituals that were once distinct, or at most integrated by degree of complementarity, coexist and cohabit. These concentrations of activities ensure that architecture increasingly assumes the character of

“artificial city”, with a relative degree of isolation with respect to the city as traditionally understood, with its mainly horizontal development. Architecture and the city are thus no longer complementary scales of the same urban substance, but tend more to be in competition. This is undoubtedly a new aspect within urban planning, even if Rem Koolhaas did brilliantly indicate the beginnings thereof in the unique and unrepeatable instance of New York, defined the *“vertical city”*. This phenomenon is also more evident, from a strictly figurative point of view also, in the great metropolises of the world, but is also already apparent in lesser settings. One only needs to think of the diffusion of integrated shopping centres, theme parks and transport hubs, as miniaturisations of the city. Deconstruction can therefore reveal the mechanisms through which these new ritualities take form, without necessarily aspiring to a judgement of value.

4.3.2) The ideas of authors: intentions and definitions

Architectonic deconstruction can be viewed as a cultural movement whose exponents share some research interests although they may not adhere to a common theoretical programme. Conversely, its leading figures have produced conceptual interpretations relatively autonomously, occasionally at odds with exhibited works and public appearances in which they have attempted to systematise the respective results in a bid to raise awareness of the movement. In such terms it is the works that have gradually brought the movement to the fore and not the other way round.

It is particularly important to emphasise an element of continuity that distinguishes protagonists of architectonic deconstructivism from followers of current practice: firm integration of theoretical and conceptual reflection, project processing and the experimental checks during the construction process.

The current period seems in fact to be mainly characterised by exasperating pragmatism that seems to find obvious satisfaction in reducing the question of the architectonic object, and, even more seriously, of the town planning phenomenon, to the mandatory contextual conditions (economic, political, social, cultural and constructional) and to its effect on the completed work, measured by the uncertain *“creativity”* of constraints. Deconstructivism, by contrast, controversially rejects the notion of context and the place’s ability to explain and reveal the truth of the proposal, systematically underlining a desire to always and in any case bring the various proposals back to generalised principle against which the degree of compatibility with a reality under continual transformation is to be constantly checked.

It should be recognised that such principles do not translate into conventionality of proposal, but rather into a project strategy that constantly measures itself against the vagaries of context in order to assess its own internal coherence.

With such initial conditions in place it is possible to compare different

spatio-temporal experiences, in the knowledge that they may offer lessons that can help to reject the cynicism that accompanies current practice and the uncritical conventionality that often accompanies more intellectually based proposals.

Bernard Tschumi himself declared *The Manhattan Transcripts* to be the first theoretical text on architectonic deconstructivism, implicitly laying claim to paternity. Published in 1981, three years after the Rem Koolhaas' *Delirious New York*, it takes the form of a collection of theoretical designs, supplemented in the 1994 re-edition by a text presented to the Architectural Association in 1982, in which the author provided some clarifications on the ambiguities of the definitions contained in the first edition. We shall refer principally to these texts in defining the most important themes of Tschumi's theories.

According to the author, architecture involves continual and systematic interrogation on its disciplinary limits. Only by placing oneself in this state of apparent marginality can one fully understand its contents, paradoxes and implicit contradictions. The limits also constitute areas of overlap between different fields of interest, and are therefore places where we can fully understand the nature of the associated processes of current transformation.

Based on these premises, the theme of the conventionality of architectonic language assumes a central role. In fact, the author states: "*However precise and generative plans, sections, and axonometrics may be, each implies a logical reduction of architectural thought to what can be shown, to the exclusion of other concerns. They are caught in a sort of prison-house of architectural language, where "the limit of my language are the limit of my world". Any attempt to go beyond such limits, to offer another reading of architecture, demands the questioning of these conventions.*"⁽⁴⁾

The author's philosophy appears concealed in these meaningful and effective words. They confirm the conventional nature of architectonic language and its plurality, given the different instruments through which it reveals itself. Yet there is at the same time an implicit suggestion of the idea of language as a representation of the developing reality. Since every representation is a reduction of the infinite potential that the reality can offer as such, and which we tend to conventionally reduce in order to be able to communicate a given meaning attributed to that reality, in order to transcend the limits of that representation we must examine the system of rules that govern the language, or rather, the languages, that we intend to employ.

According to Tschumi, the conditions of contemporary life have reached a point where the codes employed thus far now need thorough revision. In particular, we now see active separation between architectonic form, the social values attributed to it, and use. A new way of looking at space must take account of these aspects and architectonic theory must be examined to assess the inherent degree of coherence therewith. The *Manhattan Transcripts* thus proposes a different understanding of space, with independent architectonic object, movement and events.

The architectonic space discussed by Tschumi has its own autonomy and its own laws on which basis it can be manipulated, distorted,

The Manhattan Transcripts,
Bernard Tschumi, 1981

4. Tschumi Bernard, *The Manhattan Transcripts*, London, Academy Edition, 1981, p. XX.

compressed and juxtaposed. There is thus a spatial syntax that exists independently of its use and of the value attributed to it. Merit for having recognised such autonomy must be given to Piranesi, and this result brings him closer to experiences such as those gained by Schwitters and Rietveld.

In Tschumi's vision, the event includes any operating moment or condition of an activity. It is as such a broader and more complete concept than the function concept, which reduces each activity to merely recurrent and essential aspects, standardising their evenemential potentialities in the search for a closer correspondence between form and function.

Movement is the factor that places the person as protagonist of space, capable through its very presence of raising questions on the balances sought through a precise geometric order.

The three aspects identified by Tschumi can find themselves in a state of reciprocal indifference, conflict or reciprocity. Every architectural work seeks a balance of factors in relation to the underlying ideology. According to Tschumi, it is essential that they coexist and are considered in their indispensable role of composition, which contextually intervene in the qualification of architectonic and urban experience.

The objective thus declared by Bernard Tschumi is that of restoring the time factor within the interpretation of contemporary architecture, where time is understood to be linked to the notion of spatial experience. All too often this perspective has been marginalised by theoretical debate, techniques of representation, and spatial control and usability methodologies. This situation fails to meet present-day needs. A new architecture and its means of representation must take account of current conditions. From this emerges the critical distance with regard to structuralism, which had circumscribed the architectonic object with its own field of enquiry. Tschumi does not deny the importance of the role played by such an interpretative approach to architectural planning and the city, but maintains that, as a representation of reality, such an unequivocal perspective continues, from a modernist point of view, to encourage an objective and therefore scientific definition thereof.

Once again, with the search for synthesis and unity of the ill-concealed structuralist ideology playing its part, the subject, as a user of space, animated by proposals that cannot always be foreseen or reduced to responses of a conventional nature, is deprived of the role that a producer might expect. In moving attention solely to the intrinsic rationality of the object and its rules of formation and transformation, structuralism evades the principal role of the spatial experience as a factor of interaction and signification.

Reintroducing the concept of experience to architectonic and urban interpretation also means replacing the single point of view of the abstract subject, in the plural, with the multiple interpretations of space that different individuals will attempt to give it through use.

Tschumi thus identifies three systems that must be considered together with regard to the subject of architectonic and urban space: events, actions and spaces. In the author's words: "*The purpose of the tripartite mode of notation (events, movements, spaces) is to introduce the order of experience, the order of time—moments, intervals, sequences—for all*

inevitably intervene in the reading of the city. It also proceeds from a need to question the modes of representation generally used by architects: plans, sections, axonometrics, perspectives.”⁽⁵⁾

For Tschumi these three systems are subject to three absolutely independent rules, which we could refer to as the specific measure, and, as already pointed out, could find themselves in a condition of conflict, synthesis or indifference. *Fig 1*

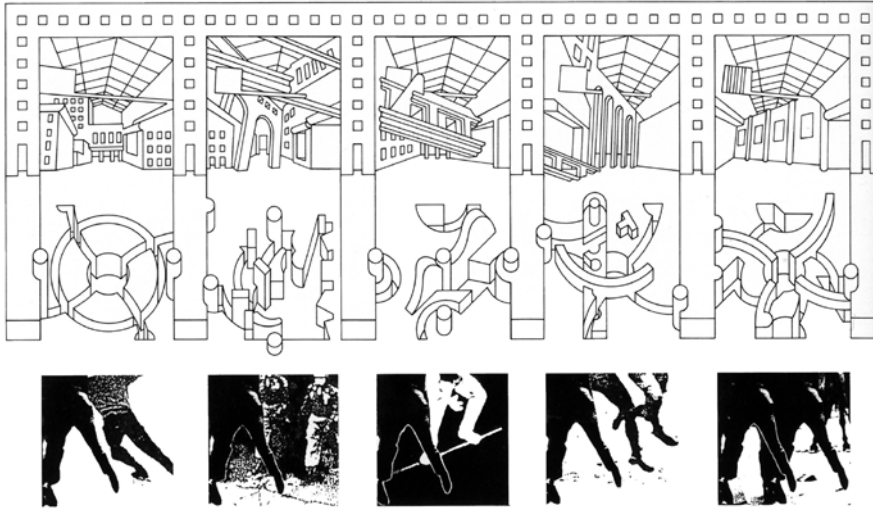


Fig 1. MT 4 The Block. The diagram presents three different level of the reality: the architectural object, the movement and the event. Each of them has been extracted from its context, New York. As such, they act as fragments floating within the space of the plate. The author plays with them, producing a landscape of ruins. Through the real logic of the resulting collage, Tschumi aims at questioning the underlying rational structure reduced into pieces. Isolating himself in the space of the drawing, the author succeeds to replicate a real condition, avoiding a return to eclecticism. But he also alienate himself from the real which subvert the reality he is referring to. The drawing space replace the referent.

In this way, the principle of synthesis and equivocality of the structuralist viewpoint, is called into question and reduced, not for the purposes of each language, but rather to fortuity suspended in a possible but unnecessary state. The structure and order that govern it become an eventuality in a field of possible determination that includes all the combinations that our minds can imagine.

Language therefore translates as the field of the possible, in an absence of determinations that include circumscribable and repeated relations, and hence conventionality, but excludes the possibility that its prerogatives can deterministically arrive exclusively from a relation of correspondence between the three previously identified systems: *“The pleasure of architecture is granted when architecture fulfils one’s spatial expectations, as well as embodying architectural ideas or concepts, with intelligence and invention. There is also a special pleasure to be mentioned: the pleasure that results from conflicts, when the sensual pleasure of space conflicts with the pleasure of order.”*⁽⁶⁾

We may define this interpretation of architectonic space as post-structuralist to the extent in which it predicts the coexistence of various perspectives through which to order and thus represent reality, leans, in our opinion towards an image of architecture that is as close as can be to its existence, through the desire to reinstate a stimulating representation thereof in a multi-directional weft intertwined with threads of experience that are never reducible to a merely statistical unitariness.

In Tschumi’s proposal, the interpretation of space, and thus our representation thereof, falls within a collective account of individual experiences in which architectonic objects, actions and projects continuously interact to create dynamically changeable places. The

5. Tschumi Bernard, *The Manhattan Transcripts*, London, Academy Edition, 1981, p. XXIII.

6. Tschumi Bernard, *The Manhattan Transcripts*, London, Academy Edition, 1981, p. XXVIII

interpretation of architectonic and urban space constantly reminds the author of cinematographic techniques, in which the specific filming, the actions of the characters involved and the dramatisation are interwoven under different rules and in pursuit of aims that cannot always be brought back to art and to a synthesis.

We thus see the outlines of an architectonic narrative that is rather less concerned with the conventional nature of languages and much more aware of the unpredictability of reality. The architect has less freedom of action than a film director and less control over the various factors at work in the plot.

Although there has never been a clearly demonstrated relationship between Deconstructivism and the successful book *Delirious New York*, written by Rem Koolhaas and first published in 1978, in the writer's view it contains a series of extremely interesting critical reflections that exhaustively examine the post-modern condition with the additional merit of an essentially architectonic/town-planning perspective.

The author considers Manhattan Island to be the clearest expression of 20th Century town-planning culture, a collective work that he refers to as the culture of congestion. Nevertheless, though he demonstrates an ability to systematically document the genesis and development of continuing practices that are analysed with a comprehensive historico-critical approach, Koolhaas acknowledges that they lack supporting theory. In an age that seems to have firmly repudiated the avant-garde, which, since the start of this century has developed through the radical rethinks of the 1960s and early 1970s, the author's controversial intent is to propose a retroactive manifesto to justify a programme that is so at odds with the culture of modernity that, if its proposals were openly declared, it could never be implemented: In the author's words: "*This book is an interpretation of that Manhattan which gives its seemingly discontinuous – even irreconcilable – episodes a degree of consistency and coherence, an interpretation that intends to establish Manhattan as the product of an unformulated theory, Manhattanism, whose program – to exist in a world totally fabricated by man, i.e., to live inside fantasy–was so ambitious that to be realized, it could never be openly stated.*"(7) Noting that choice of subject matter can determine the ultimate aim, the author justifies awareness of the theoretical project and his position regarding the risks and limitations of a more tested a posteriori critical and historical reconstruction.

Although the premises of this relatively unknown theory can be recognised in some technological innovations tested and presented at the Exhibition in Manhattan in 1853, such as the lift invented by Elisha Otis, Koolhaas states that we should not underestimate the role played by some archetypal structures, such as the tower and the sphere, which first appeared on occasion of this exhibition and took form in the Latting Observatory and the Crystal Palace, as well as the acclaimed grid-like infrastructure that had given plan and order to the island since 1811: "*The needle and the globe represent the two extremes of Manhattan's formal vocabulary and describe the outer limits of its architectural choices. The needle is the thinnest, least voluminous structure*

Delirious New York,
Rem Koolhaas, 1978

7. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.10.

to mark a location within the Grid. It combines maximum physical impact with a negligible consumption of ground. It is, essentially, a building without an interior. The globe is, mathematically, the form that encloses the maximum interior volume with the least external skin. It has a promiscuous capacity to absorb objects, people, iconographies, symbolisms; it relates them through the mere fact of their coexistence in its interior. In many ways, the history of Manhattanism as a separate, identifiable architecture is a dialectic between these two forms, with the needle wanting to become a globe and the globe trying, from time to time, to turn into a needle – a cross-fertilization that results in a series of successful hybrids in which the needle's capacity for attracting attention and its territorial modesty are matched with the consummate receptivity of the sphere.”(8) Fig 2

But the culture of congestion, which was to use technological innovation and the archetypes of the grid, the tower and the sphere to justify its own existence, historically finds its first major manifestations in Coney Island. To quote Koolhaas: “Coney Island is the incubator for Manhattan's incipient themes and infant mythology. The strategies and mechanisms that later shape Manhattan are tested in the laboratory of Coney Island before they finally leap toward the larger island.”(9) Although Coney Island, with its unspoiled natural beauty and relative inaccessibility, had represented an ideal place to shrug off the stresses of daily life since New York City's earliest days, during the city's rapid development into a metropolis between 1823 and 1860 the urge to escape became ever more pressing, and the growth of transport infrastructure between Manhattan and Coney Island – first the railway in 1865, followed by the opening of Brooklyn Bridge in 1883 – led to the island's beaches becoming the most crowded in the world, within easy and affordable reach of the proletarian masses. Fig 3 According to Koolhaas: “This invasion finally invalidates whatever remains of the original formula for Coney Island's performance as a resort, the provision of Nature to the citizens of the Artificial. To survive as a resort – a place offering contrast – Coney Island is forced to mutate: it must turn itself into the total opposite of Nature, It has no choice but to counteract the artificiality of the new metropolis with its own Super-Natural. Instead of suspension of urban pressure, it offers intensification.”(10) Such a response translated into the realisation of an endless series of amusements – Loop-the-Loop, the Roller Coaster, Shoot-the-Chutes, the Inexhaustible Cow, Electric Bathing – leading finally to the first amusement parks, such as Peter Tilyou's Steeplechase, where mechanical horses that anyone could easily control ran around an enclosed track; the Lunar Park of Frederic Thompson and Elmer Dundy, where visitors took a spectacular imaginary journey to the moon, ascending to 300 feet above the ground; and the mythical Dreamland of William H. Reynolds, the first true amusement park, organised in such a way as to resemble a coherent town plan. Koolhaas' interest in this entertainment project, in a scale greater than any previously seen, arose from the desire, coherently and gradually achieved, to provide experiences capable of satisfying dreams and the imagination and giving them greater solidity, far from the humdrum reality of daily life, through a calculated intensification strategy of spatio-temporal opportunities, beyond the offerings that could be experienced in the real city. The quest for the supernatural, in which



Fig 2. The Chrystal Palace and Latting Observatory at the first New York World's Fair, 1853, on the fore, and Trylon and the Perisphere on the background at 1939 World's Fair. The two archetype of the unconscious “culture of congestion”: the sphere maximizes the volume with respect to the surface; the tower exploits to the extreme the land use.

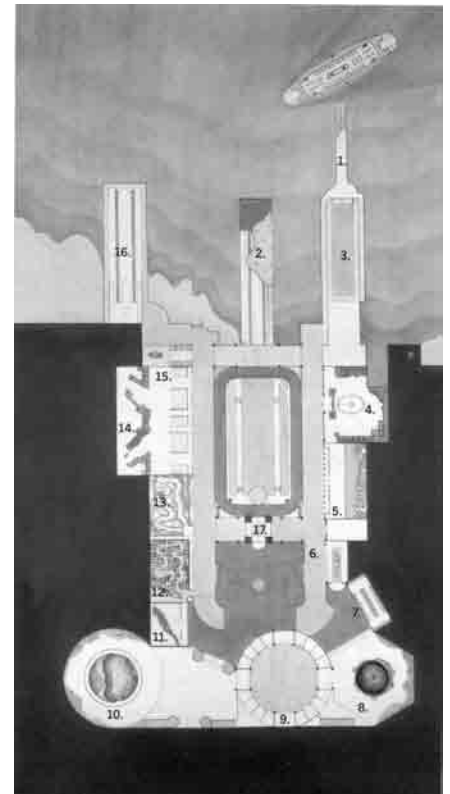


Fig 3. The Plan of Dreamland. The city of the entertainment seems to emerge from the abyss of the sea, as if its own foundation would ground not on the certainties of the rational knowledge, but on the limitless power of the creative imagination, of which the unconscious is taking care.

8. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.27.

9. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.27.

10. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.27.

Coney Island had deliberately placed its hopes of survival in the face of mass society and its secret rituals, thus took coherent form. Dreamland also represented the first amusement park devised for all social categories, overturning the previous logic of entertainment reserved for the proletarian masses. As Koolhaas recalls: *"Dreamland is located on the sea. Instead of the shapeless pond or would-be lagoon that is the center of Luna, Dreamland is planned around an actual inlet of the Atlantic, a genuine reservoir of the Oceanic with its well-tested catalytic potential to trigger fantasies. Where Luna insists on its otherworldliness by claiming an outrageous alien location, Dreamland relies on a more subliminal and plausible dissociation: its entrance porches are underneath gigantic plaster-of-paris ships under full sail, so that metaphorically the surface of the entire park is 'underwater:' an Atlantis found before it has ever been lost."*(11) By applying the same technologies that allowed Manhattan to become the world's most important metropolis and organising 15 different thematic areas in a horseshoe pattern around a shoreline cove, Reynolds managed to artificially reproduce an evenemential space closely resembling the actual post-modern condition, in which individual events take place in a totally unconnected way, with no past and an unpredictable future. Of the episodes that drew the most admiration and interest, we may recall Lilliputia, the miniature city, a faithful reconstruction of the Venice canals, a simulation of the Swiss landscape, the eruption of Vesuvius, and Fighting the Flames, a set that repeatedly simulated a fire in a city block and the consequent arrival of fire fighters who successfully extinguished it. Koolhaas comments: *"Ostensibly seeking to provide unlimited entertainment and pleasure, Tilyou, Thompson and Reynolds have in fact alienated a part of the earth's surface further from nature than architecture has ever succeeded in doing before, and turned it into a magic carpet that can: reproduce experience and fabricate almost any sensation; sustain any number of ritualistic performances that exorcise the apocalyptic penalties of the metropolitan condition (announced in the Bible and deeply ingrained since in the anti-urban American sensibility); and survive the onslaught of over a million visitors a day. In less than a decade they have invented and established an urbanism based on the new Technology of the Fantastic: a permanent conspiracy against the realities of the external world. It defines completely new relationships between site, program, form and technology. The site has now become a miniature state: the program its Ideology; and architecture the arrangement of the technological apparatus that compensates for the loss of real physicality."*(12) Despite the concern expressed by the defenders of well-meant town planning, who would have replaced the city of entertainment with a more decorous urban park, Coney Island has consolidated its success over time, becoming known for extraordinary construction initiatives of remarkable impact. In fact, an advertisement announcing the launch of the Globe Tower building project, the largest that the world had seen, appeared in a New York newspaper in 1906. To raise the vast sum required to finance the project, all New York residents were invited to invest in this adventure. This building attracted interest because of its many formal and programmatic features. *Fig 4* The schematic sketch illustrating the Globe Tower's features showed that it represented a compromise between the archetypal structures of

11. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.45.

12. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.45.

tower and sphere, which, as noted earlier, had made their first appearance at Manhattan in 1853 with the Latting Observatory and the Crystal Palace. Although in the Illuminist culture, the sphere had represented a secular alternative to the role of the cathedral, in this case it was stripped of any metaphorical adjectivation and, very pragmatically, reduced solely to its earning potential: *"It is the American genius of Samuel Friede, Inventor of the Globe Tower, to exploit the Platonic solid in a series of strictly pragmatic steps. For him the globe, ruthlessly subdivided into floors, is simply a source of unlimited square footage. The larger it is, the more immense these interior planes; since the Globe itself will need only a single, negligible point of contact with the earth, the smallest possible site will support the largest reclaimable territory. As revealed to investors, the tower's blueprints show a gigantic steel planet that has crashed onto a replica of the Eiffel Tower, the whole 'designed to be 700 feet high, the largest building in the world with enormous elevators carrying visitors to the different floors.'*"(13) As planned, the tower was to occupy a small corner of Steeplechase, rented by Tilyou to Friede, and would contain Steeplechase, Luna Park and Dreamland enclosed within a single volume, each situated autonomously on its own floor. With a total floor space 5000 times greater than its actual footprint, the Globe Tower was an explicit example of the skyscraper's potential to admit other worlds. A single planning exercise, providing an elementary plastic/volumetric solution, made it possible to restore the appropriately condensed and intensified complexity that the experience of an extensive area offered. By resorting to the artifice of construction, it was possible to concentrate the meaning of an entire conversation in a single word. A new era of architecture and town planning opened up with little sign, as yet, of any full and conscious awareness. Although this initiative turned out to be fraudulent, with even the foundations never being completed, once Dreamland was destroyed by fire in 1916 the experience gained in creating the first city of entertainment was to prove essential to understanding the developments that had been under way in Manhattan since the turn of the century.

Development of the skyscraper was linked to the convergence of three factors: the possibility of reproducing the world artificially, assimilation of the archetype of the tower, and the triumph of the city block, in other words, identification with Manhattan's infrastructure grid model. Each of these aspects played an essential role, naturally taking account of the contribution of technological innovation, which made it possible to exploit to the maximum the potential of buildings of predominantly vertical development: *"In the era of the staircase all floors above the second were considered unfit for commercial purposes, and all those above the fifth, uninhabitable. Since the 1870s in Manhattan, the elevator has been the great emancipator of all horizontal surfaces above the ground floor. Otis' apparatus recovers the uncounted planes that have been floating in the thin air of speculation and reveals their superiority in a metropolitan paradox: the greater the distance from the earth, the closer the communication with what remains of nature (i.e. light and air). The elevator is the ultimate self-fulfilling prophecy: the further it goes up, the more undesirable the circumstances it leaves behind."*(14) It was also clear that the lift, through synergy with the steel load-bearing structure, could almost indefinitely



Fig 4. The Globe Tower. The technology of the Fantastic contradicts any materialistic vision of the world. Steel construction, the elevator and the electric lighting system are non responsible for it. They are simply matters instrumental to the achievements of human creative imagination, which transforms them into materials appropriate to its internationalities.

13. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.71.

14. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.82.

repeat the space corresponding to the reference parcel. This perspective is clearly outlined in a 1909 comic strip, in which the potential performances of the skyscraper are clearly identified. *Fig 5* A steel framework supports 84 floors, each of which retains the dimensions of the original plot. Each floor contains accommodation that differs in style and social aspiration with no interference whatsoever from adjoining floors. There is clear paradox in the idea of a single building whose life is in reality fragmented into a countless series of incompatible episodes while the steel structure guarantees a minimum of unity without interfering with the intended use of the individual buildings it houses. The latter can be continually updated without the need for any work on the structural framework. The town planning consequences of such potentialities are immediately underlined by Koolhaas: *"In terms of urbanism, this indeterminacy means that a particular site can no longer be matched with any single predetermined purpose. From now on each metropolitan lot accommodates – in theory at least an unforeseeable and unstable combination of simultaneous activities, which makes architecture less an act of foresight than before and planning an act of only limited prediction."*¹⁵ The skyscraper became a factor in the promotion of a new approach to urban planning. The technology of the fantastic employed in Manhattan was translated into a technology of pragmatism at the service of property investors. The potentialities of the artificial multiplication of virgin developable land was immediately put to the test in the Flatiron Building, the World Tower Building and the Equitable Building, each building translated into a sort of *"city within the city"*, a self-contained microcosm. As the number of accessible floors increased and with it an increasing awareness of the need to integrate a variety of activities within the same building to discourage a loss of interest on the part of potential investors: the culture of congestion found its first coherent expression in the exponential intensification of space and activities. It would, however, be misleading to think of every tall building as a skyscraper, a term that, at an early stage, was only appropriate for those objects that clearly simulate the proportions of a tower. Furthermore, for the most part these latter objects occupied the portion corresponding to a single plot. Only in the case of Madison Square Garden and Thompson's Hippodrome does the area controlled by a building with prevalently vertical development coincide with the surface area of an entire city block. The city block is therefore gradually transformed into a park enclosed within a building in the Coney Island tradition: each block can theoretically be transformed into an irresistible artificial enclave. In view of the relative dimensions of the skyscrapers with respect to the building fabric, they tend to qualify as monuments, although they are not capable of representing an abstract ideal, an institution of particular importance for the community, a commemorative moment, etc... They are only capable of celebrating their own condition of isolation and massive scale. For these reasons Koolhaas defines them as *"auto-monuments"* that must seek compromise between the need for the permanence and solidity that a monument as such requires, and the desire for change implicit in the condensation of lifestyles contained internally, which is anti-monumental by definition. This situation conflicts with western architectural tradition, which

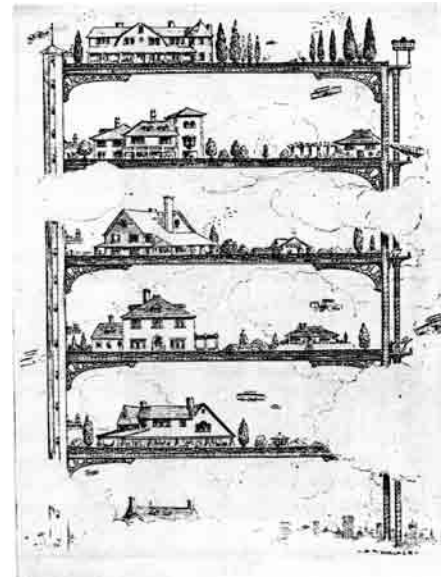


Fig 5. The Skyscraper advertised on the journal *Life* in 1909. The picture describes its object as an out scale shelf, or an erected scaffolding, suspended into the air, each storey of which can host a different life style. By exploiting to the extreme the land value, artificially multiplying the limited amount of urban soil, architecture alienates itself from the ground and the grid, i.e. the city horizon. The sky is the new frontier to conquer, opposed to the mythical west. The structure is neutral with respect to each floor, and symmetrically each floor transformation does not affect the structure.

15. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.85.

always seeks a clear correspondence between outer casing and internal activities. The correct facade is one that reveals the purpose of the building's activities and spaces. Although this may be manageable for even relatively complex buildings, it presents an unsolvable problem for skyscrapers, in which ever smaller external surfaces correspond to ever larger internal floor space. Beyond a certain critical threshold the relationship becomes unmanageable, a limit that is representative of the condition of auto-monumentality. Container and Content are deliberately disengaged, the first in order to convey the expressive elementarity required of a monumental condition, the second to guarantee the need for change of use, anti-monumental by definition. This freedom, which Koolhaas calls *Lobotomy*, the consequence of phenomena of unfamiliar scale and proportions, represents an important new factor in relation between architecture and town planning, and the repercussions seem to be of extremely topical relevance to the questions raised by the post-modern condition. The dissociation between interior and exterior is accompanied by the dissociation between the skyscraper's floors, which the author calls *Schism*, in order to give meaning to each piece of artificial ground regardless of what takes place on other floors. The continuity of narrative space, where events are interconnected and explicable within a spatio-temporal logic, is progressively replaced by evenemential space, where every event is self-contained, unable to be absorbed into the aggregate of preceding events, in compliance with an unpredictable causal sequence. As a concrete example, Koolhaas recalls Murray's Roman Gardens, a reconstruction of an Imperial Roman residence, which reduces historical periods that have always been seen sequentially to a condition of calculated simultaneity, a manipulation of memory that translates into a densification of historical time, the creation of situations that never existed to appear as though they once did. Different spatio-temporal worlds find themselves coexisting within the skyscraper's private dimension, which almost unconsciously becomes an alternative and complementary form of the logic of the social condenser, artificially reproducing a condition of real existence. The growth of auto-monuments occurs at the expense of adjacent areas, which suffer heavy limitations in terms of air and light. The 1916 Zoning Law attempted to remedy this situation by assigning every plot and block in Manhattan an imaginary development that define the outermost contour of the volume to be constructed admissible. In the words of Koolhaas: "*The law takes the Woolworth as norm: the process of sheer multiplication is allowed to proceed up to a certain height; then the building must step back from the plot line at a certain angle to admit light to the streets. A Tower may then carry 25 percent of the plot area to unlimited heights. The last clause encourages the tendency of single structures to conquer the vastest possible area, i.e. ... a whole block, In order to make the 25 percent that can be Tower as large (profitable) as possible. In fact, the 1916 Zoning Law is a backdated birth certificate that lends retroactive legitimacy to the Skyscraper.*"¹⁶ But the consequences of this law were undoubtedly much wider. Manhattan was transformed into a mega-village containing relatively self-sufficient urban entities enclosed within a single skyscraper and the urban grid was translated into a gigantic

16. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.107.

connective web of stupendous scale, controlled and managed by the pragmatism of property entrepreneurs. The need for the law however arose from considerations of functional order however, and should not be attributed to a certain formal awareness of a desirable urban outcome. Translation of the law's purely quantitative provisions into a clear urban vision was the work of Hugh Ferriss, whose book *The Metropolis of Tomorrow*, in which the image of the mega-village was first given form, went to press in 1929. *Fig 6*

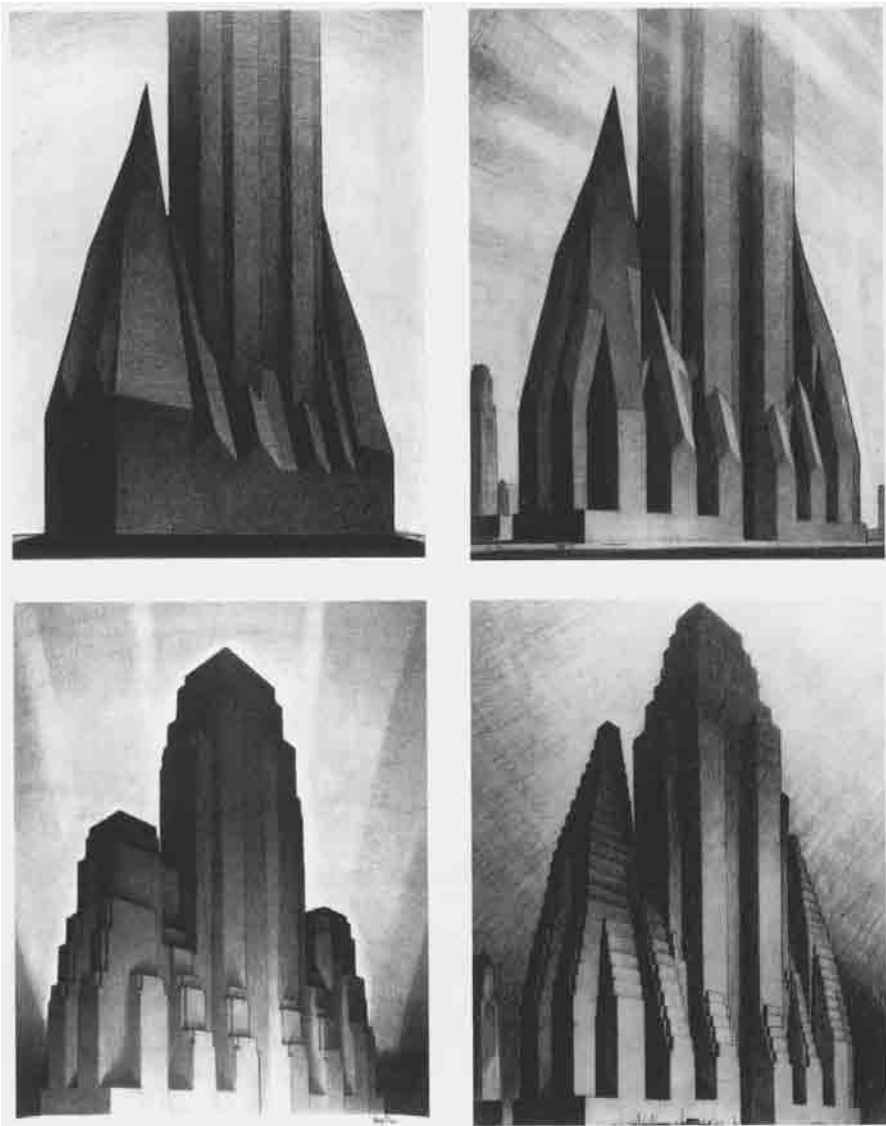


Fig 6. Hugh Ferriss variations on the 1916 Zoning Law. The author's visions preempts the announced destiny of the skyscraper: the alienation of architecture- the domain of the private- from the city, the domain of the public. The envelop, which originally acted as a mediator between the inner and the outer world, becomes independent from both of them. It defines the maximum degree of freedom allowed to individuals. However, its "lobotomy", quoting Koolhaas's definition, seems to be the dramatically rendered image of a more radical interruption: the discussion between new entrepreneurial driving forces and the institutions.

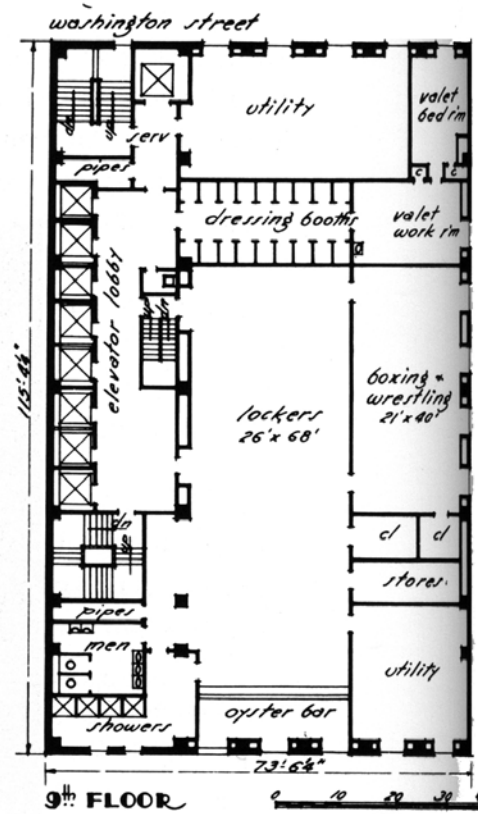
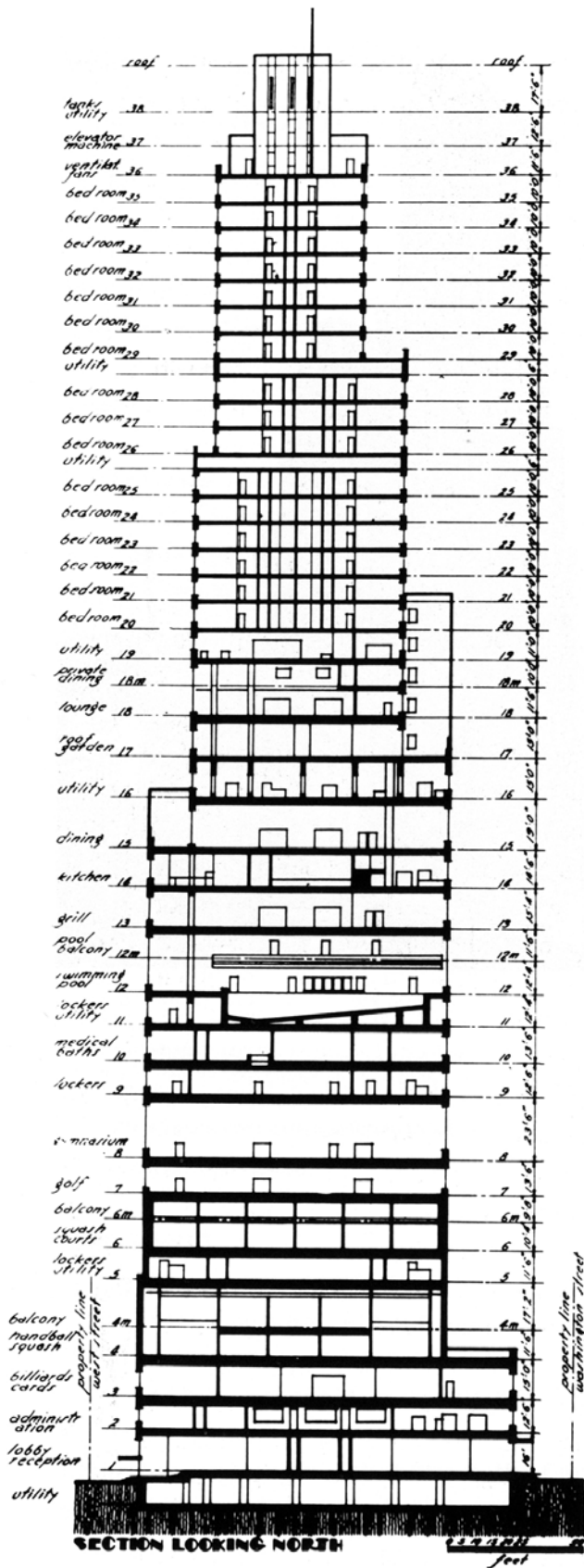
Ferriss developed each one of Manhattan's blocks on the basis of the maximum envelope permitted by Zoning Law, maintaining that this was the city's unavoidable destiny, and immersed his vision in a kind of dense night in which the substance of each individual skyscraper remained undefined. The poetic translation of a purely quantitative potentiality into images has a value that transcends any practical utility of the operation: it seems to communicate that state of suspended instability that characterised all of Manhattan's development initiatives at a time when, with the 1929 slump knocking on the door, every definitive solution was postponed because of the implicit danger: *"Each of Ferriss's drawings records a moment of that never ending gestation. The*

promiscuity of the Fernssian womb blurs the issue of paternity. The womb absorbs multiple impregnation by any number of alien and foreign influences – Expressionism, Futurism, Constructivism, Surrealism, even Functionalism – all are effortlessly accommodated in the expanding receptacle of Fernss’ vision. Manhattanism is conceived in Ferris’s womb.”(17) Ferris’s role in Manhattan’s development was to be of the greatest importance, and was later continued by the Regional Plan Association of New York. Another extremely meaningful contribution, albeit largely unapplied, came from Harvey Wiley Corbett. Inspired by the Venice’s canal system, and metaphorically identifying every city block as an island within the grid system, he interpreted the infrastructure network as a system of traffic canals for cars, and of pedestrian bridges, thus creating the possibility of solving the congestion problem. A clearly identifiable practical problem was again translated into a poetic vision, demonstrating that in American culture major financial initiatives always require a convergence of multiple insights that can never be reduced to a single speculative requirement Business and the culture of the picturesque are eternal allies. Nevertheless, the situation implicitly reveals a paradox. *“Not for a moment does the theorist intend to relieve congestion; his true ambition is to escalate it to such intensity that it generates – as in a quantum leap – a completely new condition, where congestion becomes mysteriously positive.”*(18) As had already taken place on Coney Island, the solution to the congestion problem was translated into a deliberate increase, an acceleration, and therefore into a spectacularization of the congestion. Modification of a pragmatic mindset produced poetry. The culture of Congestion obtained full and conscious recognition through the metaphor of the *“city within the city”*. Undertakings such as the Waldorf-Astoria Hotel, the Empire State Building, the Downtown Athletic Club and the creation of the Rockefeller Centre are comprehensible on the sole basis of these premises. These initiatives take on emblematic value by enriching the condition of congestion through the deep stratification of projects that they determined before reaching the definitive solution. The meaning of individual proposals cannot therefore be reduced to the definitive solution, but must necessarily take account of the many proposed architectonic *“writings”* that have never reached a dignity of the *“word”*, although they have actively contributed to its final and definitive manifestation. The book reveals and assumes a meaning, an identity, through the multiplication and expression of the countless texts that it encompasses in its personal history. In this case the critical theory of Derridean deconstruction finds an unwitting and stimulating precedent. *Fig 7*

The theory of *“Urban Congestion”*, which Koolhaas retrospectively proposes as the basis and manifestation of the phenomenon of convulsive metropolitan growth known as Manhattanism, reveals many recurrent aspects in the contemporary definition of non-places, a word that recurs in the description of the post-modern condition. The concept of congestion in fact implies overcrowding of space, in time and in the representation of any phenomenon, whether artistic, political or economic.

17. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.107.

18. Rem Koolhaas, *Delirious New York*, New York, The Monacelli Press, 1994, p.123.



Downtown Athletic Club, section.

Fig 7. Downtown Athletic Club. The skyscraper seems to start assuming consciousness about what it is doomed to become. Beyond the envelop, energies kept into captivity, start assuming the appearance of a seminal city, which is potentially undermining *The City of the Captive Globe* of which they are still almost unconscious prisoners.

With regard to the spatial coordinate, congestion implies densification and co-existence. In the case of Manhattan, it seems possible to say that, through the construction of the city of fun first, and later with the idea of the mega village, densification comes from the multiplication and stratification of spatial situations in the same unity of surfaces. The concept of coexistence by contrast implies that these same situations, while different and not linked to relations of strict narrative sequentiality, occur within the same object, be it a theme park or a skyscraper, indicating a minimum level of belonging.

With regard to the temporal coordinate, congestion takes place through acceleration and simultaneity. In Manhattan, acceleration affects all aspects of the city, from the rhythms of life to the possibility of achieving faster travel to places that were previously distant and hence transformed from marginal to central. Simultaneity reveals itself in the condition of belonging to several temporal situations, as in Corbett's urban metaphor and in the possibility of making unforeseen and, in particular, alienating, connections between the different historical periods, distorting them and inventing new perspectives for them, as in the case of Murray's Roman Gardens.

If these conditions belong to real life, and thus represent the functional aspects thereof, by spectacularizing the respective relationships, Manhattanism succeeds in providing a poetic representation, and in artificially reconstructing the essential influences. Underlying all of this is a clear spatio-temporal dissociation, which calls into question the very notion of the idea of urban experience. *Fig 8*

The aspects revealed in our critical reading of Koolhaas' work are nevertheless the constructive elements of the interpretation of the contemporary world described by Marc Augé in his book *Non-Places*. In his view, there are three factors of transformation that involve his discipline, but the discussion aptly provided a detailed description of the condition of architecture and contemporary urban design.

Above all, time is no longer the principle of intelligibility: "*Let us pay particular attention*", says Augé, "*to three of these transformations. The first involves time, our perception of time, but also what we do with it, the way in which we use it. According to some intellectuals, time is not nowadays a principle of intelligibility. The idea of progress that implied that the after could be explained by the before, somehow ran aground on the rocks of the 20th Century, with the disappearance of the hopes and illusions that had accompanied the great journey of the 19th Century.*"⁽¹⁹⁾ But later in the book, when explaining the loss of the recognition of history as bearer of sense, the author clarifies his own thinking: "*If historians today, particularly in France, doubt history, it is not for technical reasons or to do with method (history as a science has made progress), but because, more fundamentally, they find great difficulty not only in making time a principle of intelligibility, but, even more so, in signing up to a principle of identity.*"⁽²⁰⁾ Such a condition can be ascribed to the acceleration of history, through which we come to recognise who we are, constantly measuring the critical distance that separates us from what we once were, even if the past that we take as point of reference would seem to be too close for us to be able to speak of it objectively. History proceeds through a series of events that crowd our existence in terms that have

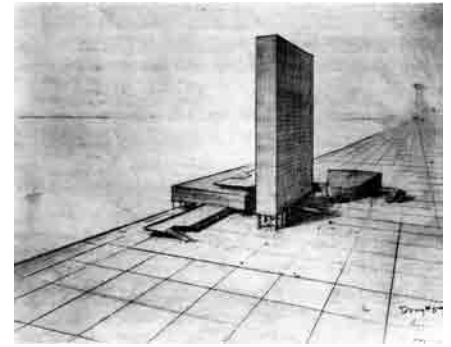


Fig 8. A render of Le Corbusier's proposal for the East River Site by Hugh Ferriss. The modern project seems to be alien to the "culture of congestion". The strategic retreat from the grid expresses the impossibility to engage in the subtle and pervasive battle of which New York is becoming the field because of *Manhattanism*.

19. Augé Marc, *Non luoghi*, Milan, Elèuthera, 1993, p.27.

20. Augé Marc, *Non luoghi*, Milan, Elèuthera, 1993, p.28.

no precedents. The excess of time and information that derives from it gradually leads to deferment of the request for sense by individual local realities, which appear to lose it in their state of isolation, to the entire world system. These conditionings produce what Augé calls “*supermodernity*”.

Similar considerations are made in relation to the spatial dimension. We are in fact seeing a “*densification*” of the planet, an excess of space, made possible by the exponential growth of means of transport that reduce distances and transform the scale of the spaces that we normally inhabit, and by the information systems that, following a suitable selection of the subject matter and images, present distant worlds to us in different ways while nevertheless distorting them.

This raises questions regarding the traditional correspondence between cultural identity and spatio-temporal unity, introduced by the classical anthropology of Mauss: “*Anthropology has always been the anthropology of the here and now*”, states Augé (21). This inevitably entails a form of decentralisation of the viewpoint with respect to the space we are analysing. But it also demands a new way of understanding the condition of “*representivity*”, with greater involvement of the plurality of individuals, and their distinct subjectivities, within the description we intend to give of a social reality.

According to Augé, the three important transformations that must lead anthropology to revise its categories, its method and its object, are absolutely pertinent to the field of architecture, and as Rem Koolhaas systematically demonstrated in 1978, define the context that we must systematically compare today.

This book sets out to offer an analysis of the American city based on non-conventional criteria. In fact the most common interpretations of the urban American phenomenon present it as the product of economic, political and cultural forces, regardless of the real construction and transformation processes of its physical form. Gandelsonas attempts to give a new interpretation of the subject and rewrite its history, focusing on the instrument of design of the city, conducted in synchronic sections arranged in a diachronic perspective so as to represent its development. Gandelsonas more generally attempts to analyse the city through the dialectic of two concepts, architecture and the city, that are not always mutually correlated, in order to assess the relative contribution of each to the city's development. In particular, the distinction between the two ambits in contemporary urban America is taken as fact, although not one that can be subjected to constructive criticism. On the contrary, Gandelsonas contends that, as a physical manifestation, the city has always been an object of architectonic desire: “*The architecture of the city has traditionally been produced through urban fantasies realized in drawings that attempt to impose an architectural order to the urban body.*”(22) There is, if anything, a need to carefully assess the possibility of realising this aspiration, or the significance of the historical circumstances.

Another essential aspect of this work is the conviction that the analysis of the American city must be conducted with an eye to the evolution of the debate in Europe. In this sense it can be preliminarily stated

X-Urbanism: Architecture and the American City,
Mario Gandelsonas, 1999

21. Augé Marc, *Non luoghi*, Milan, Elèuthera, 1993, p.14

22. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.6.

that if the discovery of the New World represented an opportunity to test the “*urban fantasies*” that were theorised in Europe in treatises and idealised representations of the city, from the early 19th Century America began to represent an imported model to Europe. Hence there is a need to analyse the transformations of the American city with reference to the evolution of economic and cultural exchange between the two continents.

While the city may experience constant modifications, only some of these can be considered genuine transformations in the method of producing the city. By “*modifications*” Gandelsonas means instances in which the relationship between architecture and the city in the realm of urban design has undergone obvious change.

Such instances are organised in the text on the basis of compact scenarios in respect of which the author assesses the contribution to project theory and practice in relation to both continents.

The first scenario is the Renaissance city. Here there is clear evidence of substantial change in the relationship between architecture and the city. For the first time there was an attempt to attribute an architectonic order to the existing city. The very metaphor of the city as a “*body*” effectively expresses the idea of the city as an organism consisting of formally completed parts that are reciprocally correlated through a clear relational hierarchy, and formally ordered through the imposition of geometric order “*representing*” the social, economic and political order that has to be pursued, on the city. The correspondence between city and architecture, promoted by Alberti, confirms the aspiration to an architectonically complete image of the city: “*Alberti’s architectural fantasy proposes a radical critique of this city: the planning of the city as a totality with geometric configuration. The city is depicted as a unified entity that presupposes a totalizing apprehension. It is metaphorically described as a building, it is portrayed in similar terms as a physical body composed of parts: actual buildings, public spaces, monuments, public/private buildings, and so on. This reflects a conception of the physical world seen as structured in different levels, where similar rules apply at every level. A city is made out of buildings, in the same ways in which buildings are made of rooms, or elements of buildings.*”⁽²³⁾ In Europe, nevertheless, this urban fantasy had to contend with the existing medieval city, which development logic that pursues different principles, i.e. it develops in accordance with formally unpredictable criteria deriving from the essentially serial accumulation of substantially identical parts that are irregularly polarised by monumental construction. The layout of Via Giulia and Via Longara in Rome clearly show the compromissory nature arising from overlapping of the medieval construction fabric and Bramante’s new geometric system.

The discovery of America offered an ideal opportunity for experimentation on what was a predominantly virgin state. In particular, the Spanish colonisation that followed the 1573 Laws of the Indies ensured that the imposition of a reticular layout became the codified norm of reference. The central piazza, formed by the simple elimination of one of the network meshes, has corresponding residential “*squares*” that are organised on the English model, as in the case of Philadelphia. Thus the result of the accurate transformation of an existing urban

23. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.14

fabric in Europe, was transformed into an easily repeated standardised solution in America. The American city thus became Europe's other dimension. The two continental experiences nevertheless demonstrate the impossibility of an architectonic construction of the city, albeit for different reasons. Europe, in fact, had to tackle inertia towards the transformation of existing structures, while America allowed architecture great freedom of action after parcelling out of the land.

The second scenario is the baroque city. Here we see an inversion of trend with respect to the Renaissance culture. *"The Renaissance architectural fantasy obscures the fact that the city occurs in the temporal dimension, that is a process and not an object, and that, if there is always a possibility of a synchronic cut in this process, the configuration of this object is given by its voids and not by its solids, by its streets and squares rather than by its buildings."*(24)

The baroque city in fact found initial expression in the plan for the redesign of Rome commissioned by Pope Sixtus V, which was entrusted to the architect Domenico Fontana. His project essentially consisted of a network of routes, or urban spaces, superimposed on the existing city in a way that reciprocally connecting Early Christian symbols. Thus did Rome become a Holy City, object of constant pilgrimage. As a result, the routes connecting the various monuments provided the conditions for the establishment of commercial activities also. It should be noted that the baroque city constitutes a third, alternative model to the spontaneous medieval development model and the total control Renaissance or restructured city model. As such it was used by Le Notre in Versailles, in an unconventional territorial scale, to express the idea of infinity sought by the culture of that age. But the baroque city did not limit itself to absorbing the prior urban structure as an integral part of the new design. The centre's uniqueness came into question, through a multiplication thereof. The city abandoned the unitary Renaissance image in favour of a polycentric system of specialised unique urban *"focal points"* with a strong identity that collaborated within the urban organisation. Baron Haussmann's transformation of Paris in 1853 employed the baroque model for these very reasons.

The new features introduced by the baroque city had an impact on the role of architecture, which acted as a medium between urban spaces and the quality of architectonic spaces. In other words, the object of architecture was what we call urban space. The first experience of so-called urban-scale architecture, or of the acquired experience of architectonic control of the city's open spaces, began principally in France, with the royal palaces, and in England, with the design of the circuses, squares and crescents of the new and expanding urban estates. The baroque city model was imported into America and found its first formulation in Washington, in a two-stage process. In the first stage the city was established on a reticular model as originally planned by Thomas Jefferson; in the second a baroque axial system designed by Pierre Charles L'Enfant was introduced to connect the city's most important sites, both physically and visually, Chicago is another instance of the baroque model applied to an existing American city.

The third scenario is the continental network and the American city network. Before America gained independence, cities such as Boston,

24. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.14.

Philadelphia and New York had developed in a way that was in some aspects reminiscent of medieval cities. In addition, colonisation was confined to coastal areas, with the hinterland remaining largely untouched. The general picture changed in 1785, with the adoption by the 1785 Land Ordinance on occasion of the Second Continental Congress, which aimed to map out American territory to define the methods for the sale thereof to members of the new democratic capitalism, whose test laboratory was America. Subdivision of the land was based on criteria established in 1784 by a committee chaired by Thomas Jefferson, who suggested adopting a grid oriented on the basis of cardinal points representing “*townships*” equal to six square miles, these being further subdivided into sections of one square mile. The consequences of these arrangements were slow to manifest, since in the early stages of economic growth all attention was primarily directed towards the sea. However around the mid-19th Century, with the advent of the steam engine and its application in the railway sector, the American territorial grid became the default system for new urban expansion.

According to Gandelsonas, the American reticular network belongs to the same visual and cultural system as the baroque: “*This Cartesian space reverberates with the gridded American territory that becomes the ground, the field of projection, where the play of geographical and historical differences represented by the Union takes places.*”⁽²⁵⁾

Although sharing some aspects of baroque culture, the American reticular system presented innovative features such as the new dimension and scale of the city, a relatively homogenous and undifferentiated distribution of urban centres, and, in particular, the capacity for virtually unlimited development in all possible directions. The reticular American city also challenged a continuous shift to the static visual dimension of the “*urban rooms*” of the Renaissance, and to the limitations imposed by the system of existing buildings in baroque system restructures. This city only achieved architectonic characterisation when imported to Europe and absorbed by the Modernist culture. In his *Ville Contemporaine*, Le Corbusier sought to solidify the American reticular network by giving it an architectonically complete urban dimension with the insertion of transparent architectonic “*crystals*” of Cartesian origin into the network meshes. *Fig 9*

The fourth scenario is the skyscraper city. In this sense, the traditional relationship of an America dependent on the cultural preferences of Europe was inverted. The skyscraper in fact constituted an autochthonous product, rooted in the convergence of technological innovation, the use of steel skeleton structures, infrastructural innovation such as Otis lift, and functional innovation, i.e. linked to the trend towards office buildings. If the first generation of skyscrapers in Chicago was in essence a simple extension of the plan, the base configuration being identically repeated, in New York there was a dissociation of plan and section, with the latter assuming a totally independent articulation. It could thus be said that the skyscraper was competing with the city. *Fig 10* The substantial independence of the third dimension from the two that defined the floor plan confirmed a tendency that had always been implicit in American cities, namely the

25. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.22.



Fig 9. View of Philadelphia, c.1855. Opposed to the European city, the grid of the American city has an apodictic quality. It emphasizes the not questionable aspects of its foundations: the European colonization of an assumed virginal land. Of course we are fully aware that the land was already occupied by the natives. This confirms the rhetoric of the underlying strategy: to establish the overseas domain of Europe as the main framework into which the future inhabitant's play should fit. An *ante litteram* Indian reservoir for both expatriates and indigenous pollution.

desire to appear as an autonomous object rather than as a component of a homogenous building fabric. The architecture of the skyscraper was thus unrelated to the image of the city, apart from the skyline, or the virtual projection of its volume onto the neutral background of the metropolitan sky. Contiguous construction in America has always represented an economic constraint rather than a shared aspiration to participate in a unitary configuration of the space of the square or of the street. Progressive occupation, on the part of the skyscraper, of the entire plot that originally corresponded to a building fabric confirmed the initial aspiration. In substance the skyscraper confirms the failure of city architecture, or at least of an architectonically complete image of the urban dimension. But it also confirms the aspiration to overcome the idea of the city as a continuum of reciprocally correlated buildings. *"the skyscraper represents the end of the conception of the classical city of fabric."*(26)

The fifth scenario is represented by the Modernist city. It starts with the *"Tabula rasa"*, the elimination of any form of constraint that might inhibit the natural freedom of the mechanised world's creative energies. In this perspective the system of existing buildings constitutes an implicit obstacle. The aspiration is thus towards an American *"condition"* of available land to welcome the promise of the new. The principles underlying the new urban organisation are those of a city organised as an extended natural landscape on which to superimpose the network of infrastructure, which meshes are placed in an ideal state of isolation of the skyscrapers-object in their Cartesian interpretation. America was able to guarantee the clean slate that, with the exception of the traumatic events of the War, Europe could not easily achieve if not for fragmentary interventions. Additionally, the New World was very receptive to innovation in any form. This explains the interest in Modernism following World War Two, and its influence on the construction of the business districts of major American cities.



Fig 10. The Chicago Tribune Tower. According to the author, with the culture of the skyscraper the architectural project of the city has been dismissed in favour of the progressive *"urbanization"* of architecture. The urban conflicts are completely absorbed by the architecture and thus neutralized. The Renaissance's ambitions are finally abandoned.

26. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.25.

Paradoxically, in the 1970s and 1980s these were to become the model for similar developments in Europe, such as La Défense in France, and London's Docklands.

The sixth scenario is the suburban city. The Interstate Highway Act of 1956 was the first official act to authorize the most significant modification of the American city since its colonial origins. The creation of an extended infrastructure network superimposed on the metropolitan landscape created the conditions for the spread of residential suburbs that were easy to reach by car as an alternative to public transport. The city was configured through the opposition of a central downtown area, with a high concentration of workplaces, and the primarily residential, suburban area. This process was accompanied by industrialisation of the single-family house, which came to symbolise the condition of isolation guaranteed by the low density city landscapes, quite unlike the business centres, where every natural feature was sacrificed to be replaced by massive investment and the corresponding construction demands. In addition to technical factors, such as heavy investment in private transport, social factors also spurred the growth of the suburban model. The new city in fact demanded a clear subdivision of roles and skills within the family: wives stayed at home to work and look after children while husbands commuted to the city. According to Gandelsonas, television and car took on corrective value for the more severe limitations implicit in the new lifestyles. The image of the traditional city, which now constitutes a distant presence, both psychologically and otherwise was brought into the home by the former while the latter in a sense projected the home into the anonymous and undifferentiated space of the freeways. But the car destroyed traditional city space linked to the presence of pedestrians, reducing the many values that had accumulated over time to one alone, that of rapid travel.

From the morphological point of view, the suburban city guaranteed every family access to open space, in contrast to the inevitable limitations of the compact city, and in fact can be considered as a product of the disurbanist ideology that was particularly widespread in America. A typical example was the city of Radburn, on which a high speed infrastructure network was superimposed. A local road system was constructed within its essentially regular meshes, winding sinuously through the residential areas to reduce car speeds and create more closed intimate views appropriate to the residential function. Architects were intentionally excluded from the planning of such cities. Their suggestions were in fact considered to be restrictive by the federal agencies responsible for financing the new suburban realities. From the morphological point of view the suburban city displayed certain aspects common to both the Modernist and the "classic" American city organised on the basis of a reticular model of compact zones. In this connection Gandelsonas observes: *"The morphology of the suburban city cannot be depicted with the opposition fabric versus object, which describes the major formal differences between the classical city (or the city of fabric) and the modernist city (or city of object). Although the suburban city has a resemblance to the modernistic city, in its preponderance of voids and in that the solids appear as objects in a field, it presents a characteristic that*

establish a similarity to the classical city. Because the field is divided into similar lots and the houses present typological similarities, we read it as a texture, as a discontinuous fabric as opposed to the continuous textures of the classical city. The suburban city proposes a situation that blurs and subverts the fabric/object opposition with a condition that could be called "object as fabric."(27) In other words, the suburban reality presents an architectonic completeness albeit sharing the morphology of a dynamically developed city. The consequence of this decision on architectonic quality is nevertheless immediate. The latter is reduced to a purely visual sign, an object of perception, no longer the product of a desire to represent the city in its dynamic and multiform development, but a simple simulacrum thereof. *Fig 11*

The final scenario is the so-called X-Urban city. This urban form began to take shape between the late 1970s and the 1980s, following the renovation of abandoned industrial areas originally located in the city's central zones, and the consequent growth of the service industry. The first of these processes entailed redevelopment of these areas, accompanied by gentrification, or the sudden and overwhelming replacement of the existing social fabric with a new one. In general this process involved the creation of residential areas that went on to impose themselves on an established fabric, acutely raising the problem of confrontation with existing architectonic and environmental features. The second process entailed the creation of office "*campuses*" to be established in park-like settings, and in close contact with the principal nodes of the infrastructure system so as to guarantee the best possible accessibility conditions for employees and clients. The suburban city, established in the course of the 1950s and based on contraposition/complementarity, made viable by systematic use of cars for travel between the downtown business area and the family home, was in this sense subjected to a process of deep internal restructuring. The relocation of workplaces prompted many employees to seek homes in the immediate vicinity. There thus became a compelling need for support services. The undifferentiated expanse of the suburban city was consequently disrupted by the creation of clusters of offices, shopping malls, housing and entertainment centres. The traditional American city promoted following the New Deal, based on clear opposition between centre and periphery, was rapidly replaced by a new model in which centres multiplied in correspondence with infrastructure intersections, becoming wholly dependent on car travel. As previously mentioned, the urban sprawl was accompanied by parallel transformation of the downtown areas previously occupied by industry. Part of this process involved the creation of large parking areas containing "*floating*" building-objects or fragments of fabric. Freeways came into the city centres, supporting the gentrification process noted earlier, with the creation of particularly dense business centres. On this matter, Mario Gandelsonas recalls:

"The semiautonomy of these urban clusters provides them with a certain independence from the core city, which becomes one more semiautonomous urban "village" in the metropolitan constellation of X-Urban centers: However this process of "sprawl" accounts for only one side of the X-Urban city: in the downtowns of the old cities, the exclusive light industrial



Fig 11. Levittown, Long Island, New York. The American arcadia is a picture symmetrical and coherent to the skyscraper. The abandonment of the city as a place of conflicts acts as a strategic retreat from the dialectical relation between the collective and the individual, made possible by the discussion on what the idea of the public should be. The nature, the grid, the plot and the architecture are the original ingredients of that discussion now reduced to its pantomime through a neutral miniaturization.

27. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p33.

districts also experience a transformation through processes of gentrification and preservation. While the process of "voiding" the residential buildings from the center city continued, buildings in light industrial districts were gentrified; that is, transformed into residential buildings and with that came new shopping and entertainment repeating the X-Urban process in the edges of the metropolitan area. In other words, the gentrification of decayed neighbourhoods and light industrial districts, and the X-Urbanization of residential suburban areas into car-dependent, low-density urbanity, are two sides of the same coins."(28)

The new multi-centre city was transformed into an urbanised, or serial, region, internally non-hierarchical. In light of the crisis of the suburban system, it seems appropriate to consider women's new role in American society, no longer complementary to that of men in the subdivision of tasks, but rather increasingly in completion therewith, particularly in the workplace. From a certain point of view, the American woman paradoxically tended to take on a simultaneous multiplicity of roles that was greater than her partner's, which implied a revision of the criteria for organising space.

Although the new formula of X-Urbanism encouraged the dismantling of cultural and commercial barriers at a global level, they increased at local level, both in perceptual and real terms. The wall symbolically replaced the suburban city garden. X-City success was, unsurprisingly, nourished by the idea that suburbia, by reason of its relative isolation from the more thriving parts of the city, was where violence drew sustenance.

In the author's view, the character of the X-City poses the question of the identity of the American city. In fact, if the suburban city is based on spatial opposition between two city models - a European and an American model - the X-City presupposes a relation between previous urban developments - the reticular city, the skyscraper city and the suburban city - that expresses itself in both spatial and temporal terms. The consequences on urban design are of great interest: *"Since the X-Urban city rejects architecture the way we know it and, since architecture nevertheless insists on the possibility of an articulation with the city (a signifier for a different urban entity that has been radically restructured multiple times), the possible strategies for the articulation of architecture and the X-Urban City need to include a previous historization and theorization of their relationship that goes back to the constitutive moments of architecture itself."*(29)

The common denominator of all the most significant stages of the history of the American city is the substantial independence of the plan and the buildings. Historically such autonomy can be explained in the clear distinction between public competence, covering design of the urban network, and the private domain, which is seen in the freedom to determine the characteristics of land developed within the meshes of the urban network. This phenomenon was already evident in the colonial era, but was confirmed by the skyscraper city and the suburban city. European and American cities have a unique relationship, the former were defined in the collective mind as places of memory, and the latter as projections of the future.

In general terms, the American city has experienced three fundamental

28. Mario Gandelonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, pp.36-37.

29. Mario Gandelonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.43.

changes, which coexist in the contemporary city and are therefore essential to an understanding thereof: the conquest of territory through use of the urban grid; the densification process arising from the advent of the skyscraper, which, by freeing the section from the plan constraints, restored the idea of American landscape diversity that was initially negated by repetition of the grid, albeit using a different modularity; and the suburban landscape that transformed the city into a garden in which objects were stood and which was made possible by the new highway system. These three stages were followed by the current process of globalisation that, by reducing physical and temporal distances between these urban models, forced them to coexist in one urban organisation, the X-Urban city.

The urban grid was defined in two separate occasions. In the first occasion, we see an importation of European models that differ from each other in the dimension of their meshes and in the internal polarisation methods, through the identification of aggregation points and new connecting routes. The second occasion coincided with the imposition of Thomas Jefferson's grid on the land, representing both a drastic change of scale compared to pre-revolutionary times and a unifying element of great value. The American city produced by the grid differs from its European counterpart, as can be seen in the roles of open spaces. While the streets and squares of the European city continue to be unifying elements whose design and control of perspective take precedence over the architectonic qualification of the two opposite fronts, in the American city they act as dividing factors between essentially homogenous areas, i.e. the city blocks. Furthermore, the syntax of the European city is characterised by the primacy and constraints of the plan, for which single buildings or tissues constitute an extrusion, by the clear opposition between centre and periphery, defined by the presence of city walls, and by the role of side-roads which restructure the existing urban fabric and adapt it for changed conditions of use. The American city, by contrast, is developed around the concept of a "*field*" on which architectonic objects are placed. Even when there is a problem of building contiguity, it seems to be more an intermediate stage of an active densification process than a result sought from the beginning of the process of urban development.

The skyscraper city succeeds in vertically producing what the urban grid provides horizontally, the possibility of unlimited extension. Freedom and the possibility of change are delivered vertically. The skyscraper represents the dominion of the section, and confirms the independence of the object-building from the base network layout, even where the skyscraper is identified with a vertical building fabric, to the extent of occupying all the usable land corresponding to an entire city block. In its American interpretation the skyscraper is immune to any attempt to limit its development on the basis of an architectonic order. By contrast, architects interpret it as an accomplished object. From this point of view, the experience of the competition for the new Chicago Tribune Building was emblematic, particularly the interpretation of the skyscraper put forward by Adolf Loos.

The American city-garden develops in two mutually complementary stages. The first sees the launch of a major land infrastructure process

through recognition of the dominant role of the car as a means of transport. During the second stage the fabric of the single-family house is fine tuned. It should be recognised that, although the urban fabric, in the sense of the road network, shapes one factor of city design, the house, although itself rigorously designed, is completely independent thereof, and in this respect corresponds to the model of the objects standing in a field. On close examination the garden assumes a dominant role compared to the house, and thus constitutes a miniaturised model of an urban planning fantasy to be applied to the land in its entirety.

Having covered the most important phases of the American city's historical development, Gandelsonas returns to the central theme of his analysis, the idea that the city was for a long period of time the principal object of architectonic interest, something that only began to change until the end of the 19th Century. The author thus expresses his personal belief that, from the Renaissance period if not earlier, there was a gradual distinction, within the concept of a building, between construction and architecture, the first being the task of the artisan who works directly with construction materials, and the second managed by the architect, who is concerned with the instrument of design. Space, as shown on the plan, takes on a clear autonomy with respect to the material nature of physical space. It is no coincidence that the architect's aspiration for formal control of the city's organisation should correspond to this distinction. In this respect Gandelsonas observes: *"In fact, the signifier/building/ collapses two objects- the urban building and the architectural building- as one..."*(30). *In other words, the "practice" of architectonics aims to extend its own order and the concept of stability to urban organisation, identifying the search for the other self in the city theme. The city as an object of architectonic desire, to paraphrase the author, goes back at least to Alberti's theory, which clearly expresses "...architecture's desire to domesticate the wild economic and political forces that traverse the urban body to impose and order. It is the doubling of architecture that wants to be within its own boundaries and have an effect outside."*(31) The design of the city is therefore analysed and translated as an essentially architectonic problem. This is accompanied by a gradual shift of interest from the life and dynamism of the city to the nature of the scenario in which life is played out in all its complexity. The aspiration to attribute architectonic order to this scenario thus tends to crystallise the representation of the multiform processes at work. This approach was placed in crisis by late-19th Century American city, particularly by the size and nature of the skyscraper. This building challenged not only the very idea of urban fabric that was an essential element in the definition of city architecture, in fact replacing it, but also, and particularly, the concept of type that was central to discussion of the city during the 19th Century. The role taken up by the American city overturned the traditional relations of cultural exchange, and Europe in fact began to look towards it when constructing its own urban fantasies, as architecture began to become an object of urban desire. This, in essence, confirmed that architecture was beginning to be defined and seen through the enquiring eyes of the city, devised, planned and realised according to principles of articulation and multiformity of urban organisation. Moreover, the

30. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.59.

31. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.60.

architectonic vision of the city was utopian to the extent that the city itself, by its very nature, resisted interpretation as a whole, a totality to which a unitary image of itself had to be made to correspond. Its real nature aspired to a representation that required the categories of multiplicity. This approach to analysis began with Aldo Rossi, and his insight in transferring the concept of type from the architectonic to the urban dimension, which thus led to definition of the “*analogous*” city. It is clear that the architect’s objective was no longer to script the city, or create its form, but rather to read through analytical tools. This led to an important shift of interest with respect to the post Second World War period. According to Gandelsonas, this had important consequences in that: “*The effect of the analogical mechanism is a displacement of forms, objects and urban buildings that subvert the humanist notion of scale and the boundaries of architecture itself, opening its lexicon to include the city and the world of ordinary objects. Rossi’s notion of permanence in the long duration of the constantly changing city, a reading in which he articulates the city to the Ferdinand De Saussure’s notion of Langue, allows him metonymically to place architecture in the space of writing.*”⁽³²⁾ Robert Venturi and Denis Scott Brown took a similar approach, seeing the architect’s role not as one of direct intervention in the city, but as one of analysis for in-depth understanding of its structures. However, unlike Rossi, they studied the city not as a process of historical development but as a contemporary suburban process produced by the urban sprawl and capable of internally absorbing elements from high and humble architecture alike, interspersed with borrowings from pop art. Nevertheless it is important to acknowledge that both authors sought the object of architectonic desire elsewhere, with respect to the previous situation. The objective was no longer to “*script*” the new city. On the contrary, the focus turned to interrogation of the relations and the existing articulation of architecture’s diachronic dimension and the synchronic dimension of the city. For Gandelsonas “*This disorder opens up the possibility of constructing architectural fantasies, that is, the possibility of inscribing architectural change as permanent traces that will belong to the long duration of the city.*”⁽³³⁾

To paraphrase Ferdinand De Saussure, the problem raised by Aldo Rossi and Venturi/Scott Brown, although in very different cultural contexts, was that of reconciling the concept of language, corresponding by definition to a synchronous state of correspondences and relationships between its components – the contemporary condition of the city in which we live being identifiable – with the coexistence within the city of components that, as “*signs*”, clearly announce their origins in different historical periods, not having undergone processes of urban transformation. For all these reasons such fragments, albeit part of the contemporary city, coexist in a condition of latent conflict.

As far as Aldo Rossi is concerned, it is important to remember that identification of the city as a “*language*” owes a cultural debt to the thinking of Saverio Muratori, who was the first to recognise, in the historical reliefs of Rome and Venice, the process of belonging and derivation that connects the characteristics of construction to a precise time and place. The distinguishing feature of Rossi’s thesis was the conviction that spontaneous processes of transformation never affected

32. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.65.

33. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.76.

the city as a whole except in very rare cases, but always left fragments in their original state. In this respect the city was never interpreted as an organic whole regenerating itself through changes differing in time and scale. Naturally, if both Rossi and Muratori considered the city as a working representation of the building language used by the community that inhabits it and passes it to following generations, transformations of the language could be followed directly through reinterpretation of the transformations of its urban and building fabrics.

The problem therefore became one of reinterpreting the design of the city as an eminently “*rescripting*” issue, namely through modification of existing relationships rather than as an entirely new scripting. If the city was becoming a metaphor of “*text*”, i.e. if it manifested itself as the product of a particular style of script - or several scripts brought back to the current reading of the “*text*” - the new approach then fell within a theoretical picture of the very concept of “*text*”, the extreme positions of which were a possible philologically correct total restoration (i.e. conservation at all costs) or the complete cancellation thereof (the *Tabula rasa*).

The metaphor of the “*text*”, which is particularly dear to deconstructionist critics, thus replaced that of the city as “*langue*” and, according to Gandelsonas, made it possible to establish a correct articulation between architecture and city, going beyond the now anachronistic desire, in the culture of the X-Urban city, to confer architectonic order on the city, where architecture was engaged in a constant scripting/rescripting process. The city assumed the character of a text, and the analysis of its transformations thus became an endless reading/interpretation process of the text that continually projected it into the present, independently of the presence of traces of the distant past.

These reflections are an important moment in the debate on the city of recent decades, which we might summarise as the journey from producing to understanding the city, and which began between the end of the 1950s and the start of the 1960s, when the contribution of Italian culture was indisputably pre-eminent.

Aldo Rossi’s definition of the analogous “*city*”, a further contribution to the heated debates of that time, presupposed exceeding of the traditional distinction of the scales of intervention, each of which is by its very nature a metaphorical “*holding area*” for the inevitable transformations that affect the city at all levels of intervention. In this respect scalar articulation became the means by which architecture and the city risk remaining autonomous entities, with changes in one finding no immediate recognition in the other. Gandelsonas, by contrast, appeared to wish to sustain the thesis that a rediscovered correlation between architecture and the city requires that reciprocal elements to constantly interact. *Fig 12*

In this particular context the author considers Aldo Rossi and his definition of the “*analogous*” city to be central to the debate, which for the first time called into question the very idea of scale. Architecture, fabric, districts, city and region were matters that needed to be addressed contemporaneously, not different aspects of a single problem. Certain principles applied simultaneously to all levels of articulation of construction, creating the factor of latent continuity. Gandelsonas



Fig 12. Plan proposal for lower Manhattan reconstruction according to iconographic source interpretation. In the overall framework of the east coast intellectual speculation, Gandelsonas identifies within the space of drawing an ideal place where to displace the architectural catalogue of the American city, the grid, reduced to its underlying structure. The outcome results into a collage of conflicting patterns, which become a representation of a real discussion.

attempts to find somewhere for architecture and city to establish a new basis of reciprocal articulation. This place is identified as the plan. On this matter the author observes *"At another level, we are also dealing with the urban plan, which can be seen as the ground where the traces are inscribed and indefinitely retained while everything changes."*(34)

It is interesting to note that while European cities show few changes at the level of construction and many in the plan, which is presupposed to be more resistant to transformation, quite the opposite is true of American cities. Gandelsonas again returns to this theme: *"It is in the space where these two levels are reconciled where architecture finds the site for its articulation with the city, the site where architecture can produce changes that inscribe permanent traces in the urban realm."*(35)

This leads the author to the view that the Master Plan must be kept up-to-date if construction and the city are to rediscover the place of possible articulation. The street plans of New York, Los Angeles, Boston, Atlantic City, Chicago and Des Moines, which are included for the sake of completeness, can all be ascribed to this line of study. *Fig 13* If space in the plan encourages a critical rethink of the city and its diachronic articulations, it can also become the starting point for a new way of planning the city itself. The plans demonstrate a shifting

34. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.67.

35. Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.67.

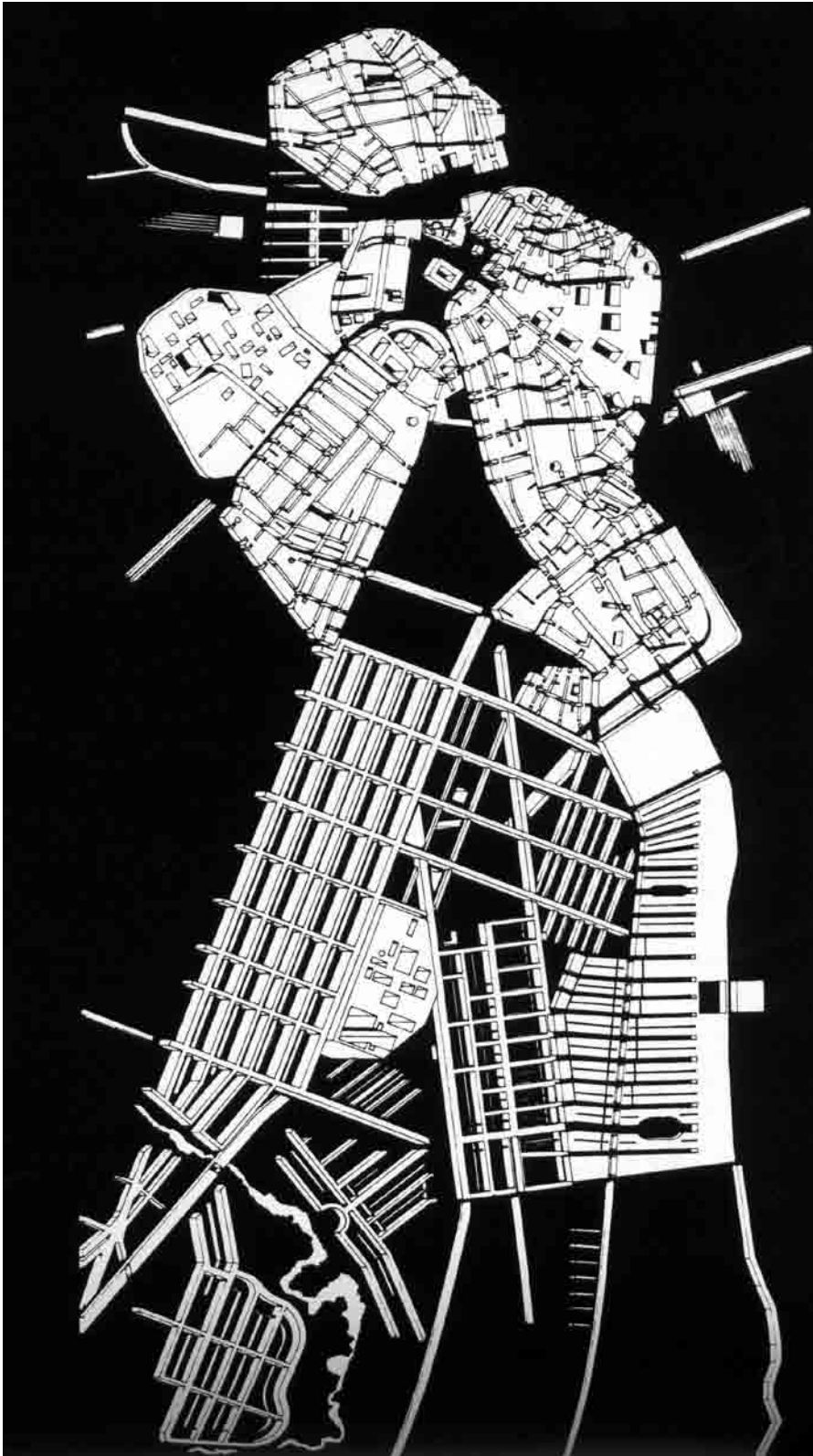


Fig 13. The structural plan of Boston. The city collage is selective with respect to the available information. Only the structural aspects are dropped out, while all processual and interstitial condition where deliberately abandoned.

of interest from places where architectural scripts relate to the various moments in the city's development, to areas where scripts overlap, i.e. the places that best represent the articulation between architecture's diachronic axis and the city's synchronic axis. It is worth noting that Gandelsonas' contribution is completely in tune with the Humanist distinction between construction and architecture, where the latter assumes the characters of a compositional art having autonomy with respect to the rules governing the articulation of materials and the

control of their static configuration. By contrast, Gandelsonas rejects this same culture's distinction between the architecture of the city and that of its component parts, in accordance with the scalar distinction that is still present in Humanist culture. It is no coincidence that his plans, in an attempt to reconstruct the stratification and mutual interference of the various architectonic "scripts" that had become sedimented over time, place Jefferson's regional and urban networks on the same level, as if they were constituent elements of the same text. This decision reveals a new critical attitude which is justified in light of the so-called X-Urbanism, or the present phenomenon of the coexistence of remnants of earlier buildings not absorbed into a global transformation of the city.

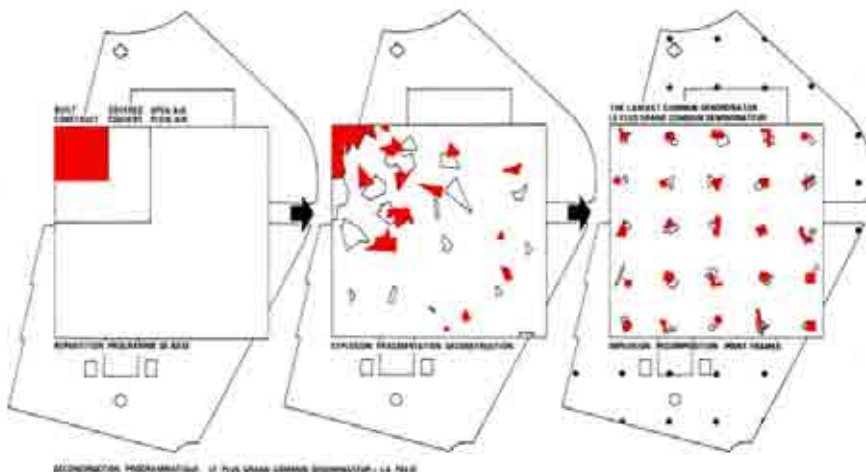
This also explains the author's view that the contemporary American city cannot be explained through the description of a single historical scenario, but must be viewed through a superimposition of several transparent layers, as if these were geological sections.

4.3.3) Projects and Works

In 1983 Bernard Tschumi won the international competition to create the "Park of the 21st Century" proposed for the La Villette area of Paris. The aim of the competition was announced, in very general terms, as the creation of a large urban open area catering principally for cultural and recreational activities. In requiring the expression of new values around which a general consensus might congeal over time, the premises of the programme already contained the idea that the contemporary park had lost the clarity of meaning traditionally attributed thereto.

This condition was immediately translated by Tschumi into rejection of the urban park typology as the starting point and unifying concept of the design process. The type, as the conventional value relationship between signifier and signified, form and function, and space and action, unequivocal in historically verified attribution, and clearly recognised by Tschumi in these terms (36), contradicted that uncertainty of attribution contained in the programme in the spirit of the times.

Fig 14



Parc de La Villette, Paris.
Bernard Tschumi, 1982

Fig 14. Deflagration and re-composition of the functional program. In Bernard Tschumi the drawing acts a sort of *alter ego* of the architecture of the city, transforming into a theoretical project. The functional brief is not responsible anymore of the design strategy. It is therefore articulated according to a grid of point, a logical structure, to which the function is clearly subordinated and instrumental.

36. On this matter refer to Mario Gandelsonas, *X-Urbanism*, New York, Princeton Architectural Press, 1999, p.22. Refer to the comments of Bernard Tschumi, "Parc de La Villette, Paris", in *Deconstruction. Omnibus Volume*, London, Academy Edition, 1989, pp. 175-183.

This realisation became the search for a solution in which the significance of the contemporary park would be constantly and systematically deferred, in an endless process of search and postponement of meaning that would never be resolved in the multiplicity of possible solutions. The user of the park and the park itself, as a multi-semantic device, would become players in this linguistic game. As such the project would not be the bearer of truth, its meaning always destined to be the product of a changeable, and never conventional, interpretation. Architecture itself became a function of interpretation, with this taking shape in the non-programmable meeting point of attributions of use and constantly changing usages.

This meant that users would constantly redesign the park on the basis of the use made of it by their users, thus ensuring their active and informed participation in the planning process.

For similar reasons, according to Tschumi, the project needed to reject context in order to challenge the characteristic of conventionality and recognisability that distinguished it. But the La Villette project was designed to become reality, various practical constraints were as such imposed on its theoretical and programmatic premises. This was not viewed as a restriction of expressive potentiality; on the contrary it became a factor of intrinsic multiplication of possible meanings which the project would guarantee.

The competition rules generically envisaged the provision of areas dedicated to sport, culture and general recreation that would not in any way constrain its configuration. Tschumi addressed these requirements by superimposing three mutually independent structures, a reticular system of points, a system of lines and a system of functional areas, in such a way that none of the structures could implicitly assume the surrounding urban fabric as an ordering element. The only internal concession was the alignment of the grid with the La Villette basin and a water channel at right angles thereto. *Fig 15*

The nodes of the grid (point grid), with meshes measuring 120 metres per side, are occupied by the Folies, buildings constructed on a square base, with sides measuring 3.60 metres, created as a simple mesh structure made of reinforced concrete covered in red-coloured (37) painted sheet. The buildings themselves, with shape virtually approximating to a 10.80 metre cube without ever actually attaining sufficient height, are “empty” lattices awaiting allocation of an intended use that is yet to be defined, on account of the changeable nature of the functional program and of its transformability requirements. From the point of view of the formal configuration they can be combined in a variety of ways, a fact that excludes a priori any fixed ideas of use and is thus consistent with the requirement of flexibility and evenementiality set by the program and shared by the author of the project.

The grid system overlies the linear system, which is offset by two degrees with respect to the former, and is defined by modern covered galleries capable of directing the major streams of pedestrian traffic north-south and east-west, and by cinematic promenades, which are tangential to the various themed areas without precisely connecting any place in the park. Endless paths, both literally and figuratively at the same time.

37. For a more detailed description of the technical aspects of the project, see Claudio Roseti, *La Decostruzione ed il Decostruttivismo*, Rome, Gangemi, 1997, pp. 208-218.

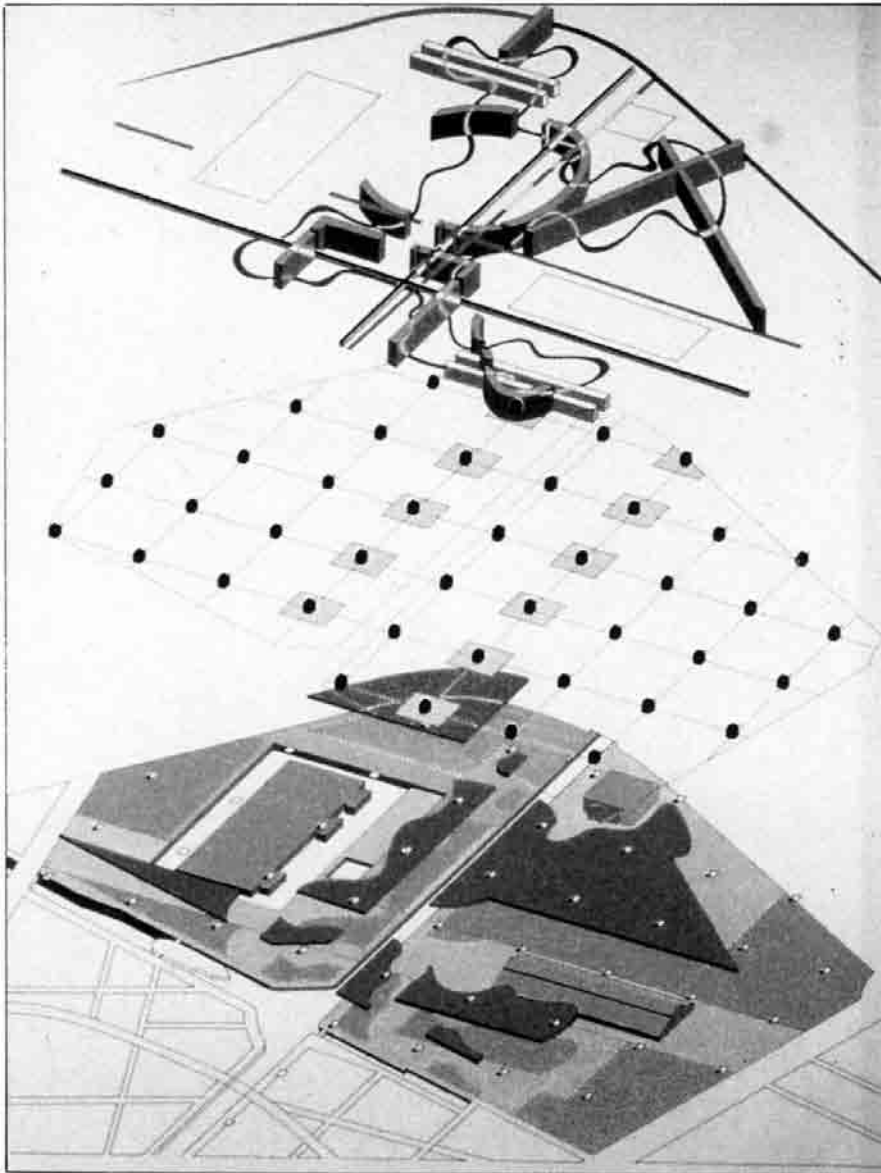


Fig 15. Lines, points and surfaces. An explicit homage to Kandinsky becomes a pre-text to articulate the Parc according to three different systems of relations, each of which is autonomous and independent from the others. The language of the drawing additionally tell us what cannot be explicit: the living presence of individuals to establish the field of possibility among the superimposed layers.

The third system is the system surfaces, which cater for the activities envisaged in the design and have variable geometries ranging from squares through to circles and triangles and even mixtilinear configurations.

Tschumi used his occasion to experiment with the themes of superimposition and dissociation. In fact, none of the overlapping structures dominates the others, and at the same time there is no attempt to resolve this coexistence in a unitary synthesis: "*The superimposition of three intrinsically coherent structures never becomes a super-coherent megastructure, but rather something inexpressible, the opposite of a totality.*"⁽³⁸⁾ the author states. While recognising the role and importance of the concept of structure, and its positive implications in town planning and the architectonic project, Tschumi consciously and critically addressed the question of all-encompassing unity and the concept of architecture as a synthetic activity par excellence, capable of ordering different phenomena from an unambiguous perspective ⁽³⁹⁾. By superimposing structures that could not be reduced to units the author created phenomena that make of the intrinsic diversity a

38. Bernard Tschumi, "*Parc de La Villette, Paris*", in *Deconstruction. Omnibus Volume*, London, Academy Edition, 1989, pp. 175-180.

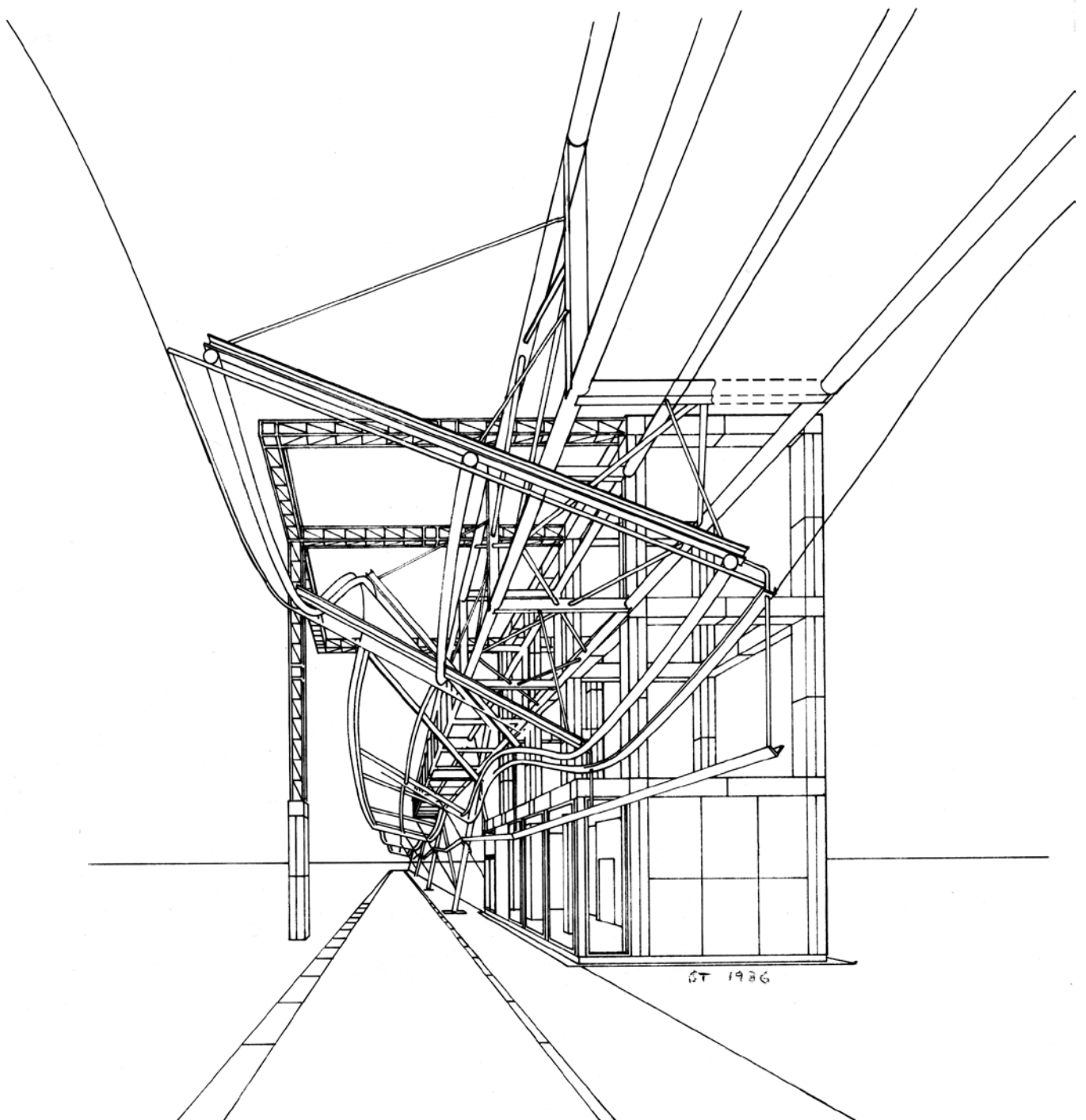
39. The definition of structure is discussed by Umberto Eco in *La Strutturazione Assente*, Milan, Simon and Schuster, 1968, p.46. "A structure is a model built according to simplifying operations that allow me to standardise different phenomena from a single point of view." This, point of view, we would add, is the very system of relations that sustains internal consistency between the constituent parts of the system or structure.

justification of their existence. *Fig 16*

The configuration's excessive implicit rationality, arising from the coexistence of three different unification perspectives of those aspects that qualified the park in entirety, generated the desired programmed irrationality that became the project's core logic.

The unitary vision of Modernism and the concept of subordination of form to function were thus kept at bay. The three structures coexist in a state of reciprocal suspension and indifference. They materialise generalizations of phenomena that are as yet unformed in order to represent them. These can eventually take shape through the different viewpoints expressed in the general configuration without this in suggesting any predictability of the options and creations.

Fig 16. A *folie* into perspective. The superimposed layers collide in correspondence of the architectural point. The fiction supersedes the reality within a Parc intended as a theatrical representation of human life contradictions.



At the same time the state of suspension, and the deferment thereof implemented by the architecture and the city, is expressed through forms awaiting a function. The project is never completed, its conclusion constantly deferred. Recognising the social and historically acquired value of the sign, Tschumi dissociates signifier from meaning in order to express their equal amenability to the linguistic change that the plan requires and which is consistent with its theoretical and cultural premises. Having achieved the deconstruction and suppression of the traditional correspondence between form and content and between mutually superimposed and juxtaposed space and action, and having oriented the design towards recognition of the inherent meanings and functions that events assign to the individual constituent parts of the project, Tschumi examines the consistency and completeness of individual signifiers, reducing them to three coexisting and autonomous structures, and emphasising the role of the conceptual phase of the design process (40).

The author thus distances himself from the easy symbolism of so much post-modern architecture, constantly in search of significant forms that evoke absolute and independent meanings from any form of conventionality. He at the same time rejects the unifying vision of the structure while not denying it, but overcoming it by means of coexistence with systems having different relationships. Architecture is reduced to an investigation process on the way forward, far removed from any teleological interpretation of its role, materialising through spatial configurations that constantly defer possible meanings and shun closed formalisation. The project becomes home of the inexpressible, sheltered from predictable interpretations and mechanical attributions of meaning.

Peter Eisenman's project was part of the Berlin IBA programme for the reconstruction and regeneration of areas of the city demolished by bombs during the Second World War. The overall objective of the program was to promote and coordinate a series of interventions providing continuity with nineteenth-century building tradition, which was regarded as having given Berlin a more evidently urbane character during its peak period of industrial growth.

The Checkpoint Charlie area is deeply rooted in history and is hugely significant for the citizens of the great metropolis, having been the most important access points to the two parts of the city until which was divided by the famous wall until 1989. It is therefore richly endowed with symbolic values, and its "archaeological" stratification attests to the various phases of the city's construction. Adjoining the control point in the Western sector, at the junction of Friedrichstrasse and Kochstrasse, are a few fragments of a typical 19th century block. The buildings were linearly arranged, with the main structure along the perimeter roads and the secondary roads adjacent to the inner perimeter of large lots, thus forming a common courtyard. The object of the competition envisaged a proposal for the entire block.

The problem of the reuse and recovery of remnants of memory is particularly significant in a city like Berlin, whose history was almost

*Checkpoint Charlie Project, Berlin.
Peter Eisenman, 1981-1985.*

40. For a discussion of conception in the architectonic process, see the essay "*La composizione architettonica nel suo rapporto con alcune tecniche di invenzione (The architectonic composition in its relationship to various techniques of invention)*", by Franco Pure in *L'Architettura Didattica*, Reggio Calabria, Casa del Libro Editrice, 1980, pp. 49-58. The passage on the fourth technique, on p. 46, seems particularly instructive for the purposes of understanding the operations implemented by Bernard Tschumi.

entirely erased first by the ravages of the Second World War and subsequently by property speculation activities. Moreover, recent generations of Germans have always had an ambivalent relationship with their past. For his part Eisenman decided to address the issue by distancing himself from the post-modernist attitude that regards buildings as unmodifiable talismanic objects, museum pieces that “freeze” memory and history at a particular stage of urban culture. He at the same time criticised the attitude of those who treat history as a continuous linear process that is unaffected by traumatic interventions and dramatic changes of course.

This Berlin opportunity was therefore particularly significant and Eisenman decided to lay bare the site’s history – a “staged” history, that was however rebuilt through the mechanism of fiction, with no direct and precise correspondence between the “materials” used and the history to which they would allude. The material were, in other words, simply symbols that would narrate the area’s dense layers of history, its unresolved conflicts, and hopes alignment between the parts that would be impossible to achieve without attributing a value of authenticity to such fragments. Peter Eisenman thus seemed to hold the controversial view that it isn’t history that produces languages, but rather languages that determine the course of history by shaping man’s ideas and bending them in line with its “structure”.

History is thus built through the project, and the resulting architecture simply exists as a fragment of “another” time that no longer exists, suspended over the city’s present like a virtual archaeological section that is unable to project itself into its future.

The project and its partial realisation successfully express the relationship between intentions and practical constraints arising from the context and the programme assigned, far better than any other description. Observation of the competition ground plan reveals four different controlling grids with square meshes that overlap each other with different scale and orientation on the base area of the block. Each of these symbolically alludes to an urban layout that has settled over time, without claiming to correspond to precise alignments in the area and recognisable as such. The different grids are continuously in collision, and the areas of overlap intentionally emphasise the mutual interference. Through clear use of fiction, with recourse to symbols that allude to urban scripts “other” than those found in the remnants of nineteenth-century construction, Eisenman “represented” a dense historical palimpsest that introduced the sense of conflict of the urban languages to which the various controlling grids relate. Each is, in this sense, a metaphor for a spatial articulation “code”, in which no particular detail allows us to trace the point of origin and original nature of the script. Each grid repudiates the limitations of the nineteenth century block and refers to the other through a process of mutual opposition.

Fig 17

Each controlling abstract grid is associated with a greatly simplified morphological configuration, to which the painted background and the strips of land occupation allude, in a subtle interplay of abstraction and representation. One of these was used by Eisenman to organise the solution for the building to be placed on the corner of Friedrichstrasse

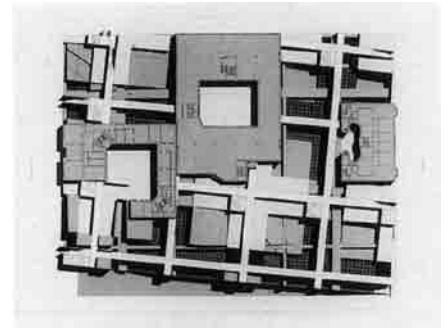


Fig 17. The area reduced to a site of artificial excavations. The theme of city reconstruction becomes a pre-text to reflect on the structural evidence of the city and its ongoing transformation. By combining reality and its imagination, Eisenman emphasizes to what extent the shift from one layer to the other always happens under conditions of reciprocal conflicts.

and Kochstrasse. A warp of paths that coincide with the axes of the grids is interwoven with a weft articulated by stairwells placed on the intersections of the first grid and by structures of variable depth that are linearly arranged along the perimeter of the urban meshes. The apartment building constitutes a fragment of this virtual urban weft, which has no particular connection with the city's history, but employs exaggerated abstraction to symbolically allude to a hypothetical creation and modification stage thereof.

Observed at a larger scale, the building is revealed as the area of collision and interference between two different urban warps: the fictional, symbolic warp that has just been mentioned, and the real, "*authentic*" warp of the 19th Century block, recognisable on account of its fragments. The entire composition is organized around this tension between abstraction and concreteness, and between virtual reproduction and original fragment. The original weft is aligned with respect to the street, continuing the façade lines of adjacent buildings, while the virtual weft is arranged obliquely thereto so as to follow alignment with its respective reference urban warp. Areas of conflict and overlap are conspicuous in Kochstrasse. The former coincide with key features of the building organism - entrances, boundary walls, building corners, etc. - while the latter are identified in accesses to ground floor activities, defining singular canopies projecting from the surface of the façade. The complexity of the two colliding urban wefts does not correspond with an equally clear organisation of the construction system. One single balcony type governs the whole and alignment dissonances are exclusively absorbed by the facades. The only exception is at ground level, where the different orientations of the supporting warps are clearly visible, the continuous warp on the perimeter walls, which follows the lines of the nineteenth century block, and the discontinuous warp of the beams and columns that cross the space that is to become the Berlin Wall Museum.

It is thus in the articulation of volumes that the linguistic redundancy sought by Eisenman is most clearly expressed. The same principle of reticular warps that governs the functioning of the plan "*staging*", or fiction, of history, is used in the elevations, where a mannerism that unfortunately denies every reference to the distribution of the residential units can be found. The corner of the building aligned with the existing structure is characterized by an anonymous modular isotropic "*skin*", the components of which give scale to both occupied and empty spaces. The controlling axes of the composition are those of the network, and the empty spaces take on the residual character of the background on which its form is traced. The section of the volume that is oblique with respect to the street presents a more interesting articulation. Here Eisenman implemented three reticular warps differentiated by colour - a white one, a light grey one, and a red one. They are completely independent of the general distributive articulation and possess none of its significant features. In fact they interfere with the legibility of the building organism - needlessly in our opinion, given the plan's strong quality of integration. Here also the empty spaces, i.e. the windows, assume a clear residual character. This is even more clearly demonstrated by the fact that wall panels and

sills are nothing other than filled areas created from the empty areas determined by overlapping the grids. *Fig 18*

Eisenman used this compositional artifice to successfully refute the finite nature of individual building components, which we see as most original aspect of his project. In fact windows are “*waste areas*” in the controlling grids, negative areas resulting from the overlap of compositional framework; infill walls coincide with grid fragments cut off by mutual interference, and entrances are areas of overlap or discontinuity achieved through the interplay of individual volumes, above and beyond a general strategy.

The very materials used - plastered surfaces, curtain walling and glass - tend to conceal the materiality of the complex, portraying it rather as absence of architecture and the conflicting presence of “*consolidated*” languages.

Fig 18. The floor and the façade. The rhetoric of the representation, being in this case the social reality a displacement of a drawing duplicating its categories, reaches here its climax.



In our opinion this 1989 project can rightly be considered a calculated summary of the themes most dear to the architect, involving clear and continuous reference to his earlier work, taken virtually to the limit and achieved through deliberate manipulation of a particularly complex functional program. It set out to coordinate the infrastructure network for traffic of all kinds to and from the seaport, with a system of support services for passengers and freight transport. The terminal therefore is positioned as a quayside entry point equipped with reception and transit areas.

In order to meet the specifications, Koolhaas settled upon a single volume with appropriate internal separation to meet the various program requirements, rather than a structure of inter-related volumes catering for different operational needs.

The clear plastic form of the building resembles the intersection of an inverted cone and a sphere, archetypal structures whose role was already pointed out by Koolhaas in his best-selling book *Delirious New York*; its visual impact comes from the simplicity of the formal solution and its proportions relative to the port area. The author defines it as a “*working Babel*” because “*While Babel was originally a symbol of ambition, chaos, and ultimately incompetence, this tower is functional and operational, welcoming enormous numbers of travellers, entertaining them, and helping them on their way to their destinations.*” (41) Inside the building, which is partially anchored to the bottom of the dock, the stratification of the floors artificially and repeatedly reproduces the land surface on which it is constructed. Traffic lanes for lorries and private cars pass into the building at the two lower levels before branching out to different ramps that direct traffic to ferries moored alongside. There are also some cleared service areas. Above this is a floor reserved for pedestrians and buses, with reception services and access to the restaurant, hotel and various offices. Next there are two levels in the form of a spiral containing parking for cars and lorries (this zone is bypassed by stairways occupying the interior of a wide truncated and inverted cone that starts at the pedestrian entrance and ends at the public hall). The next level contains the public hall, with panoramic views of the surrounding area and providing access to refreshment services and an office building. Above this are restaurant and an exhibition area with an adjoining cinema, crossed by the extrusion of the office building below and opening onto a residual central space. The next levels are occupied by a hotel and additional office space. The sequence culminates with a terrace functioning partly as an inwardly sloped conference area, and partly as a casino overlooking the sea, the entire floor boasting unobstructed views of the sky through the transparent spherical calotte. *Fig 19*

The Piranesian space perceptively connects the different levels by breaking up the internal space, producing a sense of unity through recognition of formally and functionally self-sufficient entities, although they contribute to qualifying the terminal as primary object. The scale of the intervention and the formal classification of the events contained within the primary volume – such as the office building, the restaurant, the curved forms of the hotel and the public hall – clearly evoke the image of the city within a crystal sphere, like a souvenir immersed in

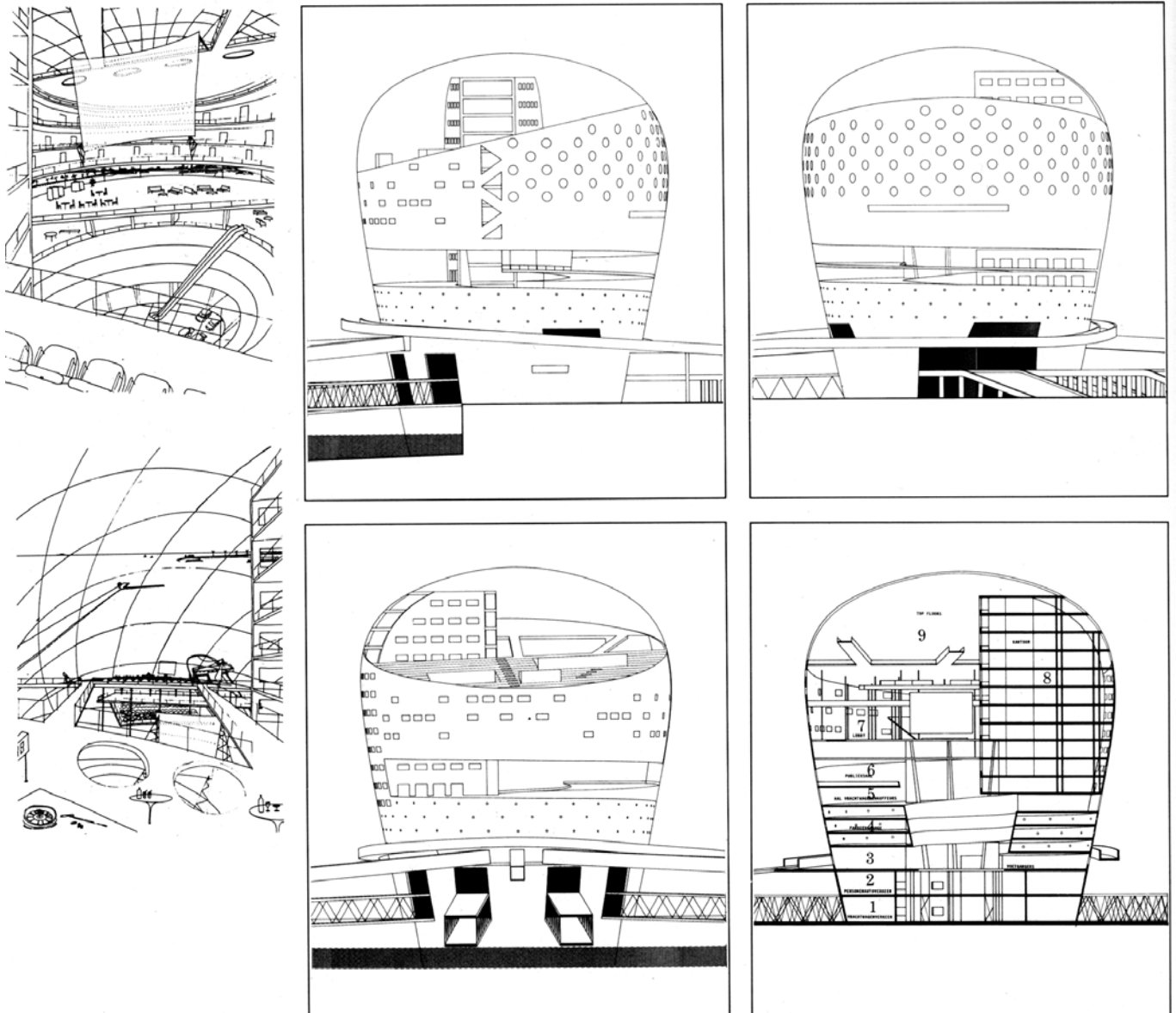
Zeebrugge Sea terminal, Belgium
Rem Koolhaas, 1989

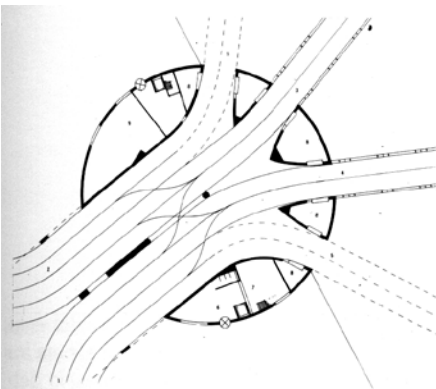
41. OMA/Rem Koolhaas, *El Croquis*, n°53, Madrid, El Croquis Editorial, 1994, p.80

an expanse of real landscape, intriguing us with its constant allusions to the culture of congestion and its self-referential discoveries. There is clear expression of the idea of accelerated experience of space and time that Rem Koolhaas has often emphasised, autonomy of the outer shell, an expression of a desire for permanence, compared to the deliberate functional and visual instability of the interior, and the idea of schism between the different levels expressing a stratification of experiences that can never be reduced to unity of space and time. *Fig 20*

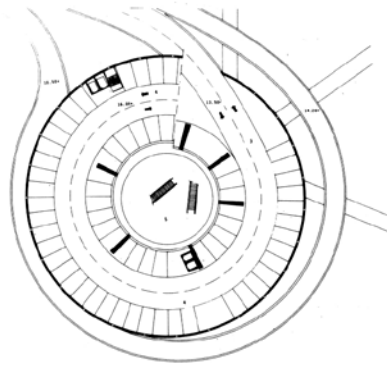
But Koolhaas' proposal confirmed his interest in a contemporary culture that seemed to have lost the ability to control the shape of the connective tissue and its public significance, and was able to artificially reproduce its valencies only through studio trials, where there is marked acceleration, densification, and dramatisation compared to the real world. Only in the private dimension does it seem possible to reinvent the quality of public space.

Fig 19. The envelop is a clear homage to the Globe Tower of Coney Island, the archetype of the "culture of congestion".

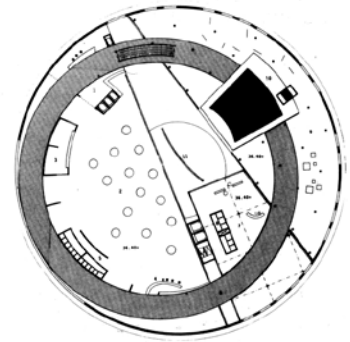




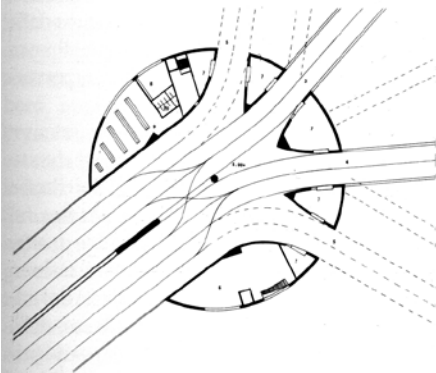
1. accesso veicoli



4. parcheggio



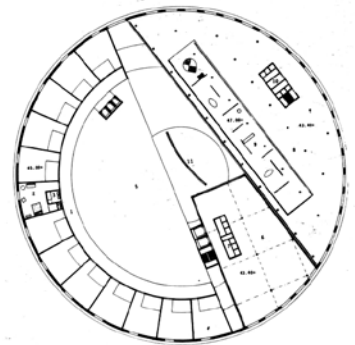
7. livello della hall



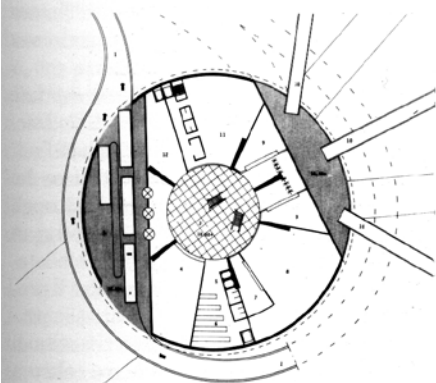
2. accesso veicoli



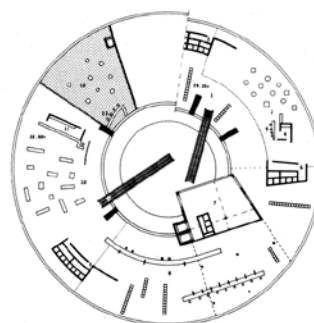
5. livello autotrasportatori



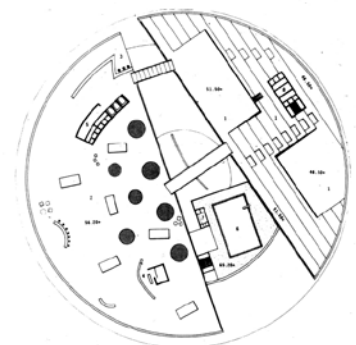
8. hotel e uffici



3. accesso pedoni



6. livello viaggiatori



9. terrazze

Fig 20. The floors. The multiplication of independent layers hollowed out by the vertical cavity where the different flows connect through stairs, elevators and escalators, leads to a spectacular nature the conflicting quality of each functional arrangement.

4.3.4) The phenomenon interpreted: analysis of the sources and spread of themes

The official historiography of architectonic Deconstructivism, consisting chiefly of exhibition catalogues from the early days of the movement (42), tends to trace its roots directly to Russian Constructivism. *Fig 21* Nevertheless it is important that there should be detailed verification of the references. In an attempt to legitimize some recent project experiences, based on a common cultural background, Mark Wigley states in the introduction to the catalogue of the MOMA exhibition in New York that “*The projects in this exhibition mark a different sensibility, one in which the dream of pure form has been disturbed. Form has become contaminated. The dream has become a kind of nightmare. It is the ability to disturb our thinking about form that makes these projects deconstructive. It is not that they derive from the mode of contemporary philosophy known as “deconstruction”. They are not an application of deconstructive theory. Rather, they emerge from within the architectural tradition and happen to exhibit some deconstructive qualities.*” (43) Further on, in the same critical introduction, the author points out that some, highlighting the existence of elements of instability in the architectural design, do not take the possible implications to extremes, while “*On the contrary, deconstruction gains all its forces by challenging the very values of harmony, unity, and stability, and proposing instead a very different view of structure: the view that the flaws are intrinsic to the structure. They cannot be removed without destroying it; they are, indeed, structural.*” (44) According to Wigley, in order to obtain this result such design experiences drew inspiration from the strategies of the Russian Avant-garde, and from Constructivism in particular. Nevertheless, the reference is to the figurative arts, not to architecture. Speaking of the highly innovative experimentation carried out in the early days of the movement, Wigley observes that “*But these radical structures were never realized. A critical shift in thinking took place. The more the Constructivists became committed to architecture, the more the instability of their pre-revolutionary work was removed. The conflict between forms, which defined the early work, was gradually resolved: unstable assemblages of forms in conflict became machine-like assemblages of forms cooperating harmoniously in the achievement of specific goals.*” (45) The preface to the presentation of the first deconstructivist works thus shows that, for exhibition curators, reference to the experiences of the Russian Avant-garde is anything but formal (deconstruction in architecture should not be viewed as a new style for contemporaneity, states Philip Johnson), and in any case must be sought in extremely detailed thematic areas.

Russian constructivism

42. We refer to the catalogues for the MOMA exhibition in New York and the Tate Gallery exhibition in London. For the first see Philip Johnson and Mark Wigley, *Deconstructivist Architecture*, MOMA, New York, 1988, and for the second, Andreas Papadakis, Catherine Cooke and Benjamin Andrew, *Deconstruction Omnibus Volume*, London, Academy Edition, 1989

43. Mark Wigley, “*Decoconstructivist Architecture*”, in Philip Johnson, Mark Wigley, *Deconstructivist Architecture*, Moma, New York, 1988, p.10.

44. Mark Wigley, “*Decoconstructivist Architecture*”, in Philip Johnson, Mark Wigley, *Deconstructivist Architecture*, Moma, New York, 1988, p.11.

45. Mark Wigley, “*Decoconstructivist Architecture*”, in Philip Johnson, Mark Wigley, *Deconstructivist Architecture*, Moma, New York, 1988, p.11.

The De Stijl movement

Only recently has there been any attempt to examine the role of the De Stijl (46) movement in the development of deconstruction in architecture, particularly its research into the concept of decomposition.

Fig 22 From this point of view there appear to be certain principles that are capable of explaining the specificity of the methods respectively employed. Theo Van Doesburg in particular became a key reference for the finding of points of convergence and discontinuity. In a text entitled *Il Significato dell'Estetica della Macchina per l'Architettura e le Altre Arti* (The Meaning of the Machine Aesthetic in Architecture and Other Arts) (47) the author argues that "*The concept of architecture without form provokes some astonishment. It is a cardinal point that I wish to clarify further. New art fundamentally differs from previous forms in that early art, and its possibilities of expression, were limited to a closed plastic form. This is true for architecture as it is for other forms of art. All the various types of form have developed from this plastic base. The development of architecture takes manual work no further than the variation of a particular type.*" According to Van Doesburg traditional architecture, regardless of inherited styles, was therefore a systematic continuation of a heritage of acquired experiences, or types that were rooted in local custom and continuously updated to meet changing needs. He continues: "*However, the new art is formless, and cannot recognise any pattern a priori. The newest architecture has surpassed the type, but not the form. The new art is formless, which does not however mean that it lacks order, proportion or culture. The new art is formless in the sense that it is way above the internal and external form of culture. It is therefore opposed to all previous architectures of form and type.*" Van Doesburg thus poses the problem of the new architecture as a process governed by rules that allow the creation of different products that cannot, however, be formally defined ahead of the process. Having made clear that that the new architecture is not identified with a specific outcome, but with a process that can, but may not, determine that, Van Doesburg questions the concept of style: "*The purpose of form is not to be a typical representation of the character of the times and the people, and the search for new form in architecture is an error, as is the imitation of the old formal schemes. As progress is made toward a compelling new method of figuration for all forms of art, there is no form to be found. This is why those who have travelled only half way down this road fall back into an organic, dualistic plasticity of form. New figuration and form are without exception mutually exclusive.*" By figuration Van Doesburg means the aspiration to a process common to all the arts that annuls the value of contemporary style in demonstration of its pointlessness. The death of art predicted by the De Stijl movement translates into both an overthrow of the concept of style, of art as a conventional representation of its own historical time, and its replacement by a structuring process of the open space, or neo-plasticism.

The surpassing of the concept of type as a first principle of architectonic practice, and the abolition of the criterion of conventionality as an operating condition of the organization of space, are aspects that distinguish the premises of both movements. However, even if architectonic deconstructivism does not appear to be a new style of architecture (48), it differs markedly from the Neo-plasticism of

46. Portoghesi Paolo, *I grandi architetti del Novecento*, Roma, Newton & Compton Editori, 1998, p. 617.

47. The complete text can be found in Fanelli Giovanni, *De Stijl*, Bari, Laterza, 1983, p.174-175.

48. Philip Johnson, "Preface", in Johnson Philip, Wigley Mark, *Deconstructivist Architecture*, MOMA, New York, 1988, p.7.

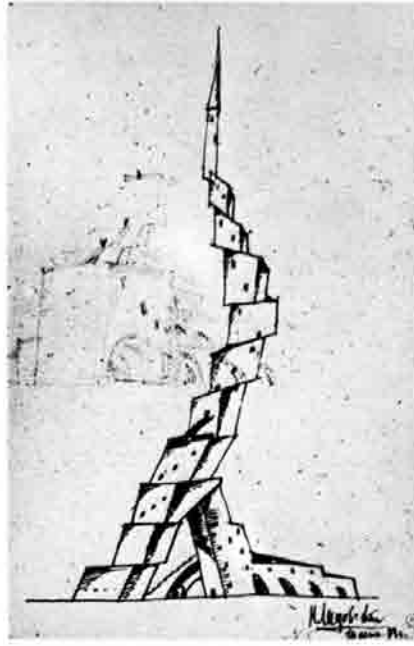
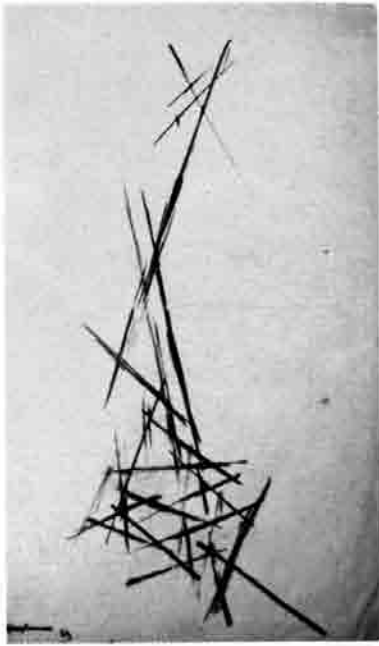
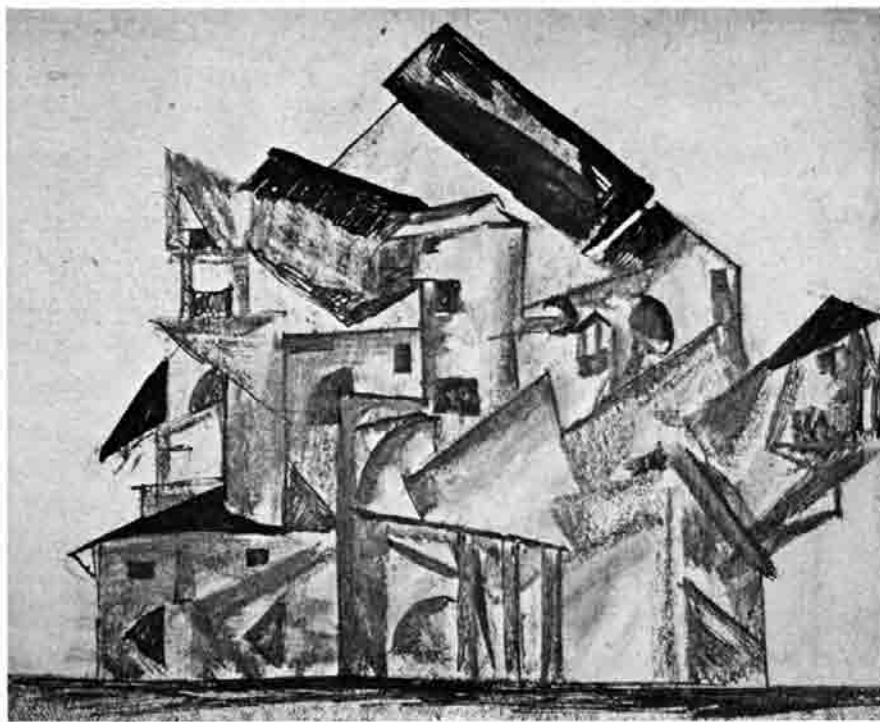


Fig 21. A. Rodčenko (*architectural composition*, 1919); N. Ladovskij (*architectural composition*, 1919); V. Krinskij (*Temple for the meeting of Peoples*). The unstable configurations of the Russian Constructivism are an important precedent of the architectural deconstructivism. Both of them prefer to displace an harsh discussion on the categories and the catalogue of human activity on the space of the canvas than on that of the city. The decision, absolutely acceptable in the former case, in the latter appear at least controversial, especially if the reality becomes a pale duplicate of the representation of its essence.



De Stijl. While the latter denies that there can still be a distinction between art and life (49), and that the first of these can be considered a representation of the second, deconstructivist architects, and with them the critics who foster its image through the MOMA exhibition, view architecture as representation and, as such, as an alternative to what now exists. They have inevitably stirred up less controversy than their Dutch predecessors. The fragmentary nature of the proposals, and the belief that they can hardly be translated into a new way to organise the city in its entirety, undoubtedly play an important role in deconstruction, and the members of the De Stijl movement were, if anything, totally convinced of this when speaking of a search for a universal architecture.

49. Van Doesburg and Van Eesteren maintain that: "The word art tells us nothing. We expect our environments to be constructed according to creative laws, deriving from a fixed principle. These laws, which are linked to those of economics, mathematics, technology, hygiene etc., lead to a new plastic unity". These considerations can be found in Giovanni Fanelli, *De Stijl*, Bari, Laterza, 1983, P.177.

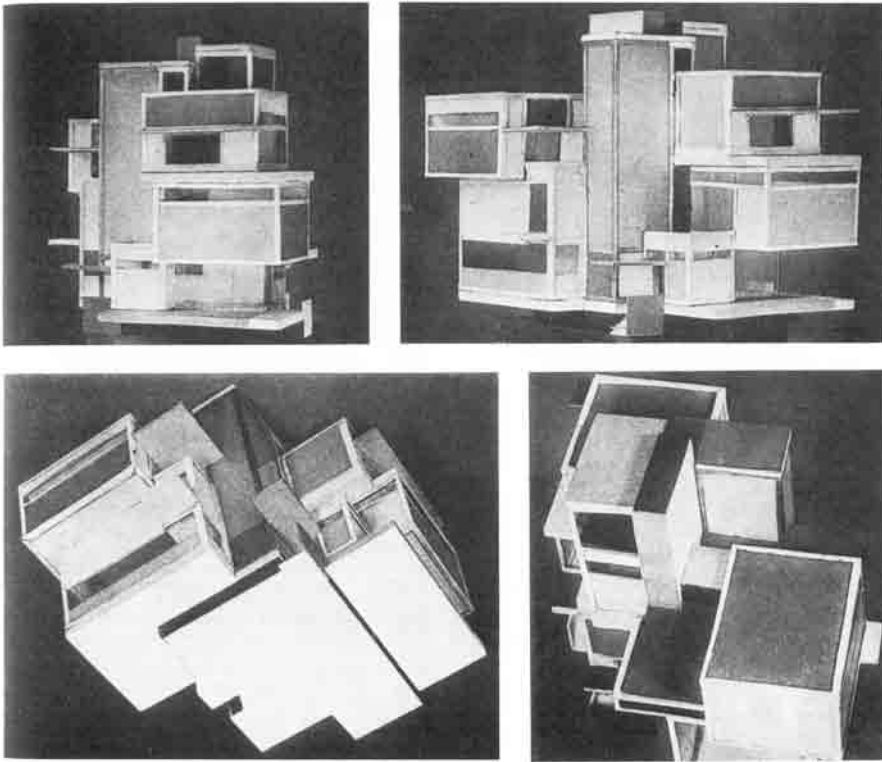


Fig 22. C. Van Eesteren e Th. Van Doesburg, *Maison d'artiste*, 1923. The death of art, which blurs into life, superseding any distinction among the two levels. Neo-plasticism tends to identify with natural processuality. Similarly, Deconstructivism focuses on processuality, adapting it to human habit transformation.

Neo-plasticism understood as the process of configuring space is made explicit through systematic decomposition of the architectural volume so as to obtain the structural and figurative autonomy of each plane delimiting the space. The use of primary and neutral tones confirms this intention and underlines the idea of composition as a search for balance between contrasting features. In this respect work is concentrated on the volumes of architecture. The proposed process of figuration is open to the extent that it is not possible to determine beforehand the architecture's final form. The only true guide to the development of the project is the method of decomposition itself. The architectonic shell is gradually reduced to a coordinated system of vertical and horizontal planes that form a three-dimensional Euclidean space, with constant allusion to their possible continuation beyond the actual limits of mutual intersection. In this sense we can say that the new configuration produces chance events rather than spaces, and that its constituent elements achieve a non-purposive unity. These aspects are clearly revealed in the counter constructions with which Van Doesburg, operates an abstraction, for theoretical purposes, of the axonometries produced by Cornelis Van Eesteren in order to further highlight the principles of the proposed method.

The aspiration to a balanced composition of dissonance is clearly expressed in paragraph 12 of Van Doesburg's manifesto of Neo-plasticism: "*Symmetry and repetition. The new architecture has eliminated the monotonous repetition and rigid equality of two halves, the mirror image, and symmetry. It does not recognise any repetition in time, any street façade or standardisation. A housing complex is integral in the same way as a single house. Rules that are valid for a housing complex or a city are also valid for the individual house. Instead of symmetry the new architecture proposes a balanced relationship of unequal parts, i.e. parts that differ from*

each other in position, size and placement depending on their functional characteristics. The equivalence of these parts is obtained through a balance of their inequality and not through their equality. The new architecture has also given equal value to 'front' and 'rear, to right and left, and insofar as possible to 'up' and 'down'." (50)

These words are further evidence of the points of discontinuity between Deconstructivism and the De Stijl movement. The former, as we have already seen, asserts the irreducibility of formal, structural and distributive contrasts to a reconciled condition of space. The latter contains unresolved contradictions, denying the possibility of equilibrium as a state of architecture. Deconstruction does not speak of parts related within a whole, but of fragments co-existing in a relationship of mutual and irresolvable indifference. Deconstructive composition disturbs us, as Wigley notes, while the neo-plastic, in our opinion, seems reassuring.

But the biggest difference is in the relationship between city, aggregate and architecture. The existence of uniform rules governing the different scales of intervention, expressed clearly by Theo van Doesburg, is in fact denied by deconstructivism, which asserts the coexistence of different rules for conforming space that claim equal validity.

These indications seem to suggest that the principles of the De Stijl movement anticipate more essential aspects of Structuralism rather than predict the intentions of deconstructivism in architecture, and that the latter can be viewed as a clear expression of post-structuralism.

4.3.5) The creation of architectural "*language*"

The "*syntactic*" dimension is undoubtedly the aspect in which architectural deconstruction has achieved greater results. In fact spaces, and the meaning implicit in the rituals taking place within them, have not always shown the character of complexity and reciprocal hybridisation that might legitimately have been expected. At the same time the pragmatic limitations imposed by contexts of intervention, competition programs, and the demands of clients (public and private), were often rather conventional and did little to stimulate deconstructive variation.

With regard to language the stated aim is to highlight the conflict and mutual hybridisation of languages, both between architectonic codes and through the interaction of languages belonging to different expressive forms, even if within the reality of interventions carried out, research has tended to be confined within specific architectonic limits. This has created a markedly experimental climate, in which the objective, paradoxically, is associated with research. In analytical terms it is therefore difficult to describe deconstruction as a new architectural "*code*".

It seems more appropriate to define deconstruction as a condition of language, a state, not a system, in which language finds itself when it interferes with communication strategies that are alternative or even contradictory thereto. Such a condition automatically becomes

Conflict of the codes as historical fiction

a metaphor for a society which, having seen the sudden collapse of the ideological and economic constraints that could once clearly establish areas of mutual decision and clear limits to action, now sees the systems that governed it in a state of crisis. If such a situation, even in language, is typical of all stages of transition that undermine any system of conventions – which always gives way to a new state of equilibrium – the leading exponents of architectonic deconstruction appear to think that the contemporary condition will enter a state of permanent instability that does not seek reconciliation, nor synthesis therefore, in any field.

This is why the linguistic analysis of deconstruction, conducted in terms of the contamination and hybridisation of languages, involves testing the unpredictable effects of mutual and simultaneous conflict between syntax, morphology, grammars and lexicons. No-one seems to aspire to a synthesis, or to a meta-language capable of systematising individual linguistic shifts. This attitude explains the fact that it is not possible to critically reflect on the nature of language, unless within the particular pragmatic constraints imposed by architectonic and urban “*text*”, or rather within the dense palimpsest of forms and meanings in which, paradoxically, deconstructive action is constructed. In this respect deconstructionist interest seems to more clearly address the grammar of the text than the nature of language as such, i.e. the problem of its essence. Leading figures such as Peter Eisenman exemplify the gradual shift that took place between the 1960s and the 1980s, from Chomskyan structuralism, linked to the processes of formation of codes and their essence, to the post-structuralist problem of the existence of syntactic mechanisms that govern the operation of the specific fragment of “*script*” while implicitly accepting the functioning of language as code. In other words, language continued to retain an irreplaceable role as a general reference framework for textual hermeneutics, but was not itself the favoured object of analytic or design related attention. This represents a cultural shift essential to an understanding of the basic differences between deconstruction and structuralism.

As noted above, and paradoxical as it may seem, deconstruction ultimately always produces a construction. Against the easy symbolism of so much postmodern underproduction that was vaguely evocative of the formal values of history, which declared the impossibility of an analytical decomposition of form and of its associated meanings, deconstruction stands apart in the analytical intensity with which is “*staged*” the conflictual interweaving of the languages, to an extent that always permits identification of its constituent parts. It is less easy to recognise operations performed on the parts since these are managed by the very systems themselves, in reciprocal interference, and placed beyond the control of individuals, who can no longer act on them.

The historical theme, which is the most obvious manifestation of the logic of the palimpsest, thus becomes one of the central issues of the debate. This is not history understood as the continuity of events, their unrepeatability, and their objective truth, easily recognisable through a hermeneutic approach, but a “*post-idealist*” history that comes from awareness that language and the thinking it shapes cannot possibly have a unifying function, insofar as it recognises that language itself has

materiality that is separate from its expressive quality. This materiality is due simply to the resistance to change implicit in language, which becomes an obstacle at times of sudden and dramatic change, a permanence attended by a new linguistic reality that is unable to absorb it.

Deconstruction therefore lives in an “*interlingual*” condition that tends to emphasise the value of spaces that appear to be “*residual*” with respect to the rules laid down by individual languages. In this sense language confirms the condition of perpetual instability, accommodating the coexistence of the partial truths implicit in all possible languages, even in those not yet invented. The idea of authenticity, originarity and truth of the work, or the text, is thus thrown into disarray.

4.3.6) The role of “*type*”

As we have repeatedly stated, the notion of type, as “*classically*” understood, expressly refers to that system of invariants (constructive-technological, distribution-functional, and volumetric-spatial) that constitutes the logical framework of anything produced by the spirit, in particular and ascertainable spatio-temporal and action-related conditions. These invariants can be strongly integrated with one another, as happens when a community’s shared social contract turns out to be solid, or may exhibit a degree of relative autonomy that is easily verifiable at all stages of transition from one cultural system to another. This definition also hints at a constructivist interpretation of architecture, or of the idea of architecture as “*tectonic*”, which has a long historical tradition springing from Vitruvian inspiration, often freely interpreted. The concepts of architectural authenticity, originality, originarity and truth as unprovable assumptions derive from these premises, on which “*classical*” culture has conferred an axiomatic character. Furthermore, and as a result of “*tectonic*” interpretation of architecture, the classic interpretation of the type has made it impossible to envisage or think about it independently of the “*presence*” of architecture. This is a fundamental aspect of the typological problem.

The deconstructive approach undermines the axiomaticity of these premises, demonstrating that its very postulates lose credibility if the very definition of architecture loses the connotations of historicity, materiality, presence and consistency mentioned above. The classical concept of typology thus adopts a conventional value against assumed claims of naturalness and scientific objectivity. This same mistake was made by neo-historical culture. Peter Eisenman clearly identifies the principles it follows in architectonic interpretation:

“Due to the inescapable presence, the importance for the architectural object of the experience here and now, architecture has to face a paradox that is not imposed on any other discipline. Originally, architecture was linked to the condition of shelter. However, the existence of a shelter must be expressed both physically and metaphysically. It exists in both the real world and in that of ideas. This means that architecture operates simultaneously in a condition of both presence and absence. In its continuous longing for authenticity,

Architecture as a palimpsest

architecture has always tried to suppress, without success, the essential aspect of absence that acts within it. Therefore, the traditional conception of architectural presence and objectivity has always been regarded as natural, innate like the representation of man and his origins. This has resulted in a formal language considered as just as natural. The column and the beam, the porch and the arch, the capital and its base, for example, were all considered innate forms in architecture. Therefore, the nostalgic post-Modernist drive has attempted to take architecture back to its "true", "natural" heritage."⁽⁵¹⁾ As the idea of architecture as a presence is undermined, so the traditional "classic" concept of architecture is called into question, and new interpretations of its possible values emerge.

And what, to paraphrase Eisenman, might "*the essential aspect of absence that acts within it*" be, if not that of language as a logical-conceptual space of composition, even in the peculiarly asystematic interpretation of deconstructivism?

Regardless of these circumstances, the notion of type implies that the logical principles governing the activities of architecture and the city should possess a degree of internal coherence that is clearly recognisable and circumscribable, although integrated into the system of rules of higher or lower order. In other words, we can always clearly identify the level of complexity of induced relations (the grades) and their effectiveness (the scales), although all the transition zones in the city of traditional understanding are abundant and clearly legible. The notion of type is at the same time linked to that of a strong correspondence with the characteristics of the context in which it operates.

Deconstruction starts from antithetical premises. Its space it operates in, in both real terms and conceptual terms, is interstitial in nature. It is not however a space between things with its own degree of internal coherence such as the one implicated by structuralism. On the contrary it is a place in which antithetical principles coexist, overlapping and intersecting, - a place, we might say, of conceptual and physical structures based on irreconcilable assumptions. This condition of marginality has nothing to do with the idea of threshold that ensures a smooth transition between one scale of complexity and another (from architecture to the city), or from one domain to the next (from public to private), that is, of a place enriched by the coexistence of qualities in different, yet unified spatial areas. Eisenman's "*in-between*" has nothing to do with that defined by Alison and Peter Smithson, or confirmed by the theories of Herman Hertzberger. It is an area of unresolved contradiction rather than of controlled transition, not quashed by the project, but celebrated as a form of enrichment.

The type, as classically understood, is a logical space that is complete in itself but not self-sufficient, which takes shape in the work realised in an area having clearly defined characteristics. The deconstructed object is an accidental event that always looks beyond itself because due to its interstitial nature, it cannot justify its existence. It is not, therefore, a kind of microcosm that shares the principles of other entities. Its eccentricity takes many forms, as the coexistence of different logics confirms. The deconstructed object does not have one degree of internal coherence, but is rather characterised by an unstable tendency to slip between different degrees of internal coherence to which its

51. Peter Eisenman, "*The Blue line Text*", in Pippo Ciorra, Peter Eisenman, Milano, Electa, 1993, p. 213.

fragmentary nature constantly refers and differentiates.

Furthermore, the type expresses the concept of the complementarity of choices relating to the transformation of physical space, and the principle of mutual implication of the scales of complexity of man-made reality. Conversely, deconstruction emphasises the endless competition between parts. The city, in its physical, symbolic and ritual dimensions, is thus systematically set against the architectonic hypertrophism of a certain megastructural pragmatism; the artificial enters into competition with the natural i.e. alternative and non-complementary solutions to a specific environmental question. Once again, the task of deconstruction appears to emphasise the existence of clear contradictions in contemporary society.

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5) SOME ONGOING INTENTIONS

5.1) Towards a *différance* of the architectural language?

5.1.1) The cultural context

The landscape of the contemporary city is increasingly fragmented, discontinuous and accidental in its ongoing configuration. There are indisputable historical reasons which support this argument. They are implicit in the modalities according to which the twentieth-century city was built. In this sense, Rem Koolhaas states: “*One of the peculiar beauties of the 20th-century context is that it is no longer the result of one or more architectural doctrines that evolve almost imperceptibly; instead it represents the simultaneous formation of distinct archaeological layers, a perpetual pendulum movement in which each architectural doctrine contradicts and in fact undoes the essence of the previous one as surely as day follows night.*”⁽¹⁾ The principle of mutual derivation, for which the new is born as a shared need to adapt existing structures to changed conditions of use, according to tradition, is gradually being replaced by the practice of a new cyclical regeneration of the very conditions of the existence of the city and of its principles.

These are flanked, however, by more recent arguments that concern new ways of growth of the city. In fact, the city reproduces itself more and more as a result of rapid and unpredictable accumulation of pre-existing settlement logics, often in conflict with each other, that have deposited over time in the territory to meet specific needs and only subsequently absorbed within the new urban context.

This result is common to metropolitan areas, yet it differs in fundamental principles because it is not the effect of a centrifugal movement, from inside to outside – that is, of a mother city organised according to satellite towns. On the contrary, it is the result of a highly competitive centripetal process of occasional acquisition of already existing urban

1. Rem Koolhaas & Bruce Mau, *S,M,L,XL*, Rotterdam, 010 Publishers, 1995, p. 206.

areas. In other words, the new city grows not so much through consumption of new territories as through gradual gravitation within its radius of influence of self-sufficient settlements. A symmetrical enlargement of the city's boundaries corresponds to its apparent immobility without this entailing, within certain limits, an increase in its building substance.

The new city is implemented by "*rethinking it*" from its boundaries. Through this process, the city has tumultuously redefined its geography in the absence of an intentionally unified design, pursuing the opportunities suggested by the specific circumstances with pragmatism. Faced with this new scenario, some design strategies tend to recognise in this condition the value of expression of the modern condition, as the result of precise cultural choices and not of fortuitous circumstances whose effects must necessarily be put right. Today, therefore, designing increasingly means revealing the deep contradictions hidden in the territory of the city, and amplifying the impossible collimations produced by at least two centuries of urban transformation, "*deconstructing*" its formal structure.

Rather than considering the mentioned contexts as problematic situations to be reabsorbed within the categories of pre-industrial urban space, it is believed instead more opportune to connote them as if they were materials aware of new rhetoric, which have their roots in history. In other words, the identity of the contemporary city lies in its hybrid and plural condition, and as such should be understood.

This chapter aims to rethink the origins of such a scenario, motivating them as conscious choice, and to follow developments through a reasoned reading of texts and works considered to be exemplary. While respecting the choice of system shared in the other chapters, the objective is therefore to identify some themes that are instrumental for issues of contemporary urban design, through greater historical awareness of the intentions that have promoted it.

The speed with which economic scenarios change and physical and psychological distances between the different local areas are narrowed produces the sense of an acceleration in exchanges and relations.

One of the most spectacular consequences of this condition is the exponential expansion of the rays of mutual influence between nodes in the global and local economic networks. To cope with the instability of the market and its constant fluctuations, major cities prefer to extend connections with existing centres, thereby expanding their range of influence, rather than increase their own dimensions. The size of these centres can therefore be deemed virtual to the extent that it has limited impact on its physicality and is expressed mainly in increased mobility and related services, in other words relations. In this sense, the city can legitimately be considered as a network whose size is not given by the physical entity of the nodes that make it up, but by the quantity of relations that are mutually established and by the extension of the network itself.

Large dimension is becoming the new parameter for analysing the behaviour of urban agglomerations, whose invisible boundaries are

The large dimension

constantly fluctuating and are not identified, or only in small part, with administrative ones. The contemporary urban models, which we assume are consistent with the new economic processes, are constantly changing their extent, with no appreciable changes in physical dimension. The city constantly reflects on its condition, starting again from its boundaries.

As paradoxical as it may seem, the phenomenon responds practically and effectively to the needs of the new economy. If the large dimension is measured in terms of the expansion of the connections between existing settlements and not in terms of expansion of the settlements themselves, the phenomenon immediately implies two important consequences for the categories that traditionally describe the behaviour of the city. Firstly, the importance of infrastructures which support and feed the network itself should be highlighted. Secondly, the notion of discontinuity, in other words the idea that the new city is not a continuous entity in which the changes brought about in one of its parts have immediate effects on the whole system, should be accepted. The level of complexity induced by the new dimension is therefore relational, and has a direct impact on existing systems which, by virtue of their potential, may suffer a downgrading or a sudden increase in their prospects. In this perspective, it is meaningless to speak of context, continuity and growth and, most importantly, to reduce the problem of the city to its historic centre, or to its suburbs. The boundaries of the contemporary city are invisible, and absorb within themselves different quantities and qualities, which cannot be reduced to a unitary dimension.

It is difficult to define the contemporary city by using traditional morphological categories. In fact, these categories are based on quantitative parameters, such as volume, mutual distance, measurability of empty spaces, modularity of façades, etc. How can the quality and quantity of the relations on which the new urban configuration is based be measured? How can an urban form that escapes representation because of the very ways in which it changes be visualised? The image of the territory-city (or region-city) can be an effective simplification for quantitatively describing the new urban models. In fact, territory is by its nature characterised by spots of high densification, that is urban centres, which are mutually interconnected by the system of infrastructures, interposed with areas of greater rarefaction - green areas, namely the agricultural fabric to which the design of unbuilt land refers. The image offered by the territory is therefore comparable to that of an electromagnetic field, in other words a discontinuous image, an entity in which the empty space assumes the function of a potential non-homogeneous connective element that is capable of recording, even in the long term, transformations of the economic level through the network of its possible transit routes.

Although many of the actions of the new economy take place without appreciable real movements, they still involve them: services tend to optimise the movement of goods and people, an activity which, however, must continue to rely on the use of the system of infrastructures. Further,

The territory-city

at this macroscopic level, changing market conditions are matched by a geographic transformation, with appreciable results from a substantial, in other words physical, point of view.

The rapidity with which the contemporary city absorbs within itself the size of the territory without changing the substance of its real size is expressed effectively through the network of infrastructural connections and the use made of it, viewable through diagrams.

The image of the territory-city also makes it possible to represent with sufficient effectiveness the idea of the city as a neutral background that emphasises the life crossing it. Urban vitality as figure and architecture as background.

The image of the territory also helps to accept the differentiation and diversity of opportunities as principal elements of the new city. While the modern city was intended to ensure the satisfaction of collective needs, the new city takes as its prerogative that of ensuring the maximum satisfaction of the individual expectations, that is, of multiplying the opportunities for differentiation and identification within an artificial landscape which, precisely for this reason, is called on to assume a certain degree of neutrality, that is, it must leave aside as much as possible the search for an explicit internal hierarchy, which would inevitably reduce the expressive potential of the whole.

In this sense it can be said that the new city acts as a multiplier of opportunities and to do this it is called on to assume within itself the greatest degree of freedom possible, or to amplify the tree of choices. The result is thus an implicit lability, which does not translate into indifference. Its very logic of continuous transformation means that it develops by multiplying and intensifying the possible relationships between parts with a clear formal and functional recognisability, with an enduring programmability. Each of these parts constantly changes its meaning simply by acting on the quality of relationships that it can entertain with the others.

The relationships are not necessary and for this reason the region-city is identified as a stream of connections in continuous alteration without a specific goal other than the opportunity of the juncture.

The new city is a dense entity with a new meaning compared with the traditional one. It is, in fact, a density which does not imply continuity, or the different components being in agreement, so much as the intensity of relationships among the parts in relation to the degree of mutual differentiation of the parts themselves. If the idea of maximum satisfaction of individual expectations translates into urban substance through accumulation of formal and functional situations with a high degree of differentiation, in the same way this condition of satisfaction inevitably passes through continuous extension of the network of possible relationships. The representation of the new city is therefore expressed through a concentration of information, goods and services at the nodes of the network, which produces the drive for densification against territorial dispersion, and a parallel increase in the intensity of the traffic on the general connection network.

Densification against dispersion

As we have repeatedly stated, in this new scenario, architecture progressively loses its traditional presence and representative function in favour of its content, or experience of life that takes place inside it. This does not mean, as we have been able to see in certain experiences of a deconstructive nature, that architecture is reduced to factual space, that its forms are shaped through an unlikely pursuit of actions that develop on the inside. On the contrary, architecture tends to assume a sought neutrality that, by contrast, tends to record every performance, event and change that can occur within it, without this involving a modification of its structure. This is an important development in the traditional concept of architecture. Architecture becomes a background that makes it possible to view and enhance the vitality and dynamism of its inhabitants. The new architecture thus assumes the quality of a neutral support that, precisely by virtue of its characteristics, ensures the maximum increment of relations between the parts that coexist inside.

Architecture as network

Within a relational interpretation of the contemporary city, infrastructures take on a primary significance as real and conceptual manifestations of the idea of interchange among the parts. Even more, in its continuous fluctuation of margins, the city prefers those situations that have a high density of infrastructures, because they constitute formidable multipliers of opportunities. On the other hand, all urban areas with poor infrastructures are destined to take on an increasingly marginal role within urban organisation.

The role of infrastructures

In addition, the more diversified the offer of infrastructure, the more the area served by it will be appreciated, because, within a logic in which competitiveness among infrastructures pays, due to the high gradient of internal differentiation, this will produce an increase of its potential. As always, the belief prevails that the goal of contemporary cities is to ensure the maximum satisfaction of individual needs, in other words the highest differentiation of opportunities in such a way that these are all accorded the same level of importance. A reduction, therefore, of any internal hierarchisation.

In such a scenario, metropolitan empty spaces take on a particular value by virtue of their very little inertia to modification, compared with solid spaces which, by definition, put up strong resistance to any transformation of their status. Empty spaces become an important resource, not only in ecological terms, but in terms of willingness of being passed through and freedom related to the implicit lack of constraints, other than those closely related to the system of property. The empty space is therefore the place of the possible, where the full assumes the meaning of binding determination.

Strategies for metropolitan empty spaces

In this specific interpretation, emptiness is no longer understood in the traditional sense as a place of being, but as a place of transit. In this sense, it takes on a precise value at different scales, from individual buildings to entire city, passing across its parts.

5.1.2) The ideas of authors: intentions and definitions

Rem Koolhaas is known for the irreverent attitude with which, since publication of *Delirious New York*, he has revolutionised the interpretation of the history of urban planning of the past century. His is a critical position, which can legitimately be taken as the first manifestation of post-structuralism in the field of architectural literature which, not surprisingly between the late '70s and the early '80s in the wake of the dissemination of the work of Jacques Derrida, questioned the criteria for interpretation of the structuralism and historicism still in vogue. The book in question presents the same subversive force, and has a graphic layout which is, in fact, a work within the work: a complex set of multi-disciplinary languages, from photography to graphic design, from performance to painting, from modelling to video art: an experiment aimed at testing the limits of coexistence and mutual hybridisation of languages. The multiplicity and structure of references and citations, which brings us back to the radical "*climacteric*" of the Seventies, is matched by an extremely simple narrative structure; the book's introduction nevertheless reveals the post-structuralist education of Koolhaas: "*Coherence imposed on an architect's work is either cosmetic or the result of the self-censorship. S, M, L, XL organizes architectural material according to size; there is no connective tissue. Writings are embedded between projects not as cement but as autonomous episodes. Contradictions are not avoided. The book can be read in any way. To restore a kind of honesty and clarity to the relationship between architect and public, S, M, L, XL is an amalgam that makes disclosures about the conditions under which architecture is now produced. Its epic scale is both arrogant and hesitant. It tries to deflate and reflate architecture- to destroy and rebuild. On the basis of contemporary givens, it tries to find a new realism about what architecture is and what it can do. In other words, this is a painfully utopian enterprise.*"(2)

Therefore, the structure of the text, characterised by a deliberate high degree of internal lability, presents a minimum level of narrative warp through the division of different design and theoretical experiences, according to an increasing order of "*bigness*". This term plays a key role in understanding the thinking of Koolhaas, and must be interpreted in the double meaning of mass and scale. Both parameters, in fact, are included in the definition of what today we call complexity. The choice made by Koolhaas therefore translates into the will to order the various materials according to an increasing level of complexity, which in turn is closely related to the relational and physical dimension of opportunities for work and reflection.

It is no coincidence that, in the course of argumentation, Koolhaas repeatedly recognises the debt that O.M.A. (Office of Metropolitan Architecture, the design firm that Koolhaas promoted in Rotterdam at the beginning of the '80s on return from his American adventure) owes to *Delirious New York*. In the famous book on urban analysis, dedicated to the American myth-city, Koolhaas identified an experience of incomparable scope in the history of urban planning in the past century in the singular method of immense growth that occurred in Manhattan

S, M, L, XL,

Rem Koolhaas & Bruce Mau, 1995

between the end of the nineteenth century and the first 30 years of the twentieth century. New York is the first example of metropolitan entity characterised by a level of complexity and internal dynamism such as to destabilise irreversibly the traditional categories of organisation of urban space and architectural quality. The intensity of its growth is such as to take exploitation of the potential of architecture to its extreme consequences. *Manhattanism* – the phenomenon of impressive growth that characterised the financial heart of the city – arrives at this result in an effort to exploit the potential of new technologies to the maximum in order to increase and guarantee maximum satisfaction of individual expectations. This condition is clearly expressed in the essay *Last Apples*: “*The presence of technique in Delirious New York was selective: the book identified the elevator, steel, air-conditioning as a “technology of the fantastic”. By surrendering their “objective” status, these inventions could enlist in the experimental enterprise of a new architecture and, in fact, become indissociable from it. This bonding represented an almost Darwinian adaptation to the demands of the metropolitan ecology: a mutated architecture no longer obsessively committed to form making but to the creation of conditions, the fabrication of context– scriptwriting by tectonic means.*”⁽³⁾ With these words, Koolhaas highlights two essential conditions for the creation of the new urban planning: a technological innovation whose value depends on the boldness of interpretation that is proposed – at the service of collective imaginary and not used in strictly functional applications – and an architectural concept that overcomes the substantial self-referencing of the form to place itself at the service of society, increasing expectations, multiplying desires and guaranteeing satisfaction through the impressive acceleration imprinted on the space and time of the metropolitan dimension. Architecture turns from figure into background, no longer a “*presence*” in space, an “*object*” called on to represent the life that takes place internally and, more generally, in contemporary society, on the basis of its own grammar and its own materiality. Its role becomes simply to “*present*” what happens in a condition of persistent “*congestion*” – or artificial spatial-temporal acceleration – fed by architecture itself and carried to the extreme, in other words, the artificialisation of real conditions of life. In the double meaning of size and complexity of relationships, the metropolitan dimension is the trigger of this new urban condition, as clearly expressed in the essay *Delirious New York*: “*The permanence of even the most frivolous item of architecture and the instability of the metropolis are incompatible. In this conflict the metropolis is, by definition, the victor; in its pervasive reality architecture is reduced to the status of a plaything, tolerated as decor for the illusions of history and memory. In Manhattan this paradox is resolved in a brilliant way: through the development of a mutant architecture that combines the aura of monumentality with the performance of instability. Its interiors accommodate compositions of programs and activity that change constantly and independently of each other without affecting what is called, with accidental profundity, the envelope. The genius of Manhattan is the simplicity of this divorce between appearance and performance: it keeps the illusion of architecture intact, while surrendering wholeheartedly to the needs of the metropolis. This architecture relates to the forces of the Groszstadt like a surfer to the waves.*”⁽⁴⁾ The complexity of

3. Rem Koolhaas & Bruce Mau, *S,M,L,XL*, Rotterdam, 010 Publishers, 1995, p. 665.

4. Rem Koolhaas & Bruce Mau, *S,M,L,XL*, Rotterdam, 010 Publishers, 1995, pp. 22-43.

the metropolis is such as to subordinate the laws of architecture to its own imperatives. That relationship of mutual scale correspondence that had characterised the well-ordered and controlled growth of the traditional city – and that the first experiences of the Modern, to which Koolhaas alludes citing the urban visions of Hilberseimer, had tried to keep – disappears.

In the inexhaustible aspiration to maximise individual needs and opportunities, and the corresponding search for conditions of satisfaction that do not cause a sense of frustration, or that are perceived as attainable in “*natural*” conditions, the “*Technology of the Fantastic*” is therefore called on to perform a vital task in the service of the nascent consumer society. It is necessary to create an artificial acceleration of the conditions of space and time of traditional urban life. In this sense, there is a theoretical foundation for the image of the contemporary city as seen through the experience of its prototype, New York City, as a system of cities or hyper-village, where the smallest component is the size of a skyscraper; in other words, of an artificial multiplication of developable land aimed at intensifying the experience of urban life in an increasingly restricted space. In this sense, the concept of “*bigness*”, understood by Koolhaas as the condition to which architecture in contemporary society is inevitably doomed, assumes an emblematic meaning. This concept, which involves an unprecedented increase in the depth and height of individual buildings, explains the divorce that took place between the casing and interior spaces, and indicates the new frontier of post-architecture. In this new scenario, there is a weakening of urban theories with a structuralist approach, which predicted a refounding of the city after the depressing creations of the Modern, starting from the archetypal elementariness of individual space to reach, through increasing levels of scale articulation, the dimension of the city. On the contrary, by reducing the geography of the real to architectural fiction, the contemporary city completely overturns the starting point of interpretation. The urban planning strategy of the metropolis is that of a conscious “*miniaturisation*” of the landscape, crafted to satisfy expectations multiplied in exponential terms. If this process occurs for the first time in New York, the socio-economic conditions that configured it began in the second half of the ‘80s to spread within European culture, in clear contradiction of the persistent calls to order of post-modern culture. Rem Koolhaas begins design experimentation aimed at transferring the experience gained in Delirious New York to the first project opportunities. The impact of the concept of “*bigness*” on European culture has many implications of a cultural nature. It is Koolhaas himself who describes the climacteric of those years in the essay *Bigness or the problem of Large*: “*Against the background of Europe, the shock of Bigness forced us to make what was implicit in Delirious New York explicit in our work Bigness became a double polemic, confronting earlier attempts at integration and concentration and contemporary doctrines that question the possibility of the Whole and the Real as viable categories and resign themselves to architecture’s supposedly inevitable disassembly and dissolution. Europeans had surpassed the thread of Bigness by theorizing it beyond the point of application. Their contribution had been the “gift” of the megastructure, a kind of all-embracing, all-enabling technical support*

that ultimately questioned the status of the individual building: a very safe Bigness, its true implications excluding implementation. Yona Friedman's *Urbanisme spatial* (1958) was emblematic: Bigness floats over Paris like a metallic blanket of clouds, promising unlimited but unfocused potential renewal of "everything", but never lands, never confronts, never claims its rightful place—criticism as decoration. In 1972, Beaubourg—Platonic Loft—had proposed spaces where "anything" was possible. The resulting flexibility was unmasked as the imposition of a theoretical average at the expense of both character and precision—entity at the price of identity. Perversely, its sheer demonstrativeness precluded the genuine neutrality realized without effort in the American skyscraper."⁵ Faced with this scenario, the generation of Koolhaas has two possible strategies of intervention: "dissolution" and "dismantling". The first, with a strongly interdisciplinary character, claims for architecture a progressive dissolution of space within a society dominated by intangible assets through the translation of its categories into those of virtual reality. An attitude that is more provocative than really innovative. The second, on the contrary, calls into question the very idea of totality implicit in the mega-structural imaginary, to which has been sacrificed recognition of the specific individuality of each constituent part. The unity of the whole is therefore attacked and decomposed into a plurality of single and unique elements arranged in a system of fragments; in other words, inserted within a network of potential multiple connections. In the European interpretation, this process of dissolution of "bigness", promoted by a renewed interest in a close connection between form and function, and aimed at replacing each programmed component in its proper position, is made possible by the ability to "assemble" fine-tuned in America at the beginning of the century. In the same essay, Koolhaas returns again with clarity to the enormous possibilities implicit in the interpretation of Bigness developed in the new world: "Bigness destroys, but it is also a new beginning. It can reassemble what it breaks. A paradox of Bigness is that in spite of the calculation that goes into its planning— in fact, through its very rigidities— it is the one architecture that engineers the unpredictable. Instead of enforcing coexistence, Bigness depends on regimes of freedoms, the assembly of maximum difference. Only Bigness can sustain a promiscuous proliferation of events in a single container. It develops strategies to organize both their interdependence and interdependence within a larger entity in a symbiosis that exacerbates rather than compromises specificity. Through contamination rather than purity and quantity than quality, only Bigness can support genuinely new relationship between functional entities that expand rather than limit their identities. The artificiality and complexity of Bigness release function from its defensive armour to allow a kind of liquefaction; programmatic elements react with each other to create new events— Bigness returns to a model of programmatic alchemy. At first sight, the activities amassed in the structure of Bigness demand to interact, but Bigness also keeps them apart. Like plutonium rods that, more or less immersed, dampen or promote nuclear reaction, Bigness regulates the intensities of programmatic coexistence. Although Bigness is a blueprint for perpetual intensity, it also offers degrees of serenity and even blandness. It is simply impossible to animate its entire mass with intention. Its vastness exhausts architecture's compulsive need to decide and determine.

5. Rem Koolhaas & Bruce Mau, *S,M,L,XL*, Rotterdam, 010 Publishers, 1995, pp. 503–505.

Zones will be left out, free from architecture." (6) In the metropolitan city, architecture takes on the task of creating the conditions for a permanent state of congestion (i.e. of time and space acceleration) between the components of the plan that are able to compete with the richness of the urban experience, increasing its intensity because of the greater degree of artificiality. In this sense, it can be said that Bigness competes with the city, or rather identifies with the city itself. Fig 1,2,3,4

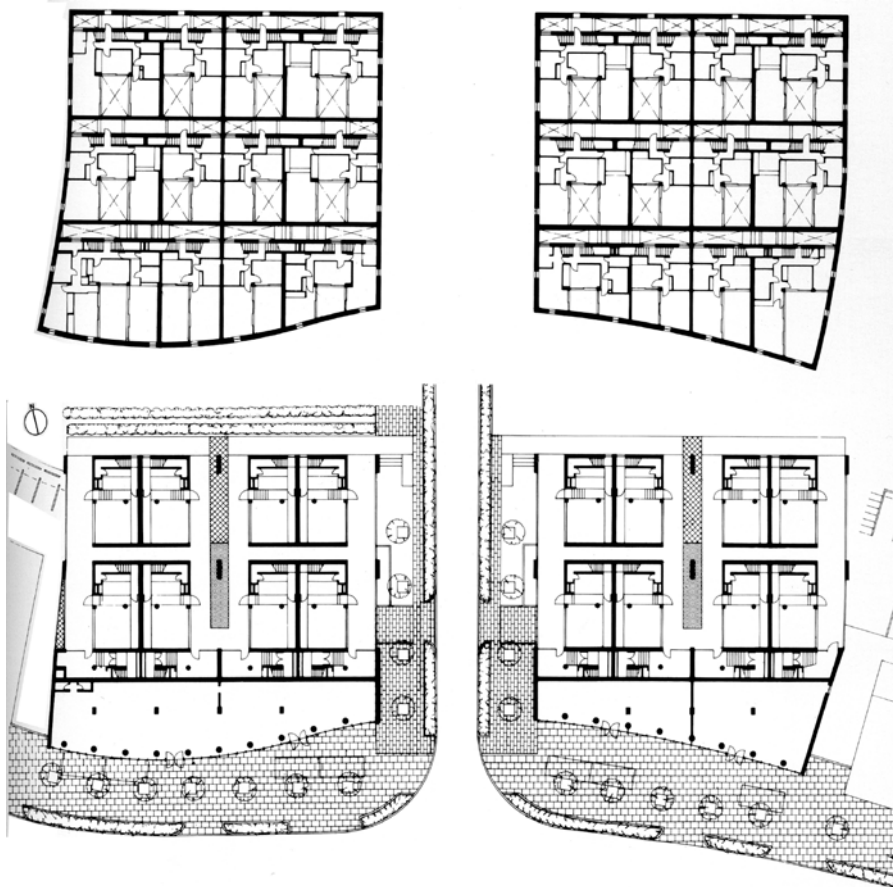


Fig 1. OMA, Nexus World Housing, Fukuoka, Japan, 1991. The design's plans are an explicit homage to the high density of the traditional courtyard house building fabric. Hutong exported from China?

To obtain this result, its role should be as neutral as possible. With this term, Koolhaas wants to express the condition of an architecture that must give up any excess characterisation which does not come from a legitimate comparison with the prerogatives of the context because, in the performance of the building, any form of specialisation would result in a limitation of the network of possible connections among the components of the functional plan. In this sense, his definition of "*typical floor plan*", reminiscent of many aspects of the free floor plan promoted by the Modern, must be interpreted. An invention of the New World, according to Koolhaas this constitutes the achievement of the zero degree of architectural language, and presents itself as "*artificialised*" ground of incredible depth, multiplied in height as a result of an elementary three-dimensional grid with a modular base of beams and columns in steel, or in reinforced concrete, experimented for the first time in office buildings. The full exploitation of the potential of technology leads to the creation of an abstract spatiality, devoid of uniqueness yet precise in responding to the demands of a highly unstable configuration of the plan. The air-conditioning and artificial lighting systems permit increasing the depth of such buildings in an unimaginable manner and

6. Rem Koolhaas & Bruce Mau, *S,M,L,XL*, Rotterdam, 010 Publishers, 1995, pp. 511-513.

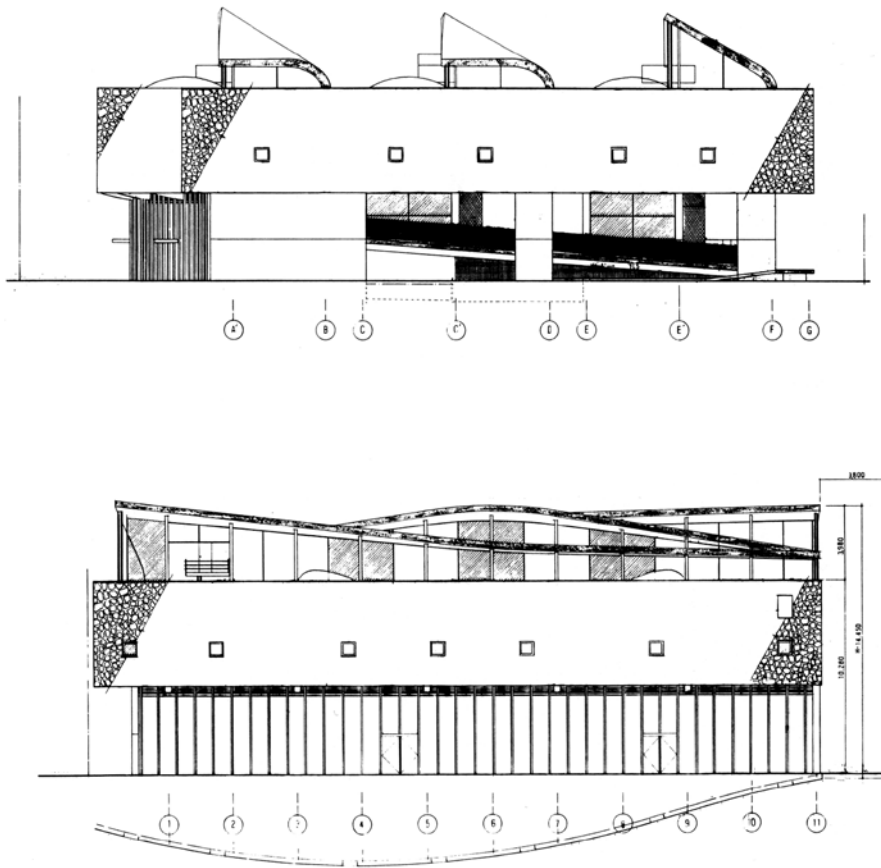


Fig 2. OMA, Nexus World Housing, Fukuoka, Japan, 1991. The façade immediately contradicts the immediate impression offered by the plans. An explicit interpretation of Le Corbusier Ville Savoye- a well known modern archetype in Japan- suddenly introduces the issue of the Birgness. The complex looks like an out of scale architecture internally congested: an urbanized object.

also maximising the spaces that cannot benefit from direct lighting. Concentrating all the services - plant, stairs and lifts - in the innermost and least prestigious area, it is possible to achieve a nucleus - or core - that guarantees the functioning of the building without interfering with the maximum possible utilisation of spaces. The use of the elevator in particular recreates the conditions of habitability at a previously unimaginable level up from the natural ground, foreshadowing that extraordinary layering of multiple functions which will be progressively experimented in skyscrapers, through extension of the results already obtained in the first office buildings. The neutrality of the “*typical floor plan*” becomes a prerequisite for obtaining any desired level of congestion and, in that sense, consents the recording of all the fluctuations that occur within it. For all these reasons, the “*typical floor plan*” represents the end of the idea of the architect as a creator. In this sense, in his essay *Typical plan*, Koolhaas recalls that: “*Architecture is monstrous in the way in which each choice leads to the reduction of possibility. It implies a regime of either/or decisions often claustrophobic, even for the architect. All other architecture pre-empt the future; Typical Plan - by making no choices - postpones it, keeps it open forever.*” (7) Europe has rejected such a model and, in fact, not seized the opportunities since the time of the masters of the Modern, denigrating it as inhospitable place. In the reasoning of Koolhaas, the simple multiplication of “*typical floor plans*” that leads to the creation of the skyscraper stands critically as a neutral support that is waiting to be filled with meaning through articulation of its diagram of inner functioning; in other words, through one of the endless interpretative

7. Rem Koolhaas & Bruce Mau, *S,M,L,XL*, Rotterdam, 010 Publishers, 1995, p. 344.

strategies of space. Therefore, if use becomes that practical and at the same time conceptual tool which allows us to grasp the opportunities offered by space, it is the task of the design process to provide a level of articulation of the network of possible relationships which, dealing with the specific needs of individual functions, amplifies its implicit unexpressed potential. In this sense, the operation proposed by Rem Koolhaas, at all scales, is to recognise the undeniable identity of each function, but, above all, to demonstrate through a careful deconstructive operation that the meaning of each function is never exhausted in itself, as theorised by the Modern, but multiplies incessantly through continuous interplay with the other functions, that is, by inserting them within continually fluctuating interpretive pathways according to the needs and demands placed by the user. In this sense, the user itself takes on a decisive importance in the definition of the articulation and role of space. Architecture gives up its traditional condition of figure, or vector of perception and consumption of spatial experience, and retracts silently to the condition of background, to record the continuous flow of information/interpretations of the plan available. The success of the initiative depends on this operation, which can be likened to a screenplay of space. Of course, not all plans accept the conditions implied in the definition of Bigness; in fact, a remarkable complexity is required in terms of the coexistence of questions that are quantitatively consistent and qualitatively differentiated.

The neutrality of Bigness allows the architect to concentrate on his basic task: to create the conditions so that the unexpected can happen, so that the opportunities for consumption can be multiplied and their satisfaction can take place according to the most unpredictable real and interpretive pathways. The question that the architect must answer each time that he faces a functional plan is not what it is, but what needs to be done so that it can become something. In this sense, it should not be the architecture that chooses so much as the individual who builds his own interpretive pathway.

Having recognised the characters of the new spatiality of the contemporary city, identified the historical matrices and retraced the main vectors of development, Koolhaas attempts to define the possible strategies of spatial articulation consistent with those same assumptions. Particularly fascinating are the opportunities for confrontation with the subjects of culture and leisure. In the designs for the Tres Grande Bibliotheque (TGB, 1989), the Center for Art and Media Technology (ZKM, 1989-92) and the Bibliothèques Jussieu (Jussieu, 1993), Koolhaas refines his strategy for implanting the concept of Bigness, and its possible implications, in the European context. The research started – from which the individual proposals seem progressive moments of settling in a theoretical position achieved through the systematic study of the transformations taking place in the great metropolitan regions of the world – documents the difficulty of the tasks and consistency with the principles set out in the essays. *Fig 5, 6, 7, 8*

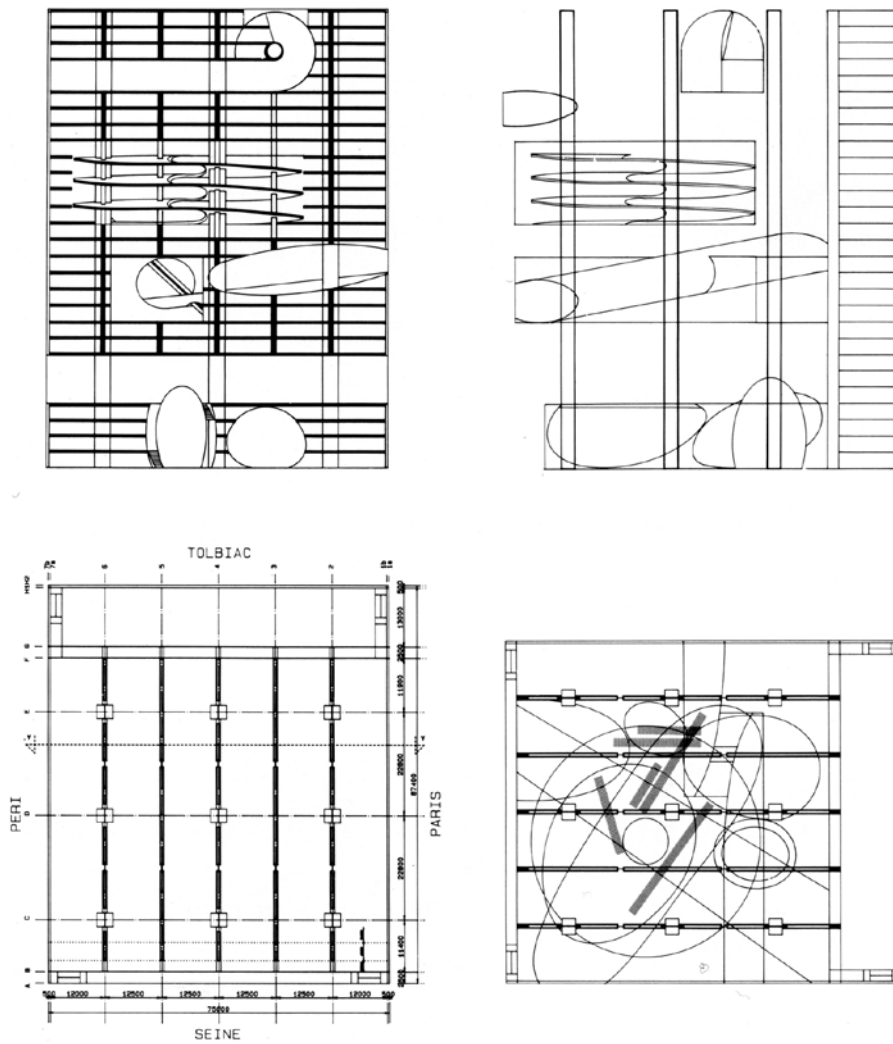


Fig 5. OMA, Très Grande Bibliothèque, Paris, France, 1989. The vertical structures are suspended on the abyss of the empty hall, unfolding an endless repetition of artificial soils from scratch. A spatial vertigo for the ultimate demise of architecture.

The occasions offer the opportunity of dealing with complex issues, both in terms of the area concerned and the richness of the functions, that concern the world of communication. The structural choices tend to favour the creation of free elevations and floors – out-and-out artificial grounds – of great dimension, within which are located the required functions, using different solutions characterised, nevertheless, by massiveness. The TGB project uses 100-metre high reinforced concrete septa with a 12.5-metre modular step, which present calibrated interruptions to ensure the necessary permeability between the horizontal levels and the free development of the volumes which accommodate special functions with limited accessibility. These beams discharge weight on two perimeter structures that leave the entrance hall completely free, creating a sense of unprecedented libration. A similar result is obtained in the ZKM using 6-metre high “*Vierendeel*” beams having different sections and conformations depending on their internal function and which, appropriately alternated, make it possible to have floors completely free of the presence of structures. In this case also, the beams rest on two imposing perimeter structures. A modular grid of pillars is present in the Jussieu which, suitably stiffened until forming a box-like system, bear the weight of the different floors. All the buildings are of incredible depth and practice the so-called *lobotomy*, that is, an intentional disconnection between the outer

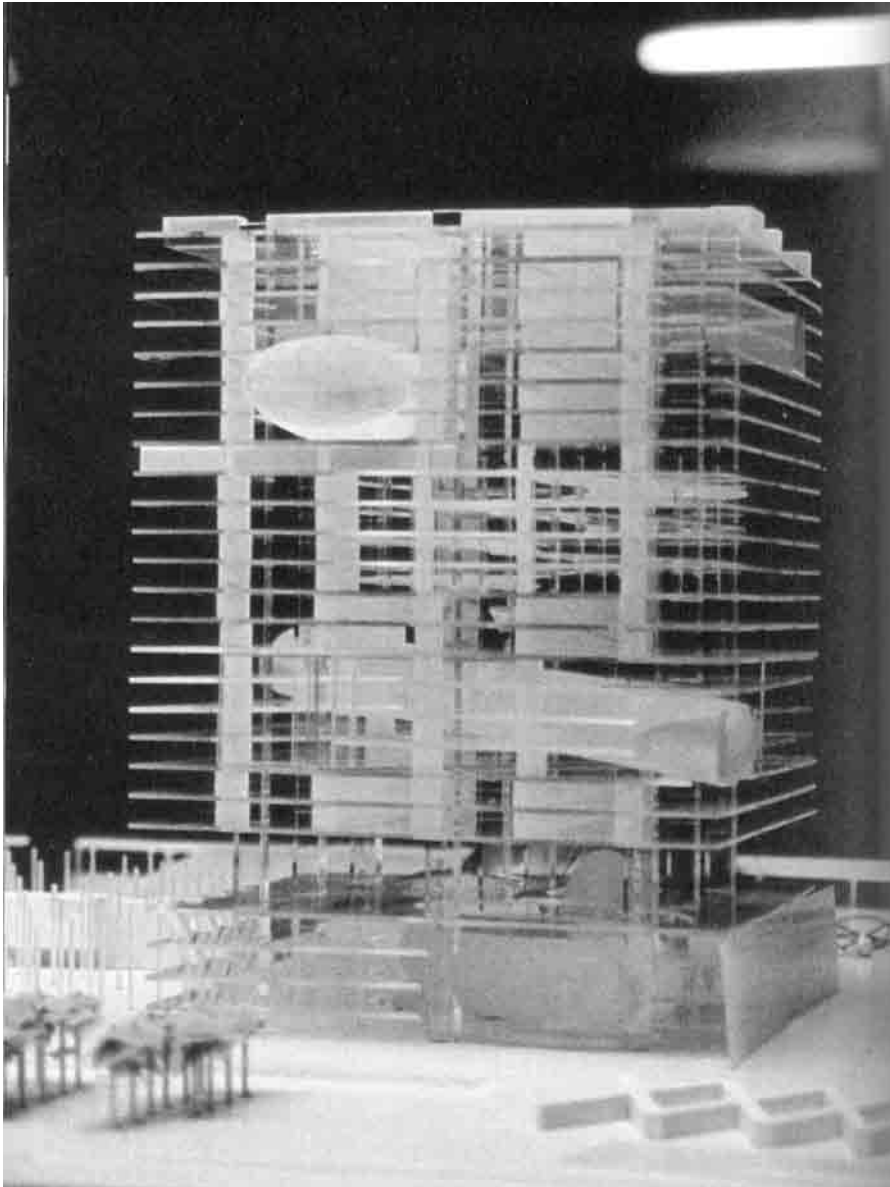


Fig 6. OMA, Très Grande Bibliothèque, Paris, France, 1989. The maquette offers the *mise en scène* of simple objects floating in the air. The suspension as a desire for architecture.

casing, which presents different degrees of transparency depending on the requirements of the plan, and the configuration of interior spaces. It is interesting to note that the façades are interpreted as sections among the many possible, consistent with the idea that the building should become a diaphragm that externally reveals the dynamism of life that takes place within. The interior spaces are then differentiated and characterised on the basis of their degree of specialization and the corresponding level of accessibility. In the TGB, the problem is solved by treating the more specialized functions as excavated voids within the neutral structure of the building, freely configured in relation to their own logic and then coated with organic-like envelopes similar to embryos - still held in their own technological placenta - that are independent of each other. Seemingly suspended in the neutral space of the library, in reality they intersect the load-bearing walls. The functions that have a broader level of accessibility and can be considered connective with respect to the first are organised in the free floors. In the ZKM, all the “*quality*” functions are stored on the contrary within the floors created with Vierendeel beams, while the

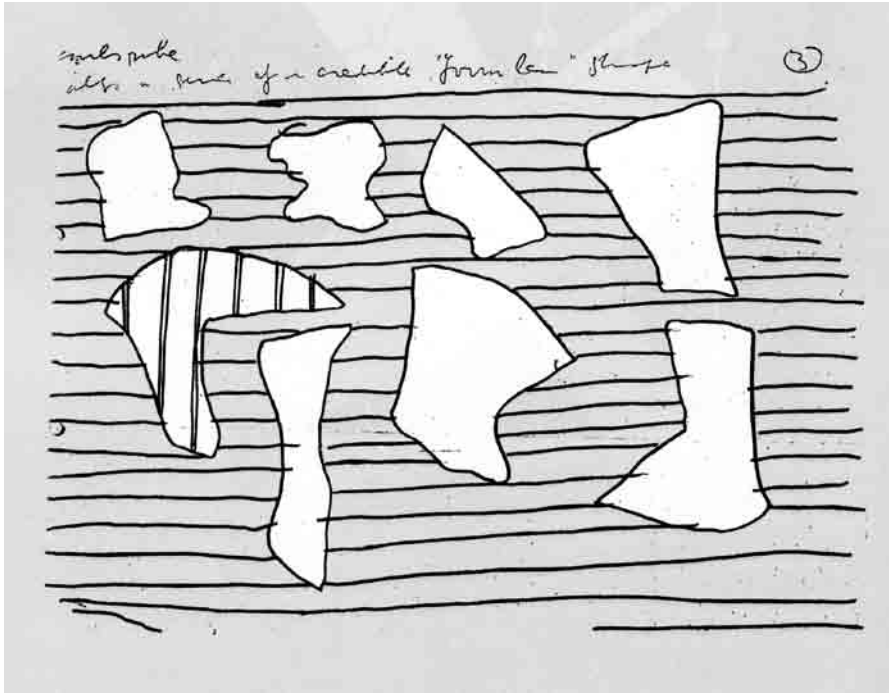


Fig 7. OMA, Très Grande Bibliothèque, Paris, France, 1989. Beyond the language, architecture blurs into diagrams.

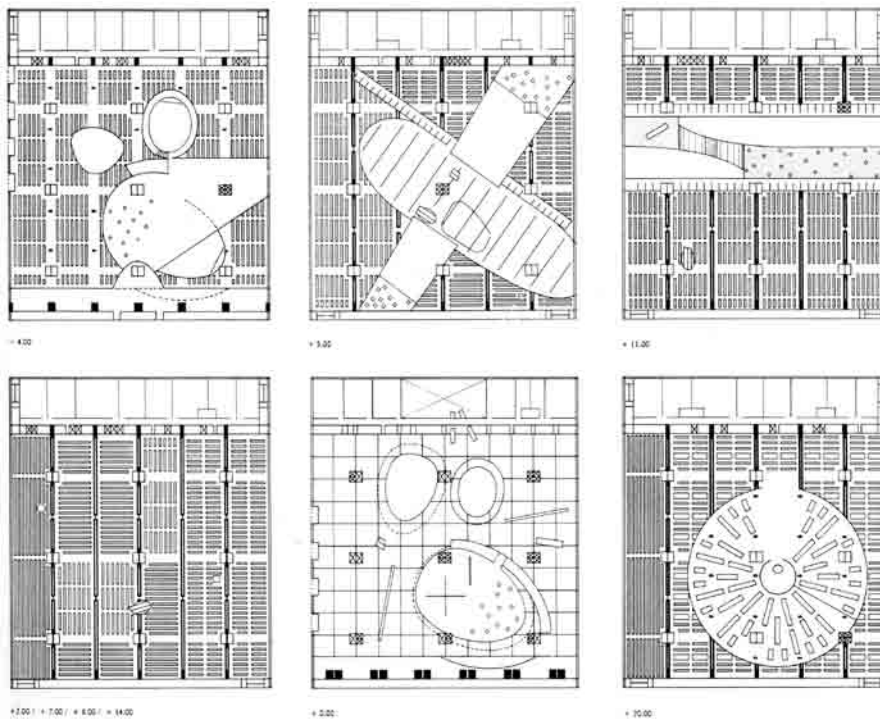


Fig 8. OMA, Très Grande Bibliothèque, Paris, France, 1989. Plans show a challenging ambiguity, metaphor of the metropolitan congestion: layers of life interrupted by fragments of architecture or architectural forms progressively eroded by life?

service functions are placed within the deep, fitted full-height walls, which discharge the weight of the beams to the ground. In the Jussieu, it is the different floors which, appropriately folded so as to create a seamless, artificial ground from the ground floor to the last level, define a very fascinating topography in which the most valuable functions are located in correspondence with its most distinctive areas, while the other functions take on a connecting role. In all buildings, congestion is clearly obtained through the multiplication of functional levels, arranged in a manner to ensure an incredible density of events, and through the system of vertical connections, stairs and elevators which make it possible to reach the different floors.

From these general considerations, it follows that the goal of multiplying the opportunities for the use of space and unveiling its infinite potential is achieved through a considerable structural work - guaranteed by the collaboration with Ove Arup Associates - that consents dealing with such complex interventions as if they were fragments of a natural landscape subjected to a systematic mineralisation process. The non-hierarchical co-existence of repeated elements - vertical and horizontal bearing components, and exceptional components - functions that are distributed inside the buildings according to a different gradient of internal specialisation - means that potential users of those spaces can move with great freedom thereby establishing continually new relationships in their space compared with the surroundings, always discovering new opportunities for perceptual and topological association according to real and interpretive pathways that are programmatically changeable. The plurality of opportunities on the one hand, and on the other the rapidity with which they can be captured through the use of stairs, ramps and lifts - the great freedom of visual connections obtained by controlling the gradient of permeability of the diaphragms, the continuous contamination with electronic billboards that provide information and data on the external and internal "*contents*" of the buildings - make it an example of absolute coherency and consistency with the issues of contemporary society.

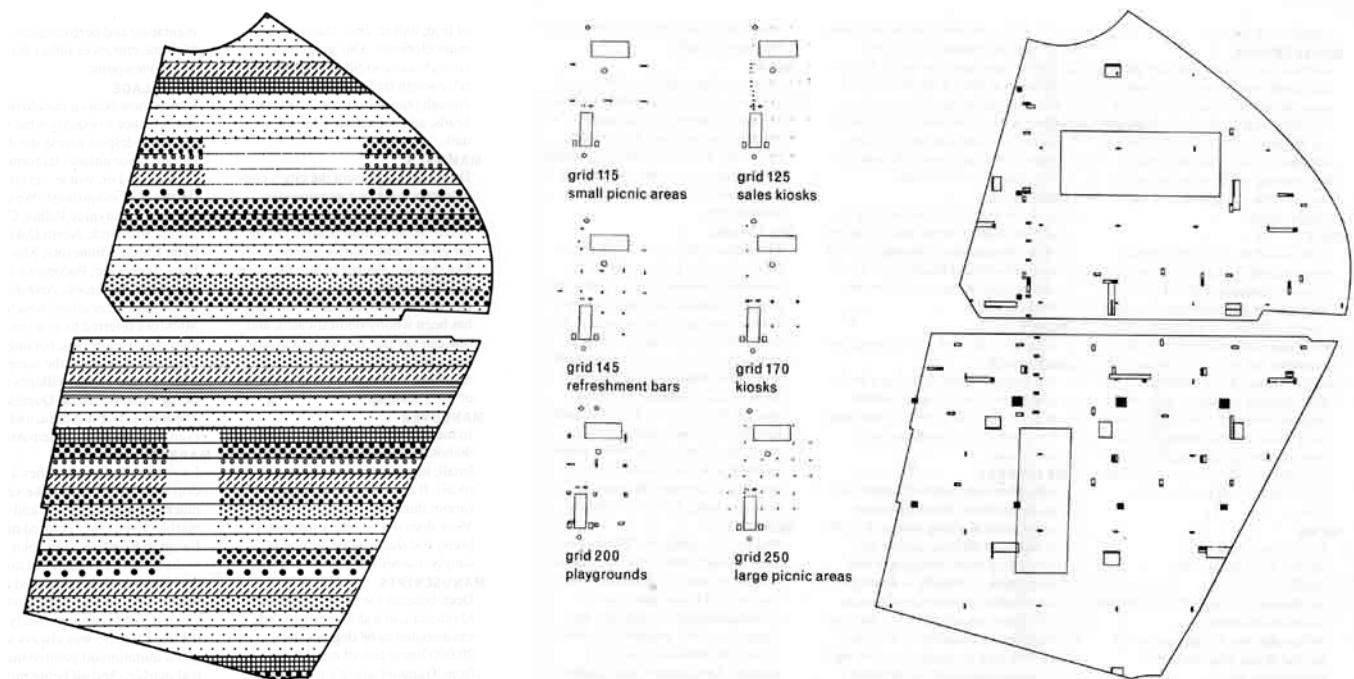
It is very interesting to note that Koolhaas's experimentation of the concept of density as a "*flywheel*" of space congestion is not limited solely to the proposal of a vertical urban planning, but also addresses the issue of horizontality, pushing the conclusions of the American experience in the direction of a greater consistency with the European tradition.

The experience of the competition for the Parc de la Villette (1982) is symbolical. According to the tender, the area of the old slaughterhouse in Paris, which was to be transformed into a place for leisure, had to gather together such a volume of activities as to undermine the traditional concept of a park, understood as a fragment of nature offering a minimum number of support services. At the same time, elements that are binding were not supplied in the tender to such an extent that would suggest its potential prefiguration. Much is therefore left to the interpretation of the competitors. Koolhaas's intention is clearly expressed in the essay *Congestion without matter*: "*We have read the program as a suggestion, a provisional enumeration of desirable ingredients. It is not definitive: it is safe to predict that during the life of the park, the program will undergo constant change and adjustment. The more the park works, the more it will be in a perpetual state of revision. Its "design" should therefore be the proposal of a method that combines architectural specificity with programmatic indeterminacy. In other words, we see this scheme not simply as a design but mostly as a tactical proposal to derive maximum benefit from the implantation on the site of a number of activities- the use of nature among them- in the most efficient and explosive manner, while at the same time offering a (relatively) stable aesthetic experience. The underlying principle of programmatic indeterminacy as a basis of the formal concept allows any shift, modification, replacement, or substitution to occur without damaging the initial hypothesis. The essence of*

the competition therefore becomes: how to orchestrate on a metropolitan field the most dynamic coexistence of activities x, y and z and to generate through their mutual interference a chain reaction of new, unprecedented events; or, how to design a social condenser, based on horizontal congestion, the size of a park. To do this we propose the following projections that, superimposed on the site, constitute the park.”(8)

The principle of programmatic destabilisation, or indeterminacy, is achieved through a series of distinct phases of the project. In the first, the area of the intervention is divided into an open system of 50-metre wide strips of land (dividable by increments of 5, 25, 10 or even 40 metres) distributed in an east-west direction. Each one of them takes care of a portion of the surface related to the different programmatic categories (theme gardens, playing fields, discovery gardens) in order to avoid concentration. Through the stratification strategy, Koolhaas manages to amplify the length of the borders among the functional components, increasing the contact surface and the resulting degree of mutual interference. This system of bands incorporates the pre-existing structures – the Science Museum and the Grande Halle – in such a way as to create an inner programmatic interference with its own rules. Nature itself, in its various forms, is organised on the basis of an identical system of division by functional bands. In this way, Koolhaas recreates horizontally the same overlapping of floors, capable of accommodating different functions in its inside, defined vertically by high-density buildings. *Fig 9, 10, 11, 12*

Fig 9, 10. OMA, Parc de la Villette, Paris, France, 1982. The ground becomes a diagram of neutral strips onto which grids of activities, accommodated into different layers, progressively land. Congestion blurs into the landscape, which has been transformed into an unstable configuration.



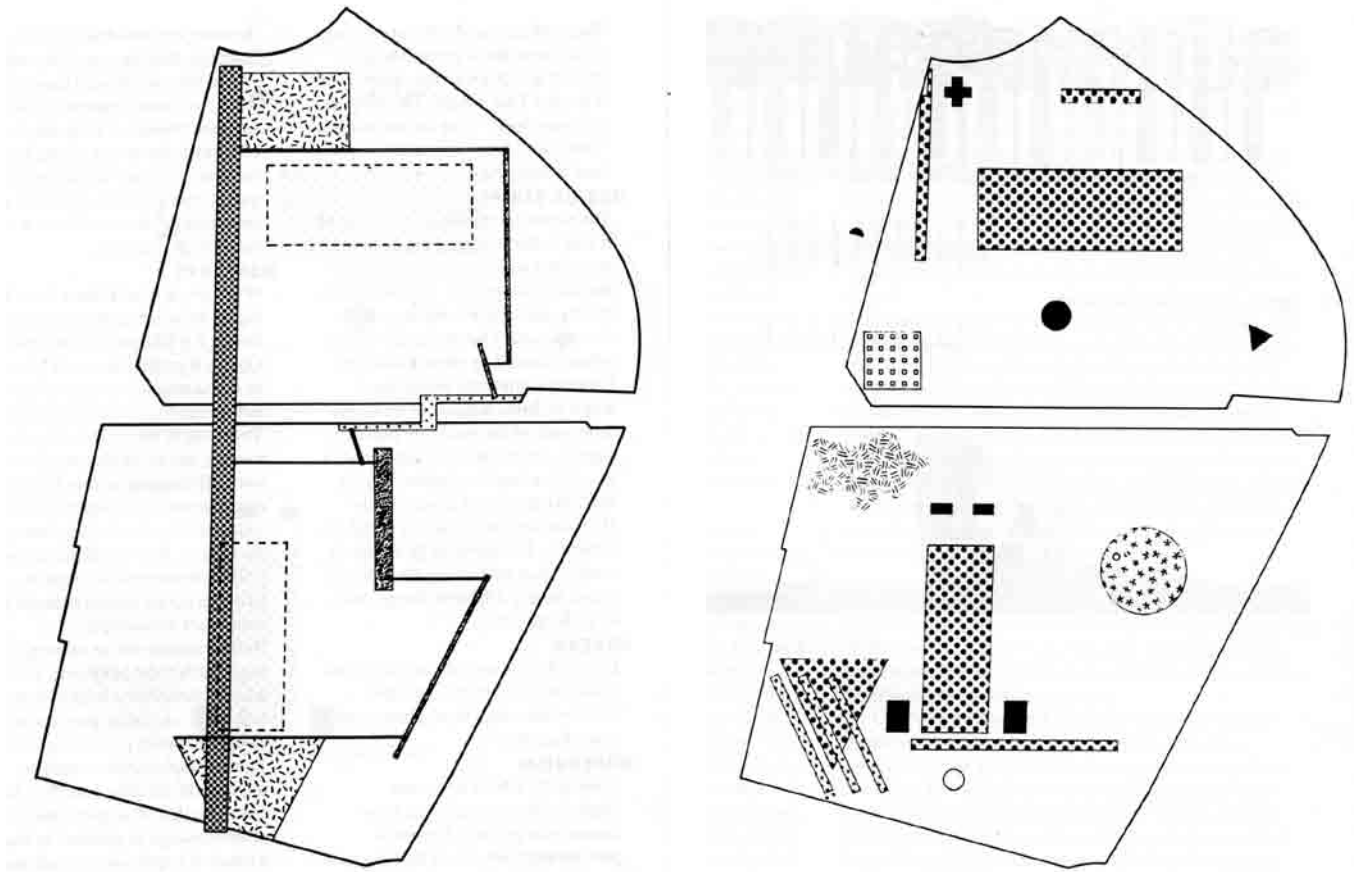


Fig 11, 12. OMA, Parc de la Villette, Paris, France, 1982. The infrastructure multiplication and randomness transforms the park from a stable space of relation into an unstable field of possibility.

Once the functions that require a larger surface development have been placed, the further programmatic components envisaged - small and large picnic areas, sales kiosks, gazebos, bars and small play areas - by virtue of their small size are atomised according to different systems of point grids, whose links are defined according to a mathematical formula related to the desired frequency of occurrence in relation to the entire available surface area of the project. In this case also, the principle followed is that of avoiding the concentration of activities and of amplifying the possibilities for mutual interference and differentiation. In fact, as a consequence of the overlap of the two programmatic systems - the linear serial logic of “bands” and the modular logic of “points” - no programmatic component will ever be found in the same conditions as another of the same species, because each will be modified by a component that accommodates it internally and, in turn, changes it. In this sense, Koolhaas manages to pursue very effectively a kind of functional deconstruction, constantly expanding the meaning of the individual components through a system of multiple and unpredictable reactions. In the same essay, Koolhaas states: “*The occasional proximity of the various elements distributed according to the different grids leads to random accidental clusterings that give every constellation of points its unique configuration and character. Besides their autonomous identity, which gives a predictable provision of each facility at fixed intervals, and their potential to be absorbed by and thereby affect their locality, their projection on the entire site creates a unity through fragmentation.*”⁽⁹⁾

Equally important is the definition of the traffic circulation system and access to the area. The transit system is organised on the basis of two

9. Rem Koolhaas & Bruce Mau, *S,M,L,XL*, Rotterdam, 010 Publishers, 1995, p.925.

major elements, the Boulevard and the Promenade. The first crosses the area in a straight line in a north-south direction, intersecting the programmatic band system and connecting the most important buildings of the park - the Grande Halle, the Science Museum, the City of Music and the entrances from surrounding neighbourhoods. The promenade has a much freer evolution and correlates the most significant cross-sections among the bands in order to enhance nodes of particular functional interest as they are created in a rather fortuitous manner through the continuous interaction of the programmatic components.

The last phase of the project involves overlapping on the area of the most significant elements in terms of size and singularity, and which elude because of their autonomy in the definition of a system. The result is that these elements are arranged on the ground as isolated objects that derive significance and meaning from the presence of other neutral systems acting as background and context. In addition to the elements already in the area, the construction of the new City of Music, the round forest, the Ariane, the Veterinarian's Rotunda and the façade buildings that mark the entrance to the park enter into play. The experience of Parc de la Villette is therefore emblematic for understanding the method adopted by Koolhaas, which has now become the distinctive trait of O.M.A. The goal of creating a congestion of spaces is independent in substance of the architectural form, which is never mentioned, and is pursued by acting solely on the mutual articulation of programmatic components and related connections. To this end, the functions are never concentrated in one area, but are atomised. This division does not, however, result in their dispersion, because they are mutually related to each other, through the definition of "*bands*", "*grid*" or "*waves*" systems – not of formal systems like those of architectural structuralism. In this way, a certain unitarity of the whole is guaranteed without, however, becoming totalising due to the coexistence and interrelation of different systems. The idea of modifiability and transformability implicit in the notion of structure is thus expelled from the structure itself; it is no longer its prerogative but, on the contrary, belongs to the overlapping and coexistence of highly differentiated systems. This fabric of different systems creates a much more extensive network of potential interrelations than that provided by structuralism which, above all, does not deny the identity of the parts and their recognisability even in the neutrality implicit in the notion of structure: it does not, therefore, cancel the differences. In this sense, the criticism of structuralism is resolved. This strategy also allows to achieve a very dense tissue, a sort of a context that acts as a binder for those episodes that cannot be reduced to units, whether they are new or inherited from dissonant settlement logics. In this way, a field of tension is created between special objects that is capable of giving new identity and value to the production of the Modern, encouraging a densification. A further differentiation of the parts is also induced by the conditions of the surroundings, or by the quality of the material and functional presences that surround the area in question. A certain attention to context is therefore reintroduced into the design process without this same context ignoring the legitimate expectations

of contemporaneity. Contextualism, functionalism and structuralism therefore co-exist in a relationship of mutual hybridisation, where each maintains its own identity, while undergoing an alteration of meaning, and thus creating an explosive mixture consistent with modernity.

Through this strategy, each functional component acquires a clear identity from the paradoxical condition of alienation that comes from interacting continuously with the elements that belong to a different programmatic system. It is the tension created by the coexistence of opposites that produces multiplication of meaning and programmatic destabilisation of conventional solutions. This particular situation of estrangement is the basis of the definition of non-place. That term, rapidly corroded in these times, is thus loaded with a strong component of ambiguity, expressing a condition of uprooting with respect to the material context that hosts it. What determines the importance of a non-place is not where it is physically located as much as the network of relations that it guarantees. For this reason, the conditions of being a place of mere transit are those that best define the condition of a non-place. The non-place does not suggest so much a presence as a distance, it is measured in terms of time and not of space, or, rather, in relation to the intensity (quantity and speed) of the interrelations that it determines.

This singular condition occurs at the metropolitan scale in the points of greatest infrastructural concentration, or where there is the largest inter-modal offer in terms of difference, both qualitative and quantitative. These concentrations, a sublimated form of non-places, multiply the opportunities for connecting through a network of relations that tends over time to replace the territory, and its complex geography, which hosts the concentrations themselves, up to taking on greater importance with respect to the relations that the concentrations themselves take on in relation to their territory. In other words, the sphere of relevance of a non-place is the highly specialised network of which it is itself a significant node, and not the territory in which it is located.

On another geographical scale, this particular situation, which is brilliantly achieved in the Parc de la Villette by organising the project area as a stratification of homogeneous functional networks, is represented by the experience of Lille. The French city is currently experiencing a period of deep renewal, following the crisis of its traditional activities: mining and textiles. Due to the presence of the tunnel under the English Channel and the TGV network that crosses it, Lille suddenly found itself at the centre of a system of metropolitan poles of great importance - London, Paris, Rotterdam, Brussels and Frankfurt - which are easily accessible within one and a half hours. Its importance, therefore, is independent of the territory in which it is located and depends on the network of connections in which it finds itself. As regards the importance of the time factor in the transformation of contemporary geographies, Koolhaas states in his essay *Quantum Leap*: "*Far can be near now. So if you ever want to organize a Frank Sinatra concert in Europe, it has to be in Lille, because in Lille, anyone from London, Paris, or Brussels can attend. And if you are a Japanese company and you want to conquer Northern Europe, Lille is the place to start. And even if you are an English company and can't afford to establish yourself in London, you could*

set up an office in northern France and be "closer" to the city of London than you would be in some parts of greater London itself. The English are buying houses nearby because Lille-London will be faster than Kent-London."(10)

The strategic positioning of some non-places determines their success and transform the areas where demand for investment is strongest. Bigness is therefore strongly linked to the dimension of non-places. For these reasons, Lille has become the subject of a real estate project of substantial size – 800,000 square metres of urban facilities which include shops, offices, parking areas, a new TGV station, hotels, housing, a concert hall, and conference rooms spread over an area of about 120 ha. The Master plan has been entrusted to O.M.A. The complexity of the plan will undoubtedly have economic effects for the city of Lille itself. But, in reality, investments will generate an independent district forming part of a theoretical community created by the presence of new infrastructures. In this sense, the concept of non-place finds clear application. On a territorial scale, the theory of congestion can find its systematic application in correspondence with non-places, intended as preferred places for concentration of complementary, albeit strongly differentiated, activities. In this regard, in the same essay, Rem Koolhaas says: "*Lille would redefine the idea of "address". The site was important not because it was there– part of the city– but because it would be only an hour from both London and Paris. Lille itself would be an accidental appendix– almost a decor. To articulate this condition, this new form of attraction, some buildings would be constructed over the tracks to become part of the TGV network: building and train would become different states of the same system. What is important about this place is not where it is but where it leads, and how quickly. We imagined a series of skyscrapers straddling the station, towers that would suggest not a place, but a distance in time from various cities. The address would be defined as "70 minutes from London", "50 minutes from Paris", "18 minutes from Bruxelles."*"(11)

Starting from the idea of Bigness and the theory of "*congestion*" as conditions through which the idea of a consumer society that embraces the models of "*network*" and information-society takes shape, abandoning the model by now surpassed of the "*machine*", the idea of the contemporary city as a discontinuous entity characterised by points of strong accumulation of tensions and fields, networked and basically indifferent to the relations of contiguity on which the historical city was based, is slowly looming on the horizon. These points come to identify with the non-places, new social condensers created by new economic and cultural opportunities determined by infrastructural networks, evaluated in terms of intensity and internal differentiation. Above all, a city in which the encumbrance of architecture has been reduced to a minimum. In a situation of this kind, because of the imbalance in the real estate market produced by the multiplication of non-places, entire urban areas will suffer a drastic fall in value and, over time, will be subject to progressive abandonment. This is because physical distance will be increasingly less important in the definition of values and the intensity of the network of possible connections that urban areas will tend to offer will be increasingly important. In this perspective, Koolhaas also comes to speculate about a preventive cancellation of low-density urban areas, in order to restore them to

10. Rem Koolhaas & Bruce Mau, *S,M,L,XL*, Rotterdam, 010 Publishers, 1995, p.1158.

11. Rem Koolhaas & Bruce Mau, *S,M,L,XL*, Rotterdam, 010 Publishers, 1995, p.1170.

the original condition of empty areas with equipped green spaces. His controversial proposal comes at a moment of particularly delicate debate, in which post-modernist tendencies proposed the values of urban continuity, in contrast to a transformation of the economic world that was beginning to show the first signs of its existence. In the essay *Imagining Nothingness*, Koolhaas clarifies his proposal: “In 1976, during a design seminar/studio led by O.M. Ungers, a concept was launched with a yet unrecognized implications: “A green Archipelago” proposed a theoretical Berlin whose future was conceived through two diametrically opposed actions– the reinforcement of those parts of the city that deserved it and the destruction of those parts that did not. This hypothesis contained the blueprint for a theory of the European metropolis; it addressed its central ambiguity: that many of its historic centres float in larger metropolitan fields, that the historic facades of the cities merely mask the pervasive reality of the un-city. In such a model of urban solid and metropolitan void, the desire for stability and the need for instability are no longer incompatible. They can be pursued as two separate enterprises with invisible connections. Through the parallel actions of reconstructions and deconstructions, such a city becomes an archipelago of architectural islands floating in a post-architectural landscape of erasure where what was once city is now a highly charged nothingness. The kind of coherence that the metropolis can achieve is not that of a homogeneous, planned composition. At the most, it can be a system of fragments.”⁽¹²⁾

According to Koolhaas, the fate of the contemporary city is to become a post-architectural landscape dominated by the prevalence of voids, in which architecture tends more and more to assume the role of neutral support for the exploitation of opportunities offered by post-industrialism. A new beginning, non-place of temporary occupations. The “void” has a special meaning in the conceptualisation of Koolhaas, insofar as it expresses a condition of possibility, limited instead by the presence of solids. But, more operationally, the void identifies the presence of a reserve of space for future transformations of the built entity. Indirectly, it is as if the design practice translates into a strategy for the conservation and implementation of the broadest spectrum of possible transformations through preservation of the void, defined as tolerance and abundance with respect to the plan forecasts. The void is identified as necessary margin, acting on which can change the role and meaning of the work.

The idea of the building as a reserve of space is consistent with that of architecture as a device for multiplying space in order to amplify its potential for use. When Koolhaas is working on pre-existences that need to be updated to adapt to different needs, he always acts on these reserves, or margins, creating appropriate conditions of multiplication of the available space through the creation of innovative conditions for congestion. And what action of multiplication of the available space is more rewarding than the transformation of an architecture in a landscape? Emblematic in this sense is the experience for the renewal of the Panopticon Prison in Arnhem (1979-81), one of the first works back in Europe. *Fig 13, 14, 15* Here the existing building was transformed through an elegant modification of the scale of the entire delimited lot that encloses the building in a small landscape fragment, by acting

mostly below the existing level. Of course, this is made possible by the “tolerances” of the building. *“Perhaps the most important and least recognized difference between traditional (1882) and contemporary architecture is revealed in the way a hypermonumental, space wasting building like the Arnhem panopticon proves flexible, while modern architecture is based on a deterministic coincidence between form and program, its purpose no longer an abstraction like “moral improvement” but a literal inventory of all the details of daily life. Flexibility is not the exhaustive anticipation of all possible changes. Most changes are unpredictable. Bentham could never have imagined the present use of the Koepel: Flexibility is the creation of margin-excess capacity that enables different and even opposite interpretations and uses. Because Bentham’s ideological purity could only be realized at the cost of a spatial surplus, the Koepel is such a margin. New architecture, lacking this kind of excess, is doomed to a permanent state of alteration if it is to adjust to even minor ideological or practical changes.”* (13)

Koolhaas therefore manages to demonstrate, against the beliefs of structuralism and historicism, that the deepest sense of traditional values lies in creating the conditions so that with time it is possible to multiply and implement their space; in other words, it is possible to create easily the conditions for maximisation of the conditions of use. The aspiration to maximum congestion thus becomes the condition that binds past, present and future in the light of a continuity without contiguity.

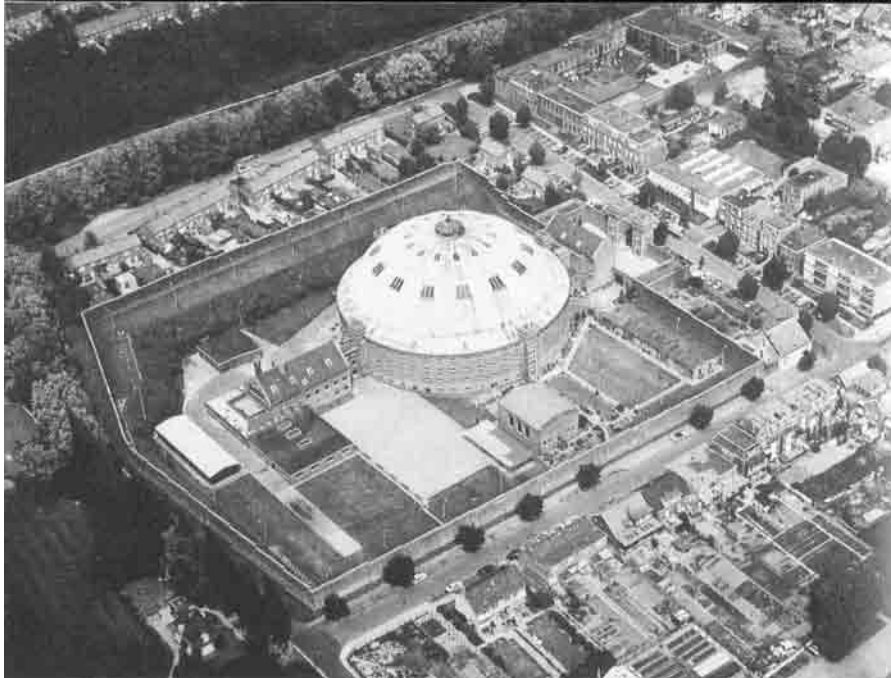


Fig 13. OMA, Renovation of a Panopticon Prison, Arnhem, Netherlands, 1979-81. The panopticon is a metaphorical evidence of the Structure, intended as a system of relation made valuable by the identification of a selected perspective: the point of view of the centre with respect to the periphery.

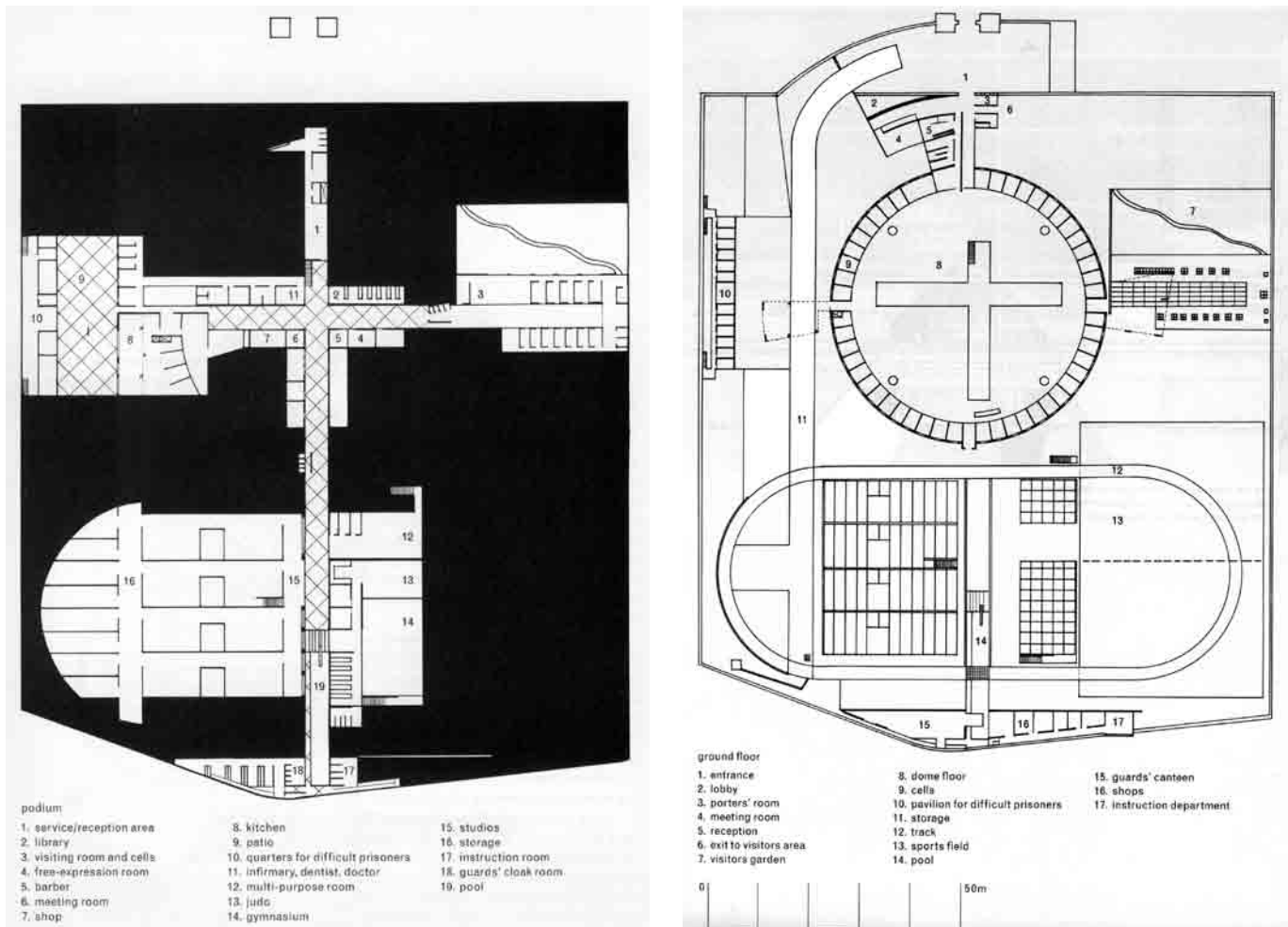


Fig 14, 15. OMA, Renovation of a Panopticon Prison, Arnhem, Netherlands, 1979-81. By completely excavating the panopticon model and its surroundings, the project undermines its conceptual stability, multiplying the individual part reciprocal relations.

The text of MVRDV is a reflection on the state of town planning in contemporary Netherlands, taken as a paradigmatic experience that reflects an increasingly prevalent attitude in the organisation of territory, not only in Europe. This condition is already implicitly expressed in the title, where the acronym FAR stands for Floor Area Ratio, and defines the amount of buildable surface per unit of area of the lot concerned. This ratio has changed slowly over the last two decades in favour of an increasingly low-density housing, which has produced an apparently unstoppable dispersion of the city.

The image of the contemporary Dutch city, which begins to develop according to these new criteria starting from the crisis of the Welfare State during the first half of the '80s, is therefore that of a very extensive suburb, connected by a complex network of infrastructure which consumes more and more land. The new scenario is described in the essay *Greyness on the Dutch Mesa*: "The Netherlands is reputed to have the highest average density in the world. Yet nowhere in the country itself is there the impression that this really is the case. Certainly not when compared to Hong Kong, New York or Rio de Janeiro. The Netherlands may

FAR MAX, Excursion on Density
MVRDV, 1998

be well populated generally but not unduly so. Vast areas of it seem to be filling up with a suburban "matter" of low cost housing-with-gardens, low rent offices, warehouses, factory-style farms, motorcycle scrambling areas and other elements with a lowish density. The country can steadily be regarded as a city-state, a northern Monaco of sorts, filled with this low-density, lightweight urban matter lacking a clean form of organization, consisting as it does of development that has to be varied all over and, perhaps as a results, ends up looking the same. This urbanity is more concerned with quantity than with quality. How than are we to cope with an urban matter that cannot be considered entirely valuable? Accepting this condition as fixed and simply continuing the present trend will cover most of the areas still open and envelop our entire society in a "greyness". (14)

As a first consequence of this attitude, the very notion of the city and its architecture are challenged in their traditional foundations, or lose meaning, and the word "landscape" seems to be the only one able to represent the new phenomenon. In fact, it best expresses the ideas of multiplicity and pluralism of the choices that are the most significant aspects of this new condition, even if it means accepting the less reassuring consequences. The reasons which lead the authors to investigate the phenomenon from different points of view, suggesting possible mitigations and/or resolutions - through a collection of essays on the theme that attempt to restore the character of the new landscape through a recomposition of critical "fragments" - are those of an interpretation of the environment in an ecological sense.

This concept is inherently wider than that of nature, because it defines a domain within which artifice and nature co-exist in a close relationship. The notion of environment thus requires dynamic interaction between human action and the characteristics of the territory in which the first occurs. If this environmental concern is now increasingly felt, up to becoming one of the most cited levers to boost the role of urban planning, the interpretation which is, however, generally given is of a bureaucratic and administrative type, that is, aimed merely at undermining the typical mechanism of plan that designs the landscape according to correspondences between political "territoriality" and economic-natural entities which have no direct relationship. (15)

In this sense, environmental sustainability and actions related to it tend to identify planning tools capable of overcoming the contradictions of a geography that is too often defined solely on the basis of strictly political parameters. In this regard, it is worth recalling the reflections of the authors contained in the essay *Landscape: "After conquering the doom and pessimism of the seventies with an ecological answer and meeting the economic hype of the eighties and nineties with "design", the profession is now confronted with the question of how to address the overwhelming number of paradoxical demands surrounding it. How to embody the multi-cultural and multiform in a profession that is historically swallowed up by the paradigms of "purity", "harmony" and "nobility". The landscape architect is seen as the personification of the pastoral, the harmonious, the environmentally friendly: truly "good" an noble aims. And in that respect one could argue that he is often misused for political objectives. Yet that very innocence is false and saturated with a oversimplified moralism. For if landscape calls upon "endlessness", "awe" and "gigantism" and expresses*

14. MVRDV, *FAR MAX, excursions on density*, Rotterdam, 010 Publishers, 1998, pp. 14-23.

15. This phenomenon has also recently been the subject of in-depth research in Italy. See for example: AA.VV., *Regioni: che fare? Una ipotesi di lettura del territorio italiano ed europeo*, Padova, SGE Editoriali, 1996.

itself in panoramas and distant prospects, then it is indeed the synonym for "overview", encompassing good and bad, is about multiplicity and pluralism. It has the potential to manipulate this field of ideas, opinions and expressions."(16)

The attitude with which the issue is addressed by MVRDV is, on the contrary, very operational and pragmatic, substantially free from ideological affectations, that is, it starts from prior recognition of the reasons that gave rise to the phenomenon in order to verify its possible satisfaction with choices that are more respectful of the natural dimension. In this sense, the possibility that intervention strategies on the territory can be defined in contradiction with the needs of contemporary society is averted, that is, that the legitimate pressure for an effective representation of contemporary territory results in a paradoxical limitation of the life itself that it is intended to be communicated.

It is precisely the features of this new society which are analysed accurately by the authors. In this way, it is implicitly confirmed that priority of "*content*" with respect to "*forms*", in which we have recognised one of the most felt issues of the current condition. In fact, it no longer seems possible today to determine the forms of new city landscapes until we have full awareness of how the patterns of city use are changing. The term "*action*" expresses more clearly than that of "*function*" the need to reintegrate the individual in the process of general configuration of space, in order to re-establish their values. This is an attitude which tends to bridge the opposing formalisms of much deconstructionist architecture and many neo-historical trends that are essentially self-referential, because more concerned with the issue of form as such than the links that it has with the real civil society that inhabits them.

It is precisely through this original inversion of tendency that some of the factors that have led to the destabilisation of the contemporary city emerge. Among these, the most important is certainly the progressive dissolution of the social "*body*" in a multiplicity of individuals with very different needs. There is increasingly less manifestation of shared collective behaviour, and the need for individuality is increasingly translated in the search, and in the corresponding offer by the system, for specific answers to increasingly specific needs and expectations.

It is legitimate to question whether such a request comes from "*below*" or whether it is simply fed by the market on the basis of its strategies. In this sense, it seems more correct to speak of a global transformation of a political nature which has involved all the Western countries, albeit with mutually differentiated degrees and methods of intervention. It replaces the old model of centralised management by the state through a logic of competition in all sectors, with a particular emphasis on the level of information technology, in which the various governments tend more and more to assume the function of simple referees guaranteeing compliance with the rules.

As an immediate consequence, the individual components at all levels have taken on a brand new role. In this sense, a re-foundation of society and politics induced by an economic transformation whose speed is unmatched is under way. This phenomenon, which is characteristic of

16. MVRDV, *FAR MAX, excursions on density*, Rotterdam, 010 Publishers, 1998, pp. 96-97.

our time, does not invest only society in its entirety, but also individual households, within which the different components claim an increasingly greater autonomy to manoeuvre. The social transformation that follows is clearly expressed in the essay *Campingland*: "*The collective ordering of time is ceding to individual ordering of time. One product of this process of individualization is that everyone divides up their time according to their needs as individuals.*"⁽¹⁷⁾ In order to cope with this type of demand, the contemporary city shatters within itself through a diffuse process of offer specialisation, sometimes pushed to paroxysm. Nevertheless, within a landscape that multiplies enormously the concept of uniqueness, the individual subject inevitably ceases to exist. In fact, the idea of the city as a structure, or system of mutually interrelated parts, fades away. This aspiration to maximise individual expectations has led to the multiplication, even within the real estate market, of the range of opportunities offered. The answer that the same market has given is that of low-density building that is essentially single-family or small-size multi-family, with the availability of private appurtenances and strong differentiation in the possibilities of use of open spaces and in the methods of aggregation.

This phenomenon is compounded by a further problem, characteristic of the contemporary situation, namely the weight of increasingly massive regulations on project conception. There have been times in the history of urban design where legislation has assumed a precise and fundamental role in the definition of urban form. However, it should be noted that this legislation resulted in a "*project*" of the city, whose awareness was collective heritage, being translated into technical parameters. The conditions under the action of which the phenomenon is now revealed have significantly changed. In fact, legislation expresses values and relationships that do not belong to the quality of space, but to factors of a substantially extra-disciplinary nature. Increasingly, architecture and the city seem to be the oblivious, or unmediated, product of the society that benefits from it. Rather than rejecting this condition, the authors attempt to understand thoroughly all possible prerogatives. In this way, awareness emerges that the consequences of this situation are different. Firstly, the freedom of the individual designer, faced with a striking quantity of information to be checked, increasingly decreases. Secondly, it is that information which increasingly tends to constrain the shape of architecture and of the city, while also limiting the possibility that the recipients of those same spaces can act directly on their configuration. In the information society, the incredible amount of data that must be taken into account impacts in an increasingly impersonal way on the construction of the city, excluding the individual from direct control.

Exemplary, from this point of view, is the case of the skyscrapers of Hong Kong, whose configuration comes from the repeated "*extrusion*" of a type-base in the shape of a flower. The first interpretation that tends to be given to this phenomenon is related to the inherent volatility of the real estate market, the intensity of the demand for housing and the lack of building lots. But these aspects alone are not able to explain the form taken by skyscrapers. At the same time, one would expect that the reduced incidence of construction costs compared

17. MVRDV, *FAR MAX, excursions on density*, Rotterdam, 010 Publishers, 1998, pp. 60-62.

with those of land acquisition would be able to promote a strong differentiation of building outcomes. In reality, however, the terminal shape of the buildings turns out to be the direct result of a legislation whose constraints are exploited to the maximum consequences. In the essay *Far East*, the authors note: "*The building regulations of the Town Planning Department are of an uncomplicated nature and are premised on three aspects: plot ration, site coverage and building height*"(18)

Similar considerations can be made about Dutch building regulations related to the lighting conditions of environments, the requirements of which are very binding on the maximum depth of the buildings and of work environments. But if it is true that such limitations of a regulatory nature tend to delegitimise the concept of project "*authorship*" which, under certain conditions, is up to architects to discover from time to time, they may also result in opportunities to experiment new potentials of architecture and urban planning, or may result in creative tools with a strongly impersonal character. This possibility is particularly interesting in a contradictory context such as in the Netherlands (but the observation is also valid for other contexts), which aspires through its policies to provide more opportunities to satisfy an increasingly individual and demanding request that is, at the same time, increasingly constrained by regulations abstracting from the specifics of the context and potentially homogenising, to such an extent that one can refer to the contemporary landscape as the *datascape*. In this regard, it is worth recalling the reflections of the authors contained in the essay *Landscape*: "*Under maximized circumstances, every demand, rule or logic is manifested in pure and unexpected forms that go beyond artistic intuition or known geometry and replace it with "research". Form becomes the result of such an extrapolation or assumption ad a "datascape" of the demands behind it. It shows the demands and norms, balancing between ridicule and critique, sublimizing pragmatics.*"(19)

It can certainly not be said that the attitude of young Dutch designers is aimed at the discovery of an alleged "*naturalness*" of urban growth, as implicitly stated by many of their masters during the '60s. On the contrary, the city appears to be a highly artificial product. Rather, what current experimentation has in common with the experimentation mentioned above is the search for unequivocally impersonal products, obtained through the use of instruments that limit to the maximum the possibility of recognising the individual's contribution, without this leading to a possible limitation of the potential for use of the space obtained. At that time, research was pursued using the concept of system, today using the regulatory instrument under certain conditions, which, because of their uniqueness, guarantee a possible "*representation*" of the effects. *Fig 16*

The combination of these two factors leads the authors to formulate a design response based on a general "*strategy*" of densification, both vertical and horizontal, capable of acquiring different manifestations according to the plurality of market demands and respecting the uniqueness of the circumstances. Consistent with these assumptions, proposals with highly provocative content in terms of the intensity and nature of the context in which they aspire to act are justified. Emblematic, from this point of view, is the proposed densification

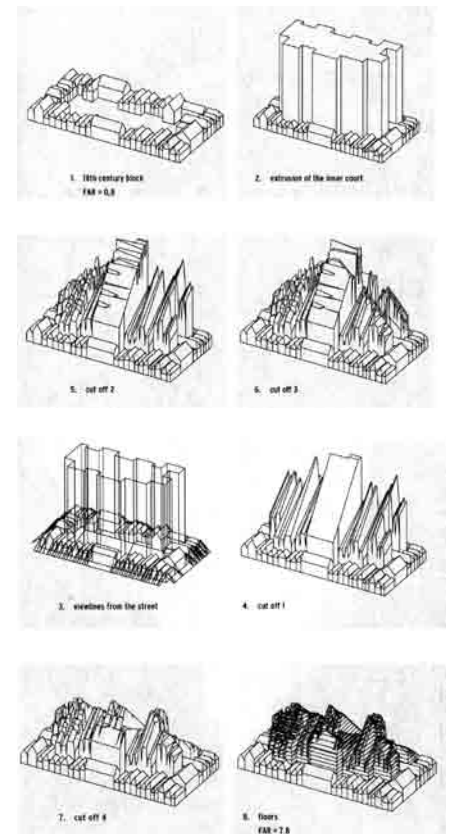


Fig 16. MVRDV, Design study for densification of the centre of Amsterdam, The Netherlands, 1996. The script of the datascape is the anonymous responsible for the future possible high density development of a traditional urban block. Radicalism overwhelms tradition. The spectrum of Hugh Ferriss wanders through Holland.

18. MVRDV, *FAR MAX, excursions on density*, Rotterdam, 010 Publishers, 1998, p. 177.

19. MVRDV, *FAR MAX, excursions on density*, Rotterdam, 010 Publishers, 1998, p. 103.

of the historic centre of Amsterdam. Faced with the increasingly widespread phenomenon on a European scale of the transformation of historic centres through operations of a speculative nature that promote their emptying in favour of commercial areas, hidden from view by preserving the original street fronts, it becomes important to understand how market demand can possibly be balanced with the active conservation of the existing historic fabric. Projecting the view from the street at eye height into the interior of this fabric and multiplying this procedure on all sides of the block, one finds in its interior a virtual envelope that defines the possible limits of a new type of buildings with a predominantly vertical and vaguely Gothic development, capable of taking the density of the same aggregates to unpredictable limits. In the same spirit, it is possible to intervene in the Hague urban expansions planned by Van Eesteren during the '30s and, above all, without affecting its intrinsic qualities and respecting the existing monumental works. Resorting to high-density building fabrics, consisting of a "*carpet*" of courtyard buildings with a strong degree of introversion of spaces, one can reconcile the need for uniqueness of existing architectural objects with the anonymous dimension of the traditional city, increasing the exploitation of land. In this way, reconciliation between the environmental need to limit as much as possible the indiscriminate use of land and that of seeing the uniqueness of its own social and cultural conditions recognised seems possible. At the same time, a condition of density pushed to the extreme creates those artificial conditions in which application of the regulations can produce architectural results of an outstanding level. This aspiration is combined at the same time with the search for a "*normal*", almost banal architecture, which claims to be the background on which, like an ever-changing "*figure*", the combined action of several individuals – constrained, to varying degrees, by the incidence of all extra-disciplinary or regulatory factors –, stands out. *Fig 17, 18, 19.*

The densification strategy of the city in the MVRDV research takes on two main development directions: if expressed in vertical terms it produces experimentation aimed at recovering the traditional logic of the building fabric made up of courtyard units, with strongly introverted spatiality. In this sense, the focus of the project is entirely on studying the structure of the interiors. Besides the already mentioned experience of The Hague, the development of a residential expansion for 750 dwellings in Delft can be traced back to this choice. If maximum density is sought in the vertical direction, the results converge towards a revival of the concept of the small city as a large building, through the proliferation of artificial urban grounds within which new landscapes of ambiguity and uncertainty gradually take shape. This is the case of many projects, among which we mention, because of the clarity and didacticism of the outcomes, the proposal for a shopping mall in Amsterdam, the centre for the new district of Leidschenveen in the Netherlands, the central park for new town of Leidschenrijn, also in the Netherlands, and the project for 284 houses in Berlin-Prenzlauerberg, Germany. In all these circumstances, because of the perceptual and material continuity which is established between the public and the private, the traditional distinction between interior and exterior spaces,

which increasingly become programmatically differentiated aspects of the same urban logic, gradually loses value. This concept is clearly expressed in the essay *The continuous interior*: "Increasingly, buildings are being placed in closed proximity, so that the one interior is literally touching the other. Under these circumstances, the reduced public space in between is subjected to a more focused attention. It has been rescued in the last decades by more and more "design". The public space has consequently lost its innocence and its freedom. It has been "colonized" as a part of our built environment, itself becoming a sort of interior."⁽²⁰⁾

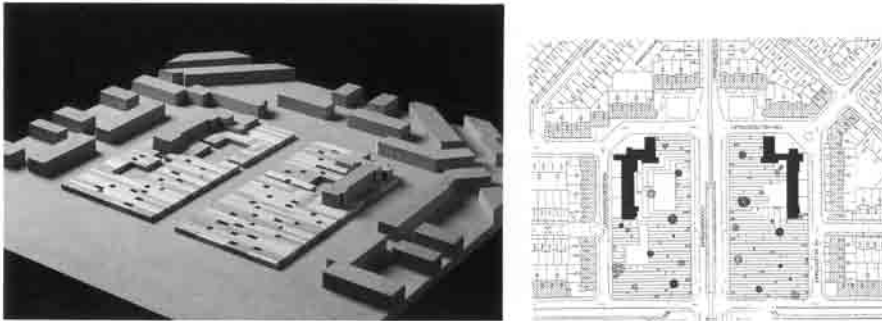


Fig 17. MVRDV, Urban study for Molensloot, The Hague, The Netherlands, 1994. A traditional urban block is turned into a new horizon made possible by an inhabitable diagram. The architecture of the city blurs into an endless tapestry into which Van Eesteren's remains float like ruins into a virginal landscape.

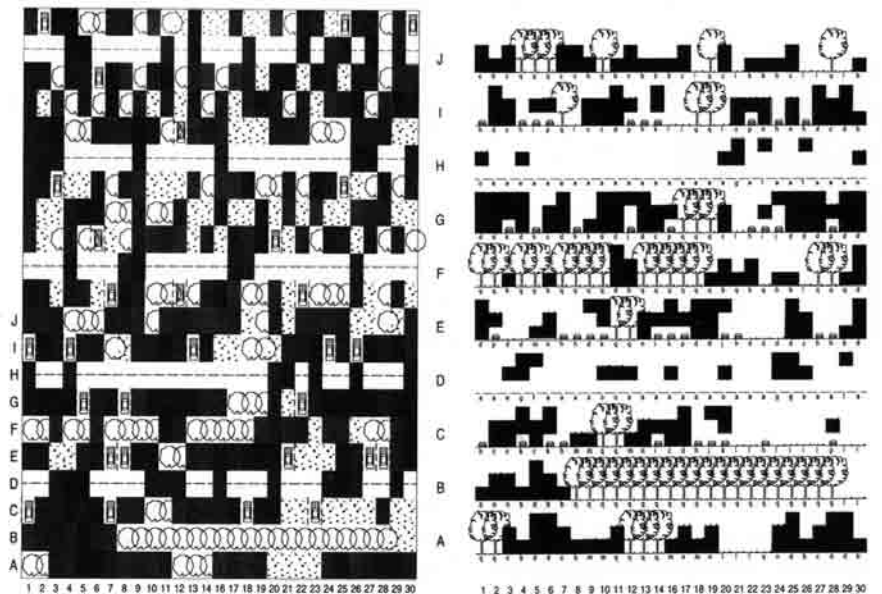
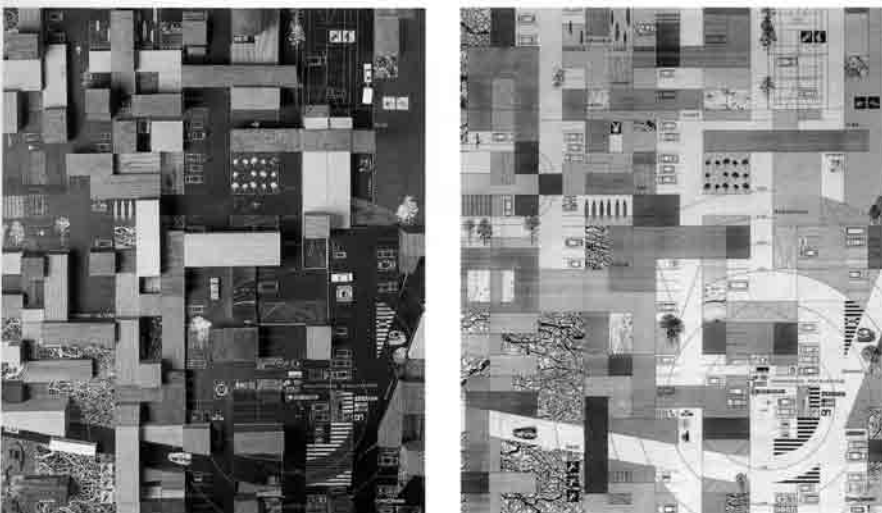


Fig 18, 19. MVRDV, Study for a development of 750 houses in Delft, Hoornse Kwadrant, The Netherlands, 1992. The architecture of the city, and its building fabrics, blur into an endless pattern of inhabitable pixels, arranged according to different layers. Individual houses are not recognizable anymore, but simply evoked through the overall grain transparency.



20. MVRDV, *FAR MAX, excursions on density*, Rotterdam, 010 Publishers, 1998, pp. 652-653.

The idea of an environment strongly influenced by the presence of complex legislation constitutes one of the dominant characteristics of the present society, and it collides with the need to ensure great freedom in the organisation of space. According to MVRDV, in the current post-industrial context, the need for individuality and identity manifests itself by giving new use values to objects that existed before us, and over which we have no direct control because they are governed by forces foreign to us. We no longer live the season of self-construction that was so promoted by "*structuralism*" and its participatory drifts during the '60s, that is, before the institutions "*reformed*" in a dirigiste and centralising sense – a recurring problem within all Western democracies – claimed for themselves the right to take care of the problem of the housing and the city in an integral manner. The response of MVRDV is, however, clear: a densification of use of space, to be achieved through the concentration and the multiplication of programmes, induces an acceleration of the possibilities of using and passing through those same spaces. Acting on the "*management*" of programmes and their mutual interrelation significantly increases the number of possible connections between spaces and the opportunity of moving within them. Architecture increasingly assumes the character of an efficient eco-friendly machine, of an ecosystemic organism. This principle is also used significantly in the design of green spaces. In this sense, the idea that in a dense city the park must necessarily constitute an alternative, in strategic terms, to the most heavily populated areas is destabilised. If densification is an eco-friendly strategy, it is also true that it "*represents*" that congestion, or that acceleration in the intensity of relationships, that is recurrent in the contemporary world at all levels of social life. An implicit answer is contained in the essay Stack Attack: *"Can the increasing densification proceed in concert with the increase in the quality of life, is a question that is often asked, with "nature" featuring as one of the key condition of quality. Clearly "nature" is retained in the zones beyond the densified zones. But what role will Nature– in its broader sense– play within the bounds of such densification? Might this be such a thing as a "New Nature"?"* (21)

The process of "*miniaturisation*" implicit in the strategy of urban densification is itself an effective tool for giving a new meaning to existing as well as to new space. The principle underlying it is to put a multiplicity of functions into close contact according to new relationships, in order to artificially induce a reaction. In this sense, the task of architecture and of the city is to define potential scenes within which the spectacle of life can occur through a kind of acceleration induced on purpose. According to the authors, in this sense it will be possible, in a complex and unpredictable context such as ours, to reconcile the desire for "*representation*" of reality, however elusive it might be, with the maximum degree of freedom – of which shape can potentially constitute a constraint – required by the information society. A "*representation*" of contents as opposed to that of forms.

The book expresses with great immediacy the renewed interest in the city as a problem of overall design, albeit differentiated and articulated within itself. The starting point is constituted by a series of reflections conducted by a group of young west coast American architects on the context of Los Angeles. In this sense, in the general introduction, Mirko Zardini states: *"The thread that binds all these researches together is the idea of a new density as a response to the problem produced by the development of Los Angeles, which now needs to start growing on top of itself, starting from the inside. Up until now this hypothesis, linked to the concept of the 'sustainable city', as generally been seen in terms of the rediscovery and reaffirmation of the concept of the 'compact city', drawn from the historical experience of European cities. But the document demonstrates that a better use of resources, a mixture of activities and the intertwining and density of relations are not the exclusive prerogatives of a compact city, but can also be found, and more simply, in a city that is 'just' more dense."*(22) In particular, the aim is to verify the possibility of preserving the typically American idea of the single-family home, reconciling it with the need for higher density which is aspired to. The aim is therefore to analyse in all its essential components the concept of urban house and check all its possibilities for transformation. If these were the real limits of research, one could simply think of a return of interest in structuralist issues. In this case, the issue would be that of the single-family dwelling, to be declined in all its possible concrete manifestations, inserted within a configuration free to reverberate its potential in all possible directions, systematically *"re-dimensioning"* the undifferentiated void that surrounds it.

In contrast, the theme of the house is framed in a higher-order logic: *"The 'urban house' takes on its own significance within the critical reflection that is carried on in parallel on the theme of the block. In fact the block is no longer seen as a simple accumulation of single-family houses, but as an intermediate urban structure."*(23) The renewed interest in the logic of the building fabric in an urban culture like that of Los Angeles, which has always been linked to the culture of dispersion, shows that a greater attention to environmental concerns, combined with a multi-racial culture, particularly developed in recent years, can have specific implications in the practice of urban design and can be addressed with precise architectural policies. The motivations for the research are therefore of a fundamentally different nature, yet all contribute to define the cultural climate of contemporaneity.

The fabric, understood as a logic of relationships that is superordinate to the individual architectural parts, responds to an environmental need to protect and optimise the use of available resources, whether they are related to buildings or land ownership. The resulting urban densification also fits with the need to reduce as much as possible the need to move frequently from one side of the American city to the other, in a context that is traditionally organised for car transportation. But beyond the environmental reasons, the logic of the building fabric of single-family homes is effectively able to reconcile the demand for individuality and recognisability of the American residential culture, which is projected in the single home with a close relationship with its territory or garden, with the optimised management of common

The Dense-city After the sprawl
Mary-Ann Ray, Roger Sherman,
Mirko Zardini, 1999

22. Mary-Ann Ray, Roger Sherman, Mirko Zardini, *The dense city. After the sprawl*, in *Lotus Quaderni Documents*, Milano, Electa, 1999, p. 6.

23. Mary-Ann Ray, Roger Sherman, Mirko Zardini, *The dense city. After the sprawl*, in *Lotus Quaderni Documents*, Milan, Electa, 1999, p. 6.

areas. In fact, the single-family dwelling, included within an inevitable process of transformation and adaptation to changed conditions of use, lends itself better than any other to be changed through the filling of the lot in accordance with the language used in the organisation of space, or the mere substitution of existing parts. This adaptive capacity, which also has deep ties with the concept of environmental sustainability, that is, dynamic man-environment interrelation in a democratic interpretation, where all individuals are involved in the adaptive process - almost to the limits of a real process of self-construction, albeit in varying degrees depending on the role they play within society - also responds to the idea of openness to change which, more generally, is increasingly recognised as a value in contemporaneity.

At the same time, the fabric of single-family dwellings also responds to the idea of multiplication and reverberation of the potential of the individual, in the face of an evident crisis of the "*collective*" dimension. Narrations in the "*plural*" have been called into question by contemporary culture that finds in the amplification and differentiation of needs of individuals its promotional carrier par excellence. So the experimentation conducted by the young American architects should not be understood as an optimisation of the characteristics of the lot and its serial repetition, nor as the definition of a theme to be declined in all its possible manifestations and interpretations, but as a minimal design of an artificial ground, that occupied by the intermediate dimension of the block, which can be internally divided with a very high degree of freedom and flexibility. We find in this way the idea of the architectural project as a construction and multiplication of artificial grounds (common to the Dutch and Japanese contemporary experiences), in which the presence of architecture dissolves in pure immaterial movement. Architecture and urban design are a deliberately superficial warp, almost devoid of a third dimension, waiting to be basted with a multiple welt, which is also essentially two-dimensional, in a game of continuous deferrals of the implied, and unspoken, possibilities of the original structure.

In this sense, the building fabric becomes a metaphor for the potential of language as an instrument capable of expressing - more than the single building could be able to do - the idea of a complex combination of associations among given elements, the number of which varies depending on the choices of the context examined and the rules of syntagmatic association. The fabric, in the interpretation given by the young American authors invited to give their contribution within the essay, thus becomes an effective instrument of linguistic experimentation, that is, a confirmation of the representative capacity of architecture within a complex dynamics such as that of the American city. The richness of its attributions clearly emerges through the combination of the different interpretations in play.

The attitude of the young Americans is that of a theorisation of an issue that has for some time been spontaneously present in the culture of their country, which finds a state of necessity in the need to grow within a given, pre-established space. This space is the two-dimensional space of the lot which accommodates architectural three-dimensionality and the fourth dimension of modification. As acutely observed by Mary-

Ann Ray and Roger Sherman, in recent years the costs of urban land and of displacement to find housing conditions that are different from the original ones, according to a Nomadism that is typical of the American culture, have been replaced by the recovery of badly used spaces, that is, the consolidation of existing building structures thereby increasing their capacity. In substance, building in has meant making the best use of garages and understairs, decreasing the height of the rooms, superimposing more uses, and partially occupying areas once used only for parking: *"A similar countertactic satisfies the need for visual extension and psychological release via the strategic penetration of the enclosing surfaces of the interior by apertures- or even their removal altogether- in order to reveal a variety of spaces beyond- some real, some virtual, other only imagined."*(24)

This practice is also associated with expansion strategies, the so-called building out/over, progressively eroding all available space between one property and the next, without losing that sense of psychological autonomy from the neighbour that is especially dear to the American culture. With this strategy, any difference between house and property is eliminated and dissolves in the image of a single artificial ground, variously structured within itself to multiply the use of available voids. This is how Jennifer Schab addresses the recurring aspects of the American single-family dwelling, identifying a tendential obsession with the strengthening of all those elements that contribute to individual distinction: fences, entrances, hedges, trees, and so on. This is the most obvious result of rigid residential zoning that is spontaneously being replaced by a stronger interest in giving suburban zoning a greater sense of belonging, of community and of unity between one property and another. This is the logic within which growth on the rears of buildings and the strong sense of continuity between areas of use inside and outside the home, even though limited to the lot, are framed.

John Chase, paradoxically more attentive to a relationship of respect with nature, ironises about the *"ten commandments"* of American residential culture, which traditionally considers low density as a sacred, almost natural, value to be preserved at all costs. Among these ingrained habits, the most difficult to remove are definitely the aspiration to the single house and the rejection of any form of change in the area where one lives. In the American culture, change is still equated with the idea of moving (to another neighbourhood, or, if it comes to it, to another city).

Different projects are presented as expressions of particular strategies. Thus, *"building in"* is defined as an attempt to multiply the use of the limited space that is available, creating the conditions for the mobility and flexibility needed to accumulate and fill the inside of the house. The densification logic thus permits congesting space to the limits of its possibilities. And it is precisely through operations of space consolidation that the potential is continuously increased. Here's a slogan that can happily be attributed to neo-structuralism: *"permit less to contain more"*. In the house on the ocean by Johnson & Favaro, this result is obtained by structuring the whole lot available so as to increase the number of internal and external exposure surfaces. *Fig 20* The building thus results from a paroxysmal operation because of



Fig 20. Johnson & Favaro completely fill in the plot up to its immediate congestion, also trying to affect the street side spatial relation

24. Mary-Ann Ray, Roger Sherman, Mirko Zardini, *The dense city. After the sprawl*, in *Lotus Quaderni Documents*, Milan, Electa, 1999, p. 10.

“extracting” from the envelope corresponding to the entire lot. In the design of a raised house by Studio Works, the goal is achieved by acting on the building casing by opening its walls to the exterior through calibrated rotations on the corners, thus contradicting the established relationships between ceiling, floor and room walls *Fig 21*. Lars Lerup seems to move in the same direction with his furniture, as well as Nicholas Lowie and Sheridan Lowrey, who work with the folding technique to transform carpets, fabrics and tapestries into works of architecture.



Fig 21. Studio Works plot architecture tends to subvert all hierarchical relation of the envelop, transforming it into an inhabitable suitcase.

It is interesting to note that the very free attitude with which these young Americans face the issues of the project is a simple reworking of current-use operations in the American residential praxis, which is essentially disinterested in questions of stylistic unity and totally focused on the problem of multiplication of space through the use of areas that are already available but poorly characterised: attics, understairs, garages, porches, covered decks, etc. In this sense, it can be said that this research starts from a need shared by the collectivity, albeit linguistically articulated in a highly individual and unique way. The strategy of space densification is therefore common; its concrete manifestation, or tactic, is different and unrepeatable.

The strategy of building out/over causes a crisis in the concept of urban density so dear to the American culture, by acting on the sacred space of the family house and its external fixtures. It is thus definitively in crisis the original relationship between figure and background of the American landscape, in which the house turns out to be simply an object

resting on natural ground, against which the house is characterised by opposition. The architecture thus tends to identify with the lot in its entirety (once again there are strong similarities with Japanese and Dutch architecture) and the section is organised in the sense of the perspective depth of the lot.

The COA project "*Above the roof*" therefore gives shape to the lot of an industrial building which houses offices and a photographic workshop, acting on its perimeter limits, ground and roof, to create a garage and a photographic workshop, thereby overcoming the distinction between exterior and interior.

Daly & Genik added a new volume to an existing house. This new volume presents itself as a simple diaphragm between interior and exterior spaces, integrating the garden into the dwelling; Eric Owen Moss created a viaduct-building passing over a fabric of pre-existing industrial buildings, congesting the use of space of the entire lot.

The proposal of Guthrie & Buresh is also interesting; they created two distinct laboratories within the same lot simply by working on the system of surfaces, which are mutually differentiated and folded according to their orientation with respect to space.

The building over strategy also has an additional feature: that of reconfiguring the existing city without having the ambition to replace it with an alternative, acting on its interstitial spaces. In this sense, we understand the attitude with which Roger Sherman abandons the illusions of a master plan for the city of Los Angeles, and offers as an alternative a set of smaller-scale projects that, by acting on significant points and spaces with an interstitial nature, replace an almost non-existent weft with a very dense urban texture, multiplying the possibilities of economic exploitation of the available space.

The "*townhouse*" projects presented exploit the spontaneous and intentional experience exercised on existing structures in order to propose a new strategy of intervention in areas of new construction. Once again the set of capillary mutations recorded by the city in its development results in a system and instrument of control whose nature is in evident continuity with the current language.

As we have already observed, the strategy of densification and multiplication of space use stems from the desire to limit the continuous consumption of land that is particularly evident in the American landscape. At the same time, there is no desire to give up the American building tradition of the single-family home, so deeply rooted in the housing culture. This explains the failures of the condos and all forms of promiscuous cohabitation which, on the contrary, are perfectly integrated in the European tradition. The transition from the single-family house to the townhouse involves a total rethinking of the relationship between house and garden, between lot and street, and between adjoining lots. In other words, the issue of the "*townhouse*" must necessarily be understood within the logic of the block.

Presenting Prototype 1, Janek Bielski asserted strongly: "*The author accepts that the increasing privatization of residential areas is a reality within which we must operate. Therefore, the proposal maximizes the usable space of private properties, with the provision that interaction between neighbours can occur on more levels than simply the "public" or the*

"private".⁽²⁵⁾ Fig 22 This result is achieved by dividing the space of the block into long and narrow lots, developing from one street to that opposite, and acting on the limits of the lots themselves through hybrid types between the single-family house and the courtyard house, simply defining a repertoire of types of land occupation, leaving prospective buyers the possibility of filling it in line with their expectations and tastes. In this way, a landscape is created that is strongly structured by the alternation of solid and empty spaces, where unity of principles and plurality of the manifestations become a source of enrichment of the project.

In the COA proposal regarding Prototype 2, a greater correspondence between the geometry of the lot and the architectural configuration is obtained. Less obvious is the dialectic between the structuring unity of block and the individual quality of single solutions. If anything, there is a greater hierarchisation of the block, whose extremities, in correspondence with the most significant urban nodes, are occupied by collective services and the design of the land is freer. The potential of the block are also increased by constructing an internal avenue onto which the garages face, thus differentiating the depth of the two resulting bands of properties. Fig 23, 24, 24a

The Johnson & Favaro proposal for Prototype 3 clearly aims for an interpretation in the architectural sense of individual lots, with the aim of overcoming the qualitative distinction between architecture, understood as an isolated object that is deposited on the lot, and the lot itself understood as a fragment of suitably fenced natural landscape. Also called into question is the usefulness of typical zoning differentiated by classes, which is contrasted by integrated zoning capable of increasing the interaction among different cultures. These objectives are systematically sought through an operation of continuing excavation of the envelope of the lot made possible by the existing regulations, thus trying to increase the number and quality of the available surfaces for using space. Fig 25

Starting with the recognition of the positive features of the existing building fabric, Guthrie & Buresh act on the nature of current building regulations to obtain a clearer effect of contamination and hybridisation, which are the side effects of all forms of urban congestion.

Using suggestive sketches, Mary-Ann Ray expresses the sense of a research that exploits the "residual" spaces of the existing city to give expression to unmet needs: "This project attempts to 'build in' to the structure of Los Angeles the pluralism that exists. This project works towards a densification of the city. Densification is seen as a positive thing- it makes houses for those who want them, and allows undeveloped land outside the city to remain undeveloped."⁽²⁶⁾ The strategy adopted is to intervene among the buildings, between buildings and roads, between public and private, crossing and connecting different blocks in order to give expression to an architecture of contamination capable of calling into question boundaries and consolidated and allegedly natural territoriality.

From the point of view of the language adopted, it is interesting to observe that the densification process is obtained by multiplying the vertical and horizontal surfaces of the interstices on which it is built, and intervening subsequently with a grammar whose recurring

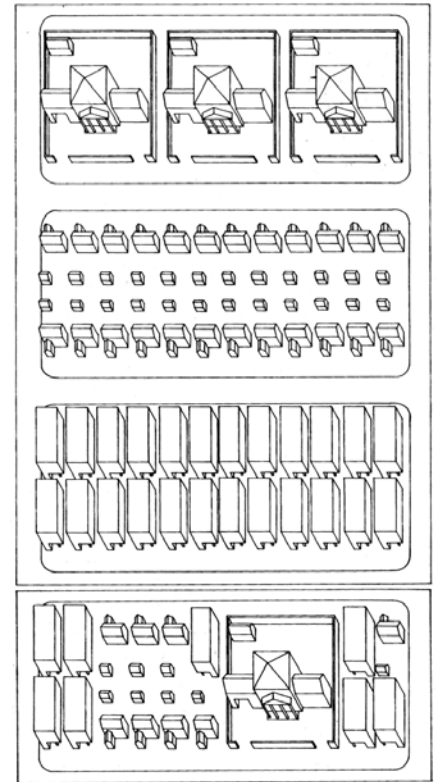


Fig 25. Johnson+Favaro, Prototype 3. Against the typological specialization, the coexistence of different types within the same block destabilizes the conventional relations among the usual parts, but does not intervene on the structural level of the city.

25. Mary-Ann Ray, Roger Sherman, Mirko Zardini, *The dense city. After the sprawl*, in *Lotus Quaderni Documents*, Milan, Electa, 1999, p. 82.

26. Mary-Ann Ray, Roger Sherman, Mirko Zardini, *The dense city. After the sprawl*, in *Lotus Quaderni Documents*, Milan, Electa, 1999, p. 98.

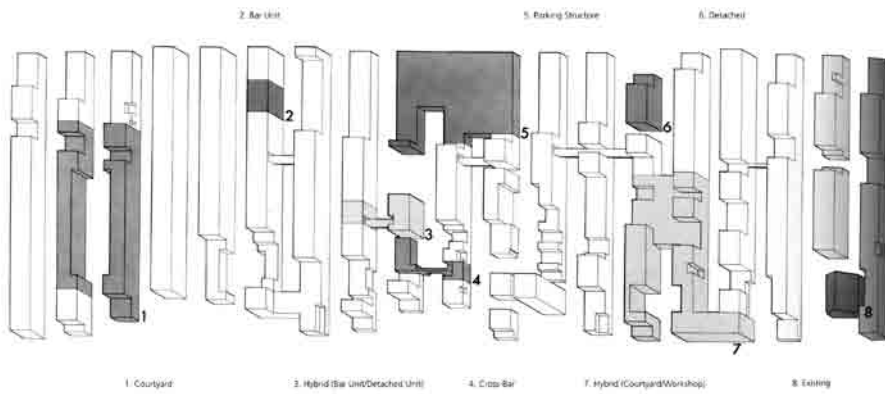


Fig 22. Janek Bielski, , Prototype 1. The American city has two not negotiable values: the public street pattern, or the grid, and the private lot, or the plot. Densification within the latter is admitted to an extent that does not erode the former, does not undermine the individual certainties and reciprocal borders. A modification without transformation.

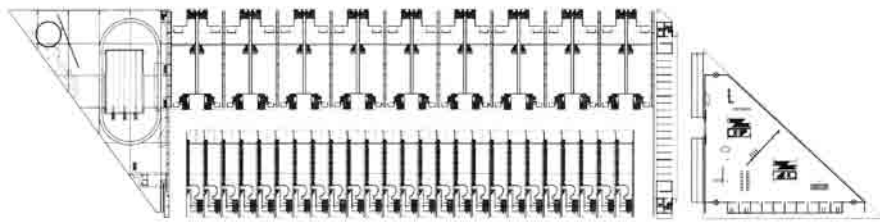


Fig 23. COA, Prototype 2. The typological diversification within the building block enhances the overall richness of the American periphery and makes more efficient the use of the plot surface.

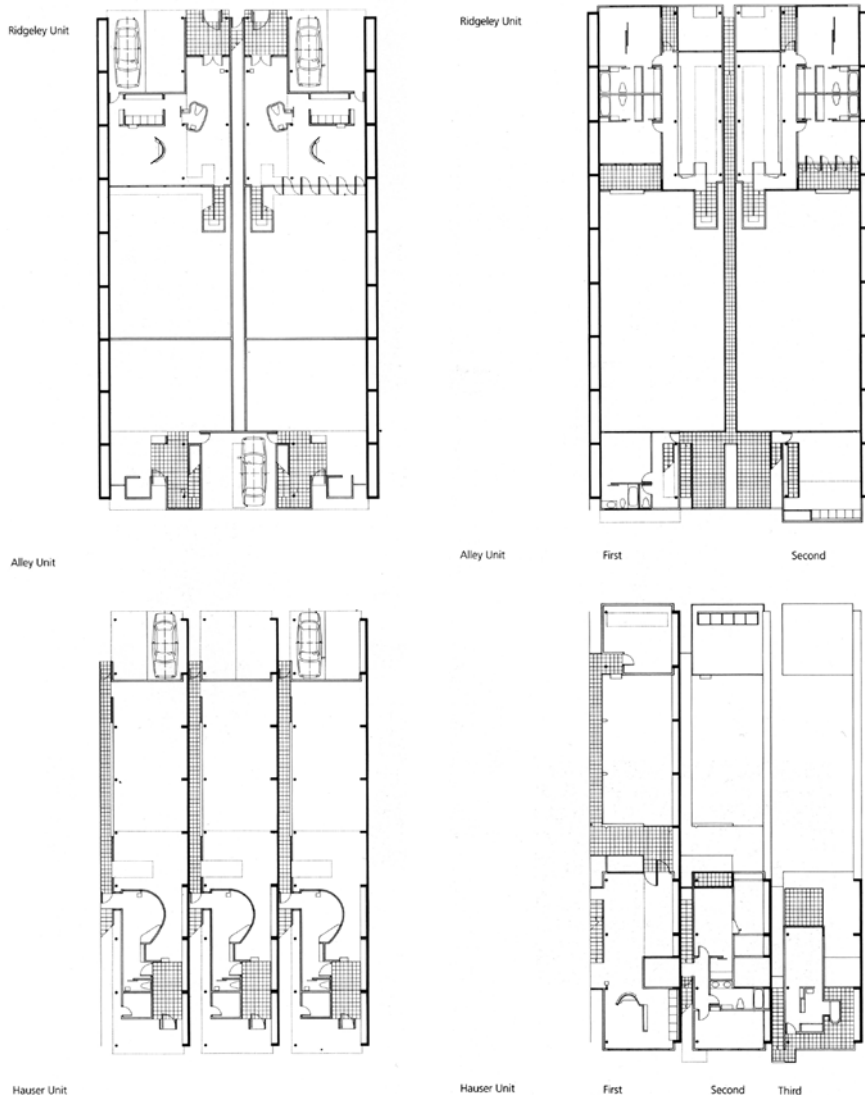
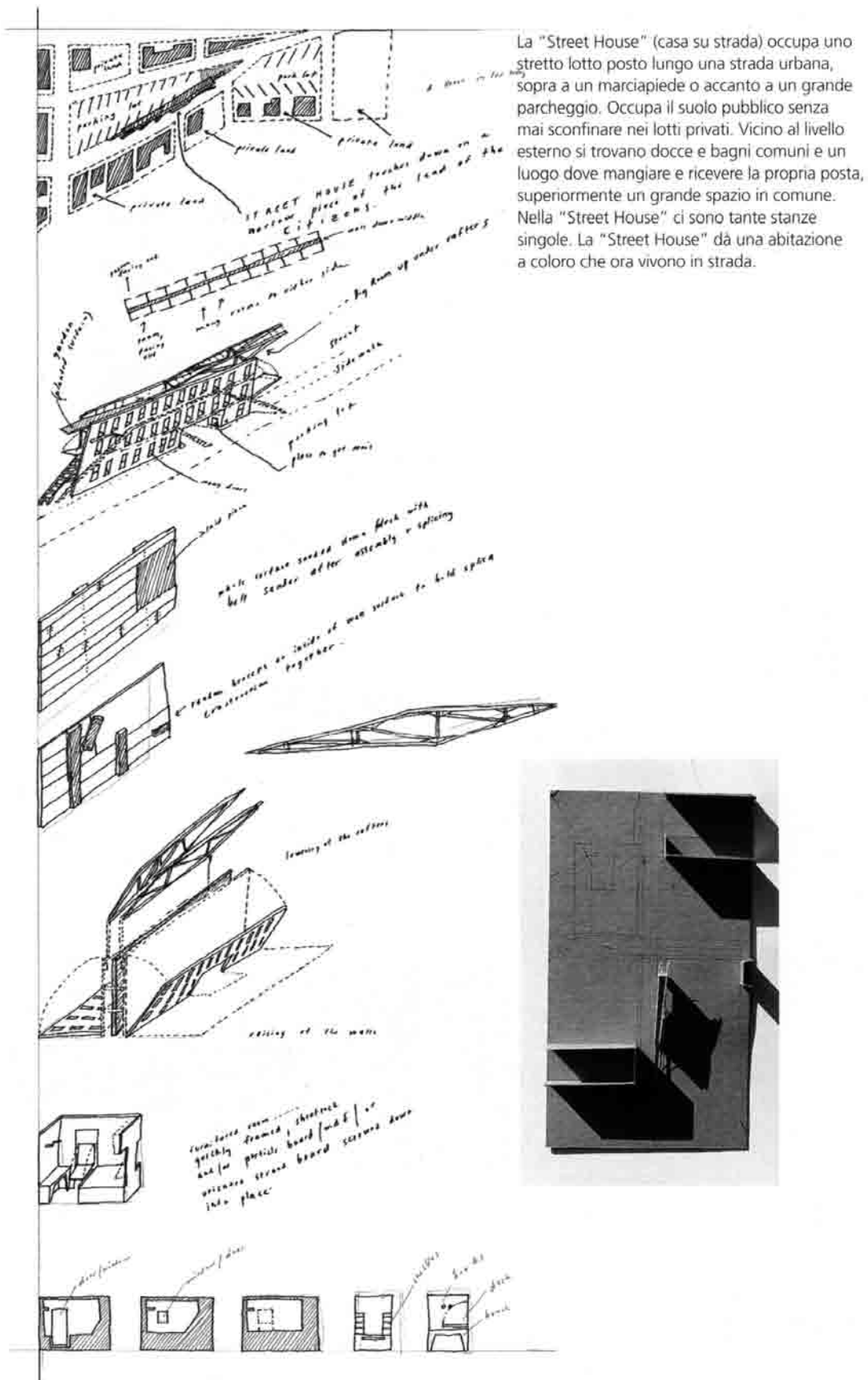


Fig 24, 24a. COA, Prototype 2. The architecture of the plot is emphasized by the extreme thickness of the walls and the tight relation between the main and the service parts within the same property. The proposal implements the existing conditions without putting them into discussion



La "Street House" (casa su strada) occupa uno stretto lotto posto lungo una strada urbana, sopra a un marciapiede o accanto a un grande parcheggio. Occupa il suolo pubblico senza mai sconfinare nei lotti privati. Vicino al livello esterno si trovano docce e bagni comuni e un luogo dove mangiare e ricevere la propria posta, superiormente un grande spazio in comune. Nella "Street House" ci sono tante stanze singole. La "Street House" dà una abitazione a coloro che ora vivono in strada.

Fig 26. Mary-Ann Ray, Prototype 5. The street house tries to establish a new relation between the architecture and the city, subverting the conventional relation between the private property and the public one and introducing a challenging dialogue among them which seems more subversive than a superficial glance would suggest.

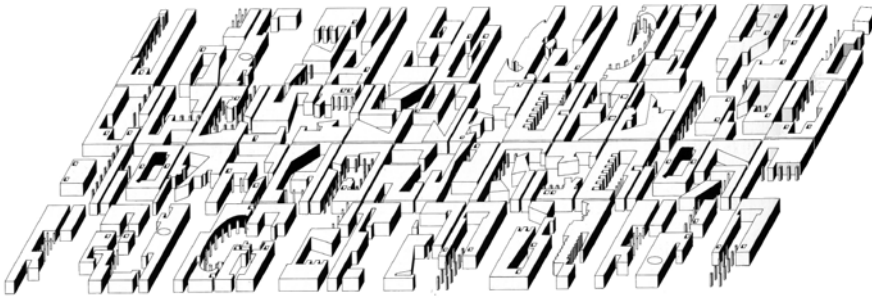


Fig 27. Roger Sherman, Prototype 6. The increasing density of the plot is pushed to the extreme, by transforming the isolated house within the plot into a courtyard type. The street pattern is slightly subverted, the resulting fabric being transformed into a western casbha.

operations are “*insertion, add-on, attachment, inclusion, inlay, and superimposition.*”⁽²⁷⁾

In Prototype 6, Roger Sherman transforms the traditional block into a condenser and multiplier of thematic landscapes, each one corresponding to a specific dwelling, working continually with the limits of the individual building properties. *Fig 26, 27*

All the projects presented thus aim to bring back a sense of “*urbanity*” within the context of the suburb. A strategy of densification that is placed in the context of an established dwelling culture that is accepted in substance, modifying it widely without having the ambition to replace it with the image of the compact city of European derivation. This is achieved through a flexible architecture that is easily adapted to new trends, by acting in particular where the American urban sprawl lacks a rich and recognisable weft, abandoned as it is to the elementary condition of infrastructural and lot-building warp.

The chapter on Density revisited summarises the American experiences between the late nineteenth century and the ‘30s when, under the pressure of real estate speculation, there were attempts to create condominiums with single-family homes. The model of courtyard building had thus represented an important resource for many new urban dwellers, especially in California. The characteristic of these aggregates was that of having a clear distinction between public and private spaces, mediated by the neighbourhood dimension of the common courtyard onto which living rooms and bedrooms faced, while the services were placed on the external front. Almost always, garages were placed under the courtyard. The courtyard-type settlement has undergone some changes over time in pursuit of a better correspondence with the characteristics of the site. This is how “*L*” and “*U*” configurations came into being, which still retain the distinction among meeting spaces and the control of pathways between them. Today, these experiences are an interesting model with which to compare for reconciling density and individuality of dwelling.

The dense-city is a clear reversal of trend in the American praxis. It tends to retrieve those values of urbanity related to building density and to the quantity and quality of interactions made possible by constructed space. This attitude must come to terms with the “*American dream*” of the single house in close contact with nature, to which the residential suburb has given, since the times of the New Deal, a response that has found a somewhat wide consensus as an expression of individual freedom in the face of the constraints of the collective dimension. The

27. Mary-Ann Ray, Roger Sherman, Mirko Zardini, *The dense city. After the sprawl*, in *Lotus Quaderni Documents*, Milan, Electa, 1999, p. 98.

lot has gradually been identified as the ideal microcosm that defines and defends the “*natural*” world of each family, the basic institution of American society. This model is now being challenged by the multiplication of the uses of the house, which is no longer simply a residential space: the world, in all its complexity, has entered the home. Major socio-economic transformations have led to the new condition. There are many ingrained habits that are opposed to the new trend, but the American culture is gradually recovering that concept of “*congestion*” as a value that developed in New York at the beginning of the century, adapting it to an urban structure that is intended to be ascertained in its general logic, with the use of a process of systematic modification without transformation.

5.1.3) Projects and works

Toyo Ito can rightly be considered one of the most interesting architects of the end of the century international scene. A great admirer of Rem Koolhaas, to whom he is linked by a deep friendship, Toyo Ito indirectly confirms the global nature of contemporary research, which expresses principles and strategies that now transcend national boundaries, while being individuated in individual countries through a process of hybridisation with the local culture.

“Instead of the difficult efficiency of posthumanism as a means of activating a theory of design, the repositioning of the subject as activator of the design—a subject turned into the central theme of the project—enables Toyo Ito to recover part of the solidity and plausibility of modern architecture, in what to some extent could be understood, perhaps too hastily, an extension of his old methodology. In Ito, however, controverting the subject ceases to have a moralistic nature, and becomes a destructive agent of the typological design order, a literary or narrative referent that above all permits the display of differences instead of similarities implicit to typological conception, highlighting the new chain of desires and necessities that the individual constructions require of architecture today. For the moderns, the subject or subjects (they were always perceived as a group) became lumped together in the function as the sole criterion of spatial construction. Now individualized, however, they are approached from an unnostalgic recovery of the phenomenological method, with a total involvement between object and subject. The TIM drifts into intensified attention paid to the aspects of perception, affection and focalization linked to objects, furniture and, in this sense, a precise reorganization of values in the project whose consequence would be the pre-eminence of proximity and instability as opposed to stable and structural forms, distanced from immediate use (the forms of what is immobile—properly), so popular with the moderns.”⁽²⁸⁾ The emphasis placed on the question of the plan – no longer understood as a static factor of articulation of space, but as a dynamic element that brings into play the role of the individual as a subject that produces the space – is an aspect that unites the work of Toyo Ito with that of the neo-structuralists. The plan is therefore not an abstraction that erases the differences among individuals, homogenising their personalities within the definition

*Home for the Elderly in Yatsushiro
Japan
Toyo Ito, 1992-94*

28. AA.VV., *Toyo Ito, El Croquis*, n°71, Madrid, El croquis Editorial, 1995, pp. 39-40.



Fig 28. The building fabric perfectly fits within the horizon of the artificial landscape.

of function, instead it is the expression of a complex ritual where the desires and expectations of each individual are intertwined continually, undermining the concept of formal stability as a value, and thus the very notion of “*representation*”.

The building for the elderly has fifty guests and is situated in the residential suburb of Yatsushiro. It stands on a piece of land obtained from reclamation between the open sea and an old health resort. The natural landscape, perceived by deep perspectives, has great charm, while the pre-existing structure is characterised by a low-density division into lots of isolated houses built in a traditional style that are arranged in a linear fashion between the harbour in front and the hills covered with dense woods behind. *Fig 28*

The architect’s intention is to transform the building into a place that reaches the intensity of a small urban fragment, where guests continually have the perception of the unfolding of their daily lives. Within the pragmatic limits imposed by the plan, the intention is to obtain a wide variety and articulation of spaces.

The building is arranged on two floors and has a very pronounced longitudinal development over a length of about one hundred metres. It is characterised by being a residential fabric with minimal characters that is arranged in parallel to the canal that divides the artificial island obtained by reclamation from the internal front. The warp of the fabric is determined by the repetition in open series of mixed structural spans with concrete bearing partitions, hollow section steel columns and profiled steel beams. The spans have a variable section and materially become steadily lighter as they move further away from the pre-existing settlement towards the open sea. A syntax of additive nature, partly contradicted in its nature by the flat roof in corrugated steel placed against the grain with respect to the supporting frames, assuming the character of an element that unifies the whole. In this way, the general additive nature of the composition is actually denied. Another

element that seems to contradict this principle is the opening of large oval-shaped skylights that bring natural light into the underlying environments, which in their gestural character reaffirm a criterion of intervention for elision of the material with respect to the unitary envelope of the roof unit. *Fig 29*

The weft of spaces is arranged against the grain with respect to its warp. The band of guest accommodations looks out on the internal front. A pedestrian corridor on both floors acts as both an area of transit and filter with respect to the band of the common areas. A simplified morphology, which seems to be obtained by elimination of the unitary space defined by the roofing in correspondence with the internal transit corridor, permits maximum amplification of the surface of contact among the constituent parts of the whole. All rooms overlook the inner front almost as if to define a collective balcony measured by the presence of parapets and slatted blinds interrupted by entrances through the residential fabric for gaining direct access to the inner gardens, obtained by elision of the façade itself. Inside, all rooms overlook the corridor, which assumes the function of a neighbourhood street. Similarly all the living spaces are structured on the corridor so as to constitute a “*cross section*” of the life that takes place internally.

Analysing the individual parts, we observe that their character is obtained similarly through an operation of multiplication of the surfaces of contact of the various activities in which collective life is expressed. Therefore each part develops as a “*cross section*” along which the different aspects of the rituals of common life are arranged in orderly sequence. This effect is achieved through the systematic use of actions of cutting and splitting the spatial envelope of the various parts, reproducing the same operations conducted at syntactic level at

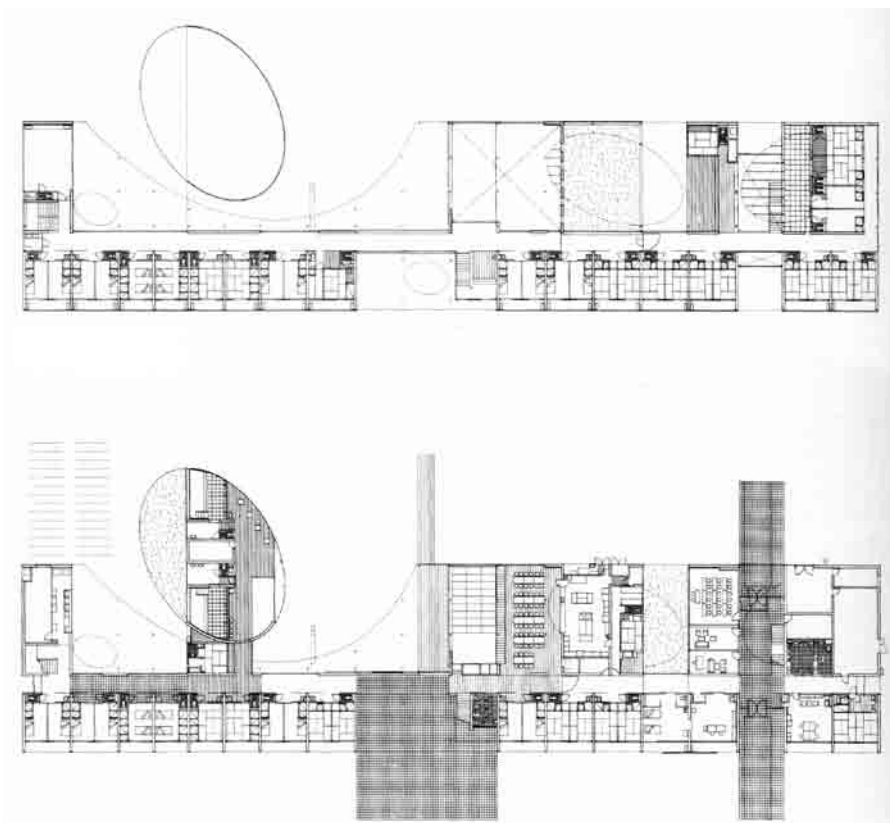


Fig 29. The overall plan blurs into a diagram, whose warp is made of a sequence of variable strips, sharing the same proportion, reciprocally connected via a corridor which seems to simply cut through them. The changing weft is made of the interior furniture texture. More than to architecture, Toyo Ito seems to refer to partitioning life, bringing design back to a primitive stage.



Fig 30. The roof and the balconies unite the endless sequence of the strips. Materials are completely coherent to the overall design strategy and its minimal conceptual quality.

grammatical level. In this way, the individual components - windows, walls, balconies, etc. - tend to assume the character of cross sections, internal and external cuts on the life of the building.

In this way the use of corrugated materials is justified, almost as if wanting to highlight, also at expressive level, the principle used in the structuring of the project. From this point of view it is very interesting to observe what happens with common services. Here, one has the precise sensation of the residential fabric as a “*plate*” on which, through subsequent elisions of material, an oval-shaped part has remained isolated, as a sort of virtual “*lens*” that focuses on a particular aspect of the life of the small community. This lens - an expedient widely diffused in the design praxis of Toyo Ito - is covered with corrugated and translucent polycarbonate sheets that give the sensation of an organic envelope. Internally, space is arranged according to a weft of bands perpendicular to the distribution corridor, multiplying the points of contact.

Observing the internal front, the sense of unity offered by the corrugated sheet roofing, with its slightly concave profile opening out to the sea, offers the sense of a further cross section on the common parts that reveals the artificial landscape, structured by the combination of different materials and colours. The same strategy can be read vertically.

Fig 30

The procedure adopted by Toyo Ito is therefore very clear. The plan, which together with the reference context constitutes a pragmatic restriction to the semantic intention of the architect and to the semantic interpretation of the user, is systematically subjected to a structuring process, which aims to intensify the use of space. The strategy used in this case is that of the incision, of the cut, at syntactic, morphological, lexical and grammatical level. Through calculated elisions of the material characterising the building - the void as the essence of architecture - the perspectives and plants are returned to their nature of artificial cross sections that reveal internally and externally the life of the building, echoing its function in the surrounding nature. This strategy

is heightened by the use of natural materials such as wood, tatami and bamboo, mutually combined with artificial materials like cement, steel and synthetic resins. From the contrast of combinations, made possible by the proliferation of openings - double-heights, transparency and connections with stairs and walkways - a happy synthesis between the limitless potential implicit in the conceptual warp of the project and the elementary weft of derived spaces is obtained.

VPRO is a nationwide Dutch radio and television company. The Dutch broadcasting system is organised on the basis of three national channels which make their transmission space available, distributing it among various concessionary networks on a pro-rata basis according to their level of audience. This means that viewers become, with their direct support, associates of the television system to all effects. In this way, it is thus possible to establish an interactive and democratic system among the listener public and the various stations of the system. VPRO is part of the third channel (Net 3), along with the associated stations VARA, NPS and RVU. In particular, VPRO is a non-profit association which, besides broadcasting, also produces programmes. VPRO is not therefore a radio or television station in the traditional sense, but a complex entity that, rather than depending on a specific medium, produces a wide range of products related to the world of information in various formats. Thus, in addition to radio and TV programmes, it promotes a guide to keep its subscribers up-to-date on current initiatives, is a publishing house, and produces digital programmes. It has a staff of about 350 people organised into several groups of “*programme producers*”.

During the '90, the station has been undergoing an intense internal transformation process which calls for overcoming the traditional division in media “*infrastructures*” through a redistribution of functions according to a content criterion, resulting in a significant change in the organisation of workspaces. The increasingly marked computerisation of the sector greatly facilitates this effort and makes it possible to rely on a common information platform.

The original headquarters of the VPRO television company was located inside a beautiful park in the centre of the city of Hilversum, organised according to the logic of the pavilion system, in which each specific function was assigned a villa with equally distinct characteristics. This condition is responsible for the particular combination of unity and independence that defines the identity of the company.

When it was decided to transfer the headquarters inside a media park where it would have to co-exist with other networks of the third channel, the need to preserve its identity and original character came to the fore.

At the same time the way of organising office work has changed significantly. Working from home and part-time work, which are very popular in the Netherlands, make it possible to optimise the use of office space, having a turnover of functions within the timeframe of the same business day and within the same environments. Added to this is the need to have larger spaces than traditional ones due to the presence

*Project for the headquarters
and offices of the VPRO Public
Broadcasting Company,
Hilversum, the Netherlands
MVRDV, 1993-1997*

of computers and the need to continuously compare the work done by various groups in meetings of a collegial nature.

The convergence of specific needs related to the nature of the customer and more general expectations to associate with the development of technologies and work organisation gave MVRDV the idea of conceiving a building that would be much more compact than traditional buildings, and able to offer spaces which, at the same time, would lend themselves to communication activities or free time.

The very features of the site to which the transfer of all offices of the TV companies was planned - a gentle slope covered by a dense forest - suggested an opportunity to focus construction in such a way as to interfere as little as possible with the natural setting and allow a continuous perception, that is, include it as an essential component of the project.

From these constraints, taken as preliminary project data, the idea of proposing a reinterpretation of the urban villa was born. This question became an object of research and critical reflection. *Fig 31*

This reinterpretation was conducted by accepting some aspects of the traditional villa and destabilising others. Among the first, the

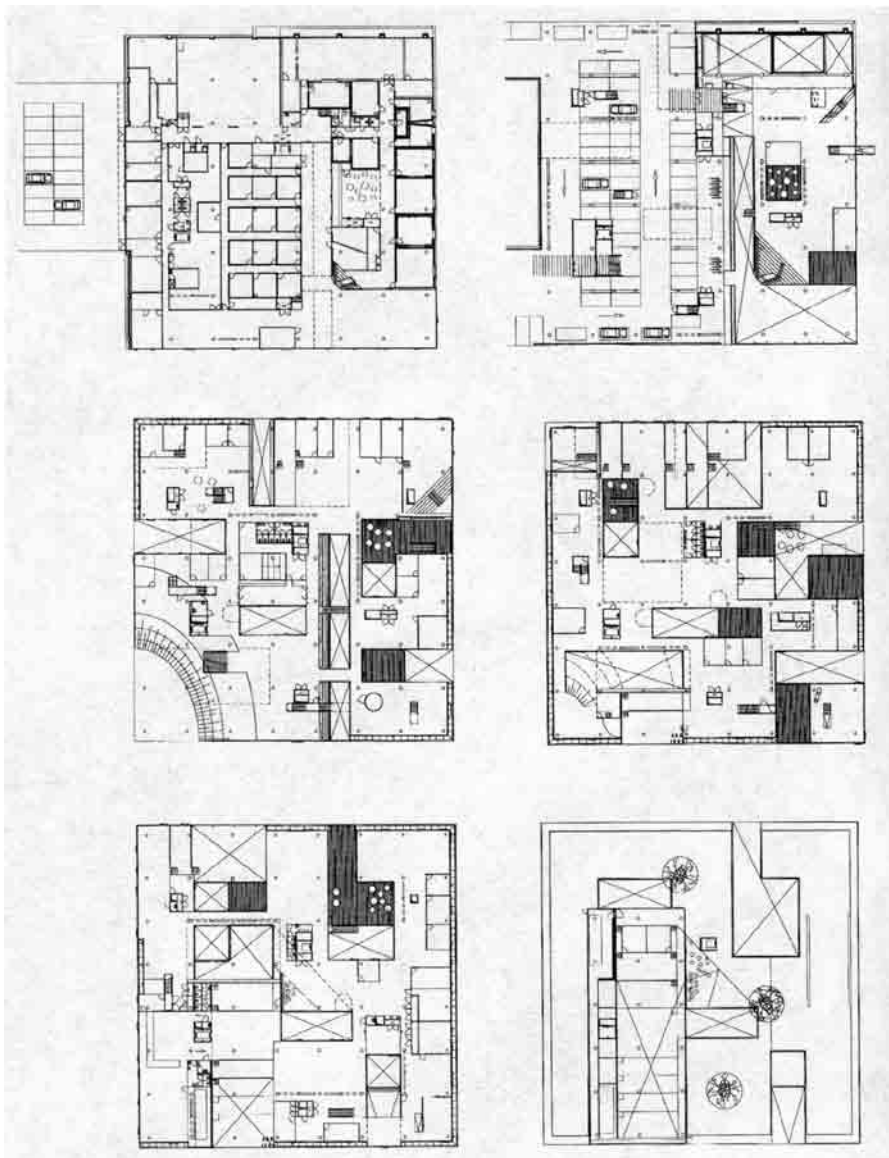


Fig 31. The floor partition is made possible by the arrangement of the different functional areas, and not by structure. Life tends to immediately translate into space. Maybe the premise of a new positivism attitude

elimination of long corridors and the overlapping of spaces with strongly differentiated functional characteristics were examined. Among the latter, there was the idea of considering the building as a small landscape, that is, of amplifying the concept of the city as a large building promoted by structuralism during the '60s and '70s. Therefore, an experiment in the sense of continuity with the post-war modernist tradition. The very characteristics of the site, leading to a considerable effort to excavate sloping ground to make way for the new building, suggest an interpretation of the succession of floors as an artificial "*geological formation*".

The aim of achieving a strong density was pursued through a square plate of 53.7 square metres, divided into 6 levels including a basement, in which the ventilation and lighting of the innermost spaces would be achieved through the creation of patios and terraces. The various floors are very structured, including vertically, presenting slightly sloping terraced sections configured as small hills. The result is a peculiar artificial topography in reinforced concrete, the individual levels of which constitute ideal sections "*supported*" by a modular system of circular-section pillars. Similarly differentiated internally are the methods for mutual connection among the functional areas located at different heights: lifts, ramps, variously configured staircases and terraces. The recourse to the free plan of modernist tradition makes it possible to create easily the conditions for subsequent "*urbanisations*", which can be managed with great freedom, favouring the plan's needs for flexibility.

Regardless of context-specific restrictions and the needs of the customer, MVRDV architects succeeded in such circumstances to give effect to that densification strategy on which their project recognisability is based. They obtained this result by reinterpreting the linguistic revolution implemented by the Modern. They accepted its specialisation and relative independence of the structural, functional-distributive and plastic-volumetric components, but by destabilising their meaning. In fact, looking closely at the project choices, it is clear that the floors are not merely structural parts, but contribute significantly to the configuration of interior spaces. Similarly, the vertical and horizontal distribution mechanisms come into play in the general configuration of volume. At the same time, the floors become façade elements and the volume loses its supposed unity by being transformed into a planned sequence of structural sections. This means that the research conducted by MVRDV tends to maintain the individuality of each specific component that comes into play in the organisation and structuring of space, but at the same time tends to attribute to each component multiple meanings through the use which is proposed for it. The plate is thus configured as an effective device that multiplies the possibilities of material and perceptive connection between different environments, while maintaining their identity and uniqueness without this determining the semantic uniqueness through amplification of the modes of use. In this sense, it aspires to combine the "*specialisation*" of the modern with the multi-functionality and the semantic ambiguity of structuralism. *Fig 32*

The effect of congestion, produced by the densification of opportunities,

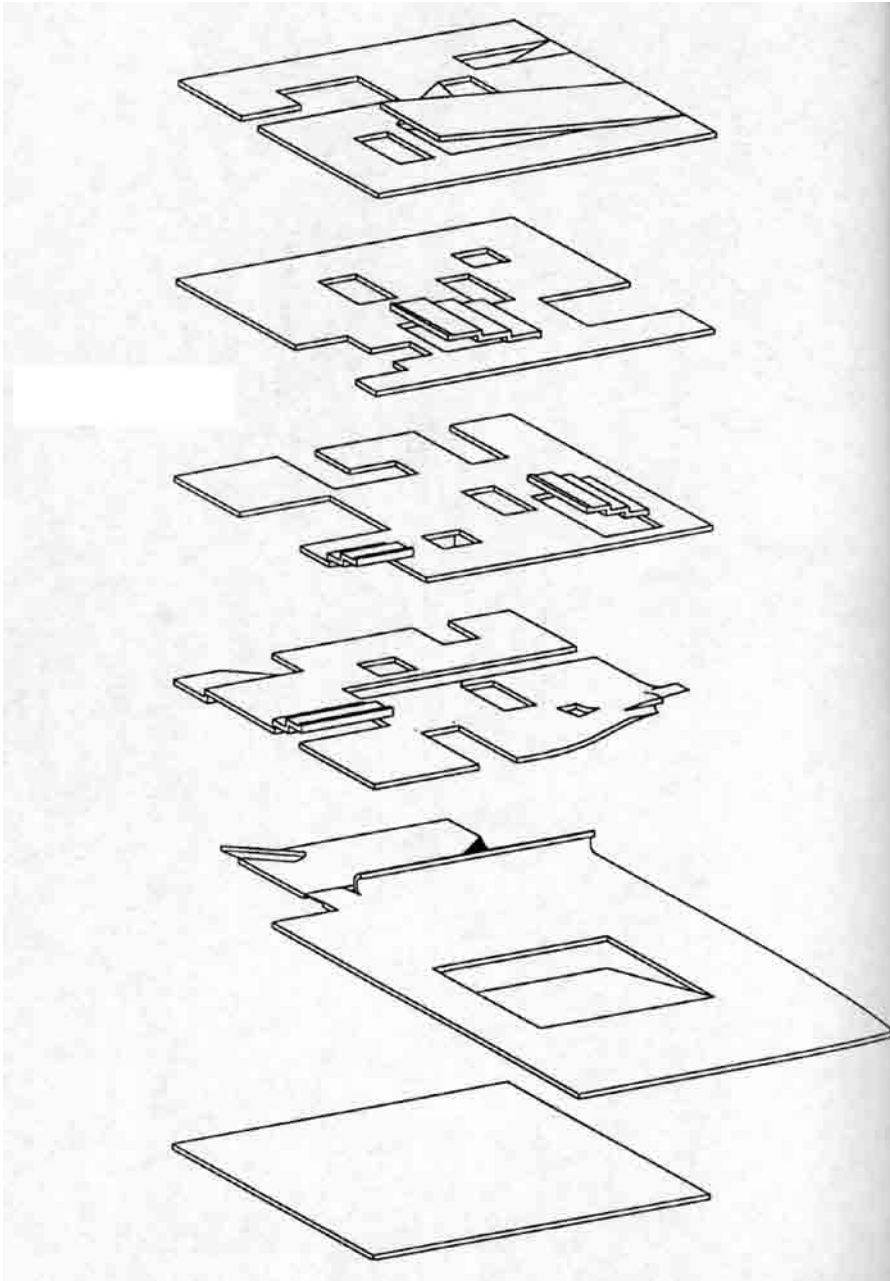


Fig 32. Each floor is searching for a programmatic indeterminacy. The vertical sequence emphasizes the resulting atmosphere.

creates unforeseen effects from the reaction of the acquired functional programmes and objects. That phenomenon, typical of contemporary life, that wants overlapping and simultaneity, as a manifestation of social roles regardless of the spatial circumstances, is also manifested at the architectural level. This condition is that which rejects and calls into question the concept of appropriateness of choices, especially of behaviour, with respect to the context in which one acts, that is, the concept of limiting the potential of use and related manifestation in space, in that it denies the possibility that the very concept of context can be clearly defined and circumscribed. There are many examples. Among these it is worth remembering how the rituals through which we behave in the workplace have changed rapidly. Working is increasingly seen not only as an opportunity for increasing one's own cultural and economic condition, but also as an opportunity to get to know people, to take care of one's body, to devote oneself to leisure. Of course, this leads to an increase of intensity in everyday life like no other.

Consequently, there is a change in rituals and behaviours, and mental and real clothes and roles that previously tended to correspond to each specific circumstance in the most appropriate way, in order to be clearly recognisable in their own objectives, now increasingly overlap, creating a climate of fascinating ambiguity and multiple semantic character. The way of dressing keeps track of the changing trend.

From this principle derives the belief that the context itself is a place of the unstable, precarious and multiform “*possible*”, in which different interpretations, to which corresponds an equally clear aspiration to the multiplication of roles, continually overlap and interfere. The potential of such an attitude, which is mental and cultural even before being architectural, has yet to be investigated. In this sense, it is legitimate to say that the objective pursued by MVRDV shares that “*radical*” attitude, although of a type that is substantially different from that promoted in the course of the ‘60s, which is found in the contemporary world.

Back then the destabilising action was performed from the “*bottom*” through the language of the culture of mass consumption whose presence in novel circumstances created that condition of estrangement and instability of the values that was intended to be promoted. Today, on the contrary, a similar destabilising function is performed from the “*top*”, that is, turning to the model of the information society, whose language tends progressively to take over all the available space. Architecture and the city tend to conform to the new behaviours.

The MVRDV proposal, developing in this direction, tends to configure office space according to the new urban rituals, as a multiform and unusual meeting place, whose apparent informality actually hides the desire to concentrate the most diverse work, circulation, leisure and rest situations in a small number of square metres according to new associations capable of creating a climate of expectation and unpredictability. *Fig. 33*

In its spatial dimension, architecture responds to such requests through a configuration that is at the same time open - in terms of modes of internal reconfiguration - and closed - in terms of the definition of volume - as required by the concept of the villa taken as an operating metaphor for the entire planning. The sense of broad willingness to create conditions that are from time to time different according to the specific needs of the radio and TV company, without limiting the possibilities of expression through decisions of an architectural nature, emerges from the words with which the architects attempt to explain the meaning of their work: “*First let us establish a parallel notion, one which may shed light on this somewhat paradoxical affirmation: the notion of the medium and the message. This idea was intuited by Marshall McLuhan, who was led to affirm that “the medium is the message”, a sublime paradox which, although restricted to communication, is useful for defining any productive act in our own information era. Through it, generically, McLuhan definitively weakened the distinction between the main focus of attention- the figure, let’s say- and the seemingly irrelevant setting- the background- in which a given action unfolds. Message and medium, figure and ground: the one is the other. Translated to architecture, the message- the object, the figure, the building in short- is no longer understood as an object in itself, but rather the medium in which this is generated; that is, reality.*

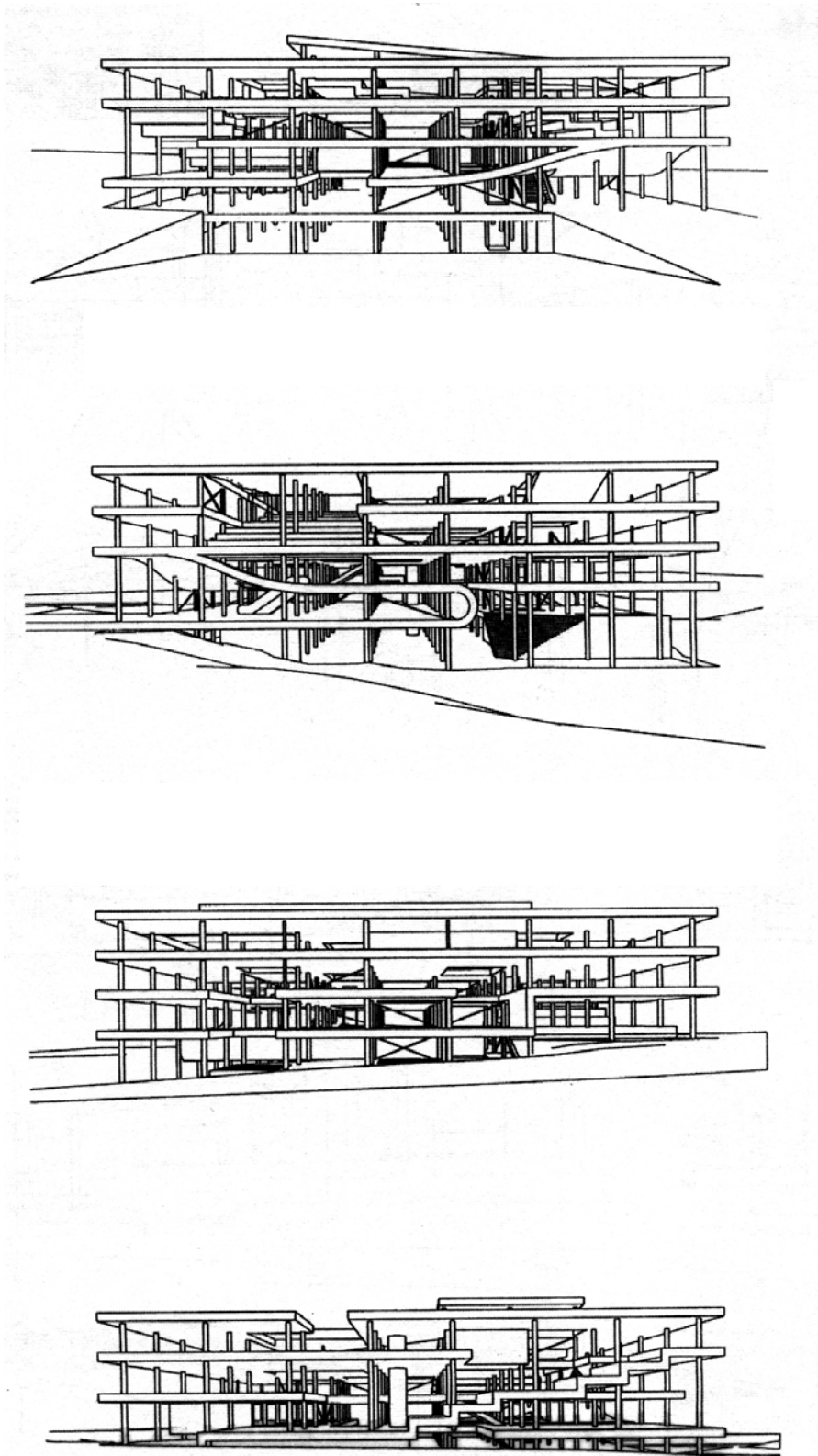


Fig 33. The internal space seems to be the result of an endless warping of an artificial landscape on itself, establishing a continuity with the external on.

One of the characteristics, then, of postmodern architecture is the progressive dissolution of the architectonic message- the design- in the medium- namely, reality.”(29)

The meaning of this reflection is fully contained in the implicit ambiguity of the term medium and in the dialectics that is established with the dimension of the message. In the linguistic context, the message is manifested in different ways depending on the communication system adopted, although the meaning can be established as conventionally

29. MVRDV, *MVRDV at VPRO*, Barcelona, Actar, 1999, pp. 24-25.

stable for all manifestations adopted, clearly where communicative intentions are equal. If this is true, the medium is identified in the particular language used to communicate – the language, by reason of its autonomy, that is, as a self-regulating system of relationships between the constituent parts that is absolutely conventional in nature, acts as a filter between reality and the judgement/representation that is intended to be given through the form of message. Identifying the medium with the message basically means wanting to give shape, through the built object, to that language of which, in traditional terms, the individual expressions constitute as many messages. In other words, this means aspiring to architectural configurations that assert the unlimited expressive potential of the language system which is irreducible, because of its implicit complexity, to the limitations inherent in every one of its messages. Therefore, identifying the message with the medium, that is, in architectural terms, identifying the object with the language system, means putting into operation, or form, the unlimited articulation of reality, that is, of the referent of the communication. But this also means giving up the representative capacity of architecture. In this sense, the assumed identification of the medium with reality is justified. Architecture is no longer the place of “*representation*” of the *civitas* but aspires to identify itself with it to find that correspondence with the complexity of the real that every form, by its nature of choice, or reduction of the field of eligible possibilities, inevitably involves. In these terms, the VPRO headquarters project is fully consistent with the cultural climate of the contemporary world.

The city of Almere is attracting international attention as an example of a highly dynamic environment integrated within a cultural circuit that is totally projected towards the experimentation of new forms of expression, leaning heavily on the future. In this way, the city, similar to what Rotterdam has produced until now, is trying to create an identity without looking to its past which is, in fact, too recent and little settled to be defined as History, becoming a symbolic theatre of innovation, however it manifests itself. Unpredictability and multiplicity of choices and opportunities have therefore become the values through which the city systematically seeks to attract new productive forces of young people.

The city itself has implemented a massive growth plan in phases that will end only in 2015, the only example of a new city in Europe which, because of the particularity of Dutch territory, where the demand for building ground is high – especially when compared with the paucity of the available land, effectively subtracted from the predominance of water – shows a positive and steady immigration balance. Within this growth plan, a transformation of its centre and its waterfront is also envisaged.

The project by Sanaa group thus assumes the literal and symbolic meaning of this same transformation as parameters of the proposal: literal, to the extent that it has to give a precise and detailed answer to an urban problem within a culture that is essentially modern, framing it in the relationship between the city and its waterfront; symbolic, to the

City Theatre of Almere, the Netherlands

Sanaa (Kazuyo Sejima+ Ryue Nishizawa), 1998

extent that the theme of the theatre acquires the value of a metaphor of the expectations that the city places in itself as a privileged place crossed by the continuous streams of global experimental culture, from which to echo, through the logic of the network, its contribution to the contemporary world. *Fig 34*

The plan is therefore a clear pragmatic limitation of a semantic intention that the planners share fully with the community. In this respect, the words of Kazuyo Sejima and Ryue Nishizawa are worthy of note: “*Almere is intently developing its urban identity. An important aspect of this identity is formed by the cultural sector. We would like to propose an image for this initiating cultural facility, which promotes a concentrated public front and allows for the complexities of human interactions.*”⁽³⁰⁾ The project presents itself, therefore, as a response, characterised by the complete sharing of individual intentions and general expectations, to a dual opportunity with respect to the city and the urban project that qualifies it and with respect to the plan requested by the municipality. With respect to the city, the project assumes all the characteristics of an urban fragment with a strong internal complexity. It is characterised as a kind of artificial ground firmly anchored to the urban front overlooking the water, which seems to symbolically reproduce the sense of the Dutch landscape as a highly artificial collective product, in the face of the informal naturalness of the polders, abandoned to the domain of water out to which they actually stretch. This “ground”, in the form of an artificial plate, is characterised by a geometry of a clear-cut base, the contours of which stand out clearly with respect to the vicinity and contrast with the constant vibrations of the waters.

The complex is obtained through the division of this ground according to compartmentalisation with variable geometry depending on the functional needs of the internally regular individual parts, which are placed in a condition of intermediate complexity between the model of the kasbah of structuralist memory and the design through which Dutch territory has traditionally been reclaimed. The basic configuration of the individual compartments is therefore obtained through successive and

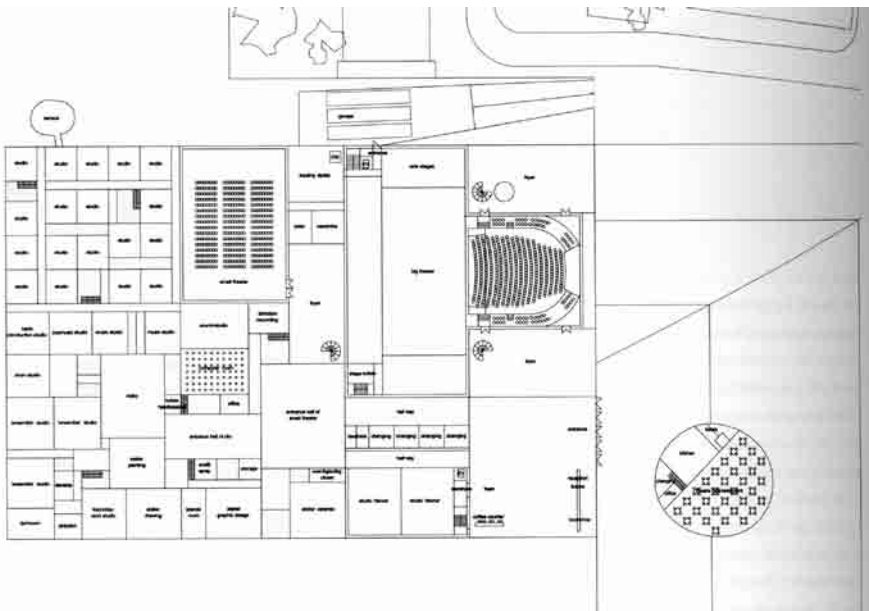


Fig 34. The plan explicitly identifies with the diagram of the functional partitioning. A modernity without objects.

30. AA.VV., Sanaa, *El Croquis*, n°99, Madrid, El croquis Editorial, 2000, pp. 188-89.

continuous partitions of two-dimensional space which are given three-dimensional texture by the different combinations and elevations of partitions. In this way, a composition that clearly alludes to an artificial landscape, progressively obtained by successive incisions in the ground, that is, by distinctions and partitions, is obtained. In brief, a work of land art.

Through an elementary syntax, the relationships of subordination among the parts are obtained simply by acting on the scale differentiation of the partitions themselves, so that some areas, which qualify themselves through the play of vertical and horizontal surfaces that capture within themselves the void delimited by the artificial ground, solidifying it into compact masses, internally gather the functions with a greater sense of urbanity (the big theatre, the small theatre and the dance and drama studios). They dominate conspicuously compared with an urban landscape characterised by a prevailing horizontality. The masses of higher “*urban*” qualification stand out with respect to the horizontality of the base fabric, which reminds of the dominating alignment of the sea, by simply acting on the diversity of proportions, thus becoming a clear visual reference from and for the city.

One of the most interesting aspects of the project is related to the double nature of the parts of the complex. Indeed, from a strictly morphological point of view, the parts are at the same time elements that come into direct relationship with the elements of the urban composition and constituent parts of a specific complex cultural plan. From this simultaneous belonging to two different scales of interpretation, the dense masses specified by the designers, which seem to solidify air withheld from their walls, take on extraordinary importance and visibility. The complexity of the project stems from this very appropriate choice, which clearly stands in contrast to both the structuralist idea of building as a “*miniature city*” and the traditional, “classical”, idea of building as a fabric of open and covered rooms, subject to compliance with an architectural order.

In fact, the individual parts, being characterised at the same time as open and closed, public and private, ordinary and exceptional spaces, are endowed with a strong individuality and recognisability that categorically rejects the multi-purpose logic dear to structuralism, and prevails plastically with respect to the generative system that governs the general rules of composition, to place themselves at the same time in direct relationship with the dimension and urban quality of Almere. In this way it is possible to interpret correctly and simultaneously the critical distance that is established on the one hand between the complex and the traditional way of organising the city - comparable to the culture of new towns of modernist tradition - and on the other to the theme of theatre as such. *Fig 35*

All spaces are connected directly to each other without the need for corridors. In this way, a great sense of interpenetration among the parts is achieved. Movement within the complex involves a seamless flow from one space to another. A web of relationships so dense assumes that all the environments define themselves as “*rooms*” of different dimensions - some covered, others open to form courtyards - which are closely interrelated in order to allow proper ventilation and lighting of environments.

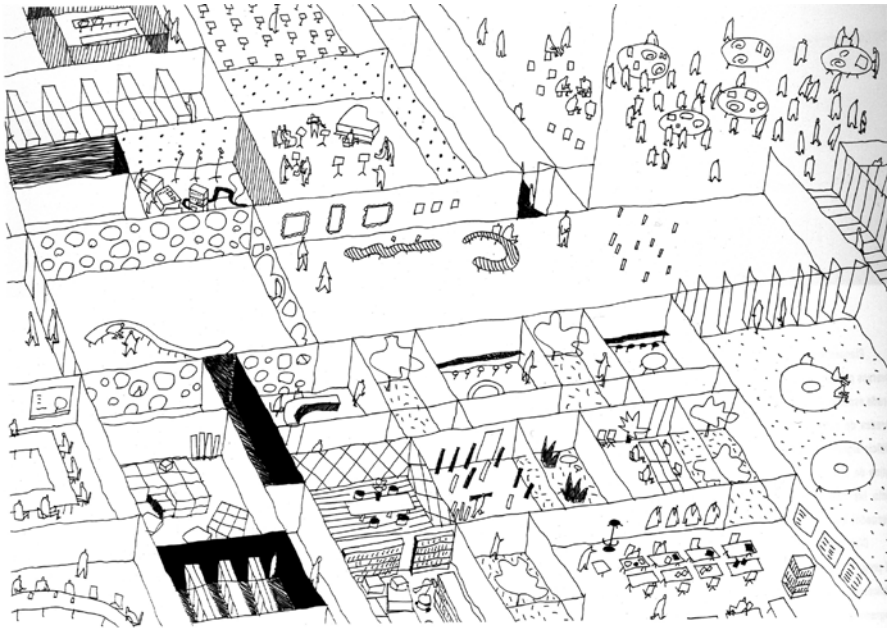


Fig 35. Partitioning life as the demise of architecture.

From a strictly functional point of view, it was decided to place the functions endowed with a greater sense of urbanity close to the centre of Almere and to accommodate those more directly related to the function of theatre on the opposite side. This gives a permeability to artificial ground that progressively diminishes, abandoning the waterfront and penetrating deep into the meandering logic of the plate anchored to the urban front. Although there is a hierarchical relationship among the parts, by virtue of their function, proportion, material characterisation and relationship with the context, there is a great freedom of appropriation of space, which involves the user as the protagonist of construction of the architectural quality of the entire building. An element of distinction with respect to structuralism can also be clearly recognised in this aspect. There, the need for flexibility and interchangeability among spaces produced a loss of hierarchies among the parts - translated into a paratactic syntax - that was partially recovered at grammatical level.

Here the relationship is reversed: a hypotactic syntax is matched by an open grammar made of a system of levels which, through slidings, translations, rotations, repetitions and scalar alterations, give form and character to individual masses and to the complex as a whole. The vocabulary used is essentially elementary, reduced to surfaces that differ in position, size, geometry and material. The main function is performed by load-bearing panels to which cladding panels that are mutually differentiated by grain, materials and colours are jointed. In this way, the elementary components obtain a strong expressive characterisation that differentiates them in relation to simultaneous belonging to different spatial areas. For the same reason, the walls that delimit the spaces of pure crossing are variously characterised by the different material used in contiguous areas. The sense of transparency and permeability of the spaces has, therefore, the aim of multiplying the possibilities of visual interaction and connection among the different areas. *Fig 36*

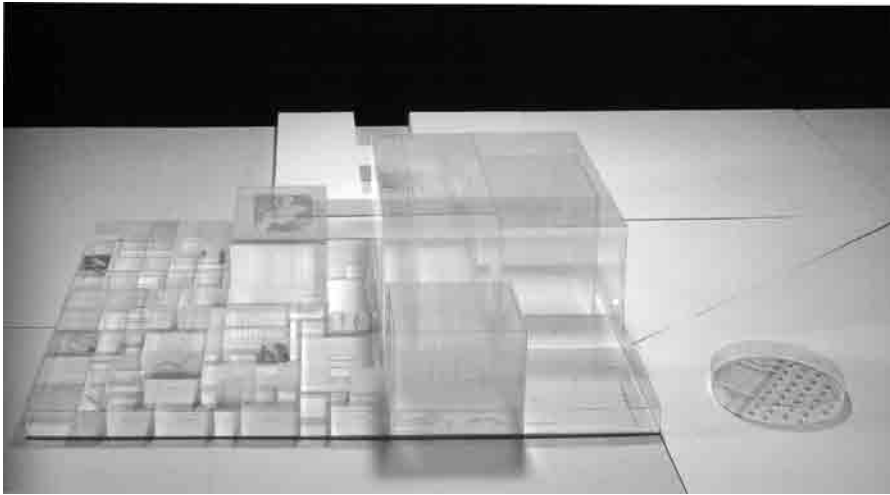


Fig 36. The resulting configuration of the theatre explicitly emphasizes a set arrangement, and its dynamic grouping, that made it possible to appear. The diagram seems to be an endless condition of suspension, floating in the power of imagination and desiring to be anything but a language.

This leads to a more intensive use of space that intends to restore the sense of integration and continuity among the parts, transferred to the logic of structural partitions without having to relinquish the characterisation and identification of the same parts by form and function. Further, the task of capturing fragments of nature within the theatre complex, through the use of materials with varying degrees of transparency, is transferred to the partitions of structural panels, while during the night images of performances can be projected on particular surfaces that act as screens towards the exterior.

The project for the City Theatre of Almere demonstrates how a more intensive use of space, or an amplification of its possibilities, can be achieved by acting on its inside through a systematic operation of multiplication of subdivisions. In this way, one obtains - for equal dimensions - an increase in surface compatible with the need of specialisation, identification of individual areas and coexistence within a single building of all kind of individuality. At the same time, each room increases its chances of interacting with adjoining rooms by sharing its walls with a corresponding number of other rooms. Differentiating the quality of interaction from a functional point of view, and leaving great freedom in how to use space, the designers obtain the result of a building that serves as a multiplier of the possibilities of connection and exchange of information. Thus, the overcoming of structuralism is fully accomplished: while it aspires to reveal the potential of the system through the progressive explanation of its manifestations, neo-structuralism aims to multiply the potential of the system itself, ideally deferring its expression at infinity, that is, programmatically renouncing the “*representation*” of its values.

5.1.4) The phenomenon interpreted: analysis of the sources and spread of themes

The city prefigured by the Modern Movement takes as the priority aim of its policy and assertion that of ensuring the satisfaction of human needs in its “*organic*” meaning and that therefore, due to the degree

The Modern Movement

of generality and diffusion that they manifest, can be considered of collective character, that is, considered common to all its inhabitants. In addition, because of the primary and elementary function that they refer to within society, such needs are known and endowed with a strong degree of stability, that is, assumed, to a first approximation, as constant elements. As such, they become acquired baseline data of the design process for defining corresponding urban and architectural forms. In this sense, it can be said that the architecture of the Modern Movement is the ultimate form of “*representation*” of society and its principles.

On the contrary, the contemporary city aims to multiply the opportunities of an individual nature in a systematic way; not only using telematics technological innovation, but creating the opportunities for events to occur. Contrary to the baseline conditions manifested by the Modern city, these needs, which are not quantifiable upstream of the conceptual process, escape any form of predictability. Architecture’s task is therefore to create the conditions for such opportunities to occur, without having the ambition to be able to control them, let alone formalise them. It follows therefore that contemporary architecture, not knowing the baseline data - which cannot be reduced simply to the requested functional plan but rather to the unpredictable opportunities that the plan can activate - cannot claim a traditional function of a “*representative*” nature. Its function can be only to multiply the spectrum of opportunities and choices offered by the plan itself. In other words, contemporary architecture can only present the life which takes place within it, caught in its factual dimension and in its subsequent fading without any trace, without memory.

Despite the oppositional nature of the principles that inform the two different ways of understanding urban organisation, there are points of contact. First, the desire to amplify the differences among the objects and the components of the plan. The differentiation of roles, which is a legacy of the Modern Movement, is considered an enrichment factor of the city. Identity involves a marked recognisability. However, while the Modern concentrates the differences and renders them mutually autonomous, in compliance with machinist logic, the contemporary city aspires to place diversities in mutual tension, amplifying the points of contact - in both spatial and temporal terms - as sources of enrichment of the urban experience. In the face of a segregation of activities and social groups, pursued through a strongly “*classist*” organisation typical of the modern, the contemporary city counterposes congestion, that is, a state of continuous interrelation which nevertheless does not presuppose coexistence.

Another significant point of contact is the question of the high density of interventions. Although the model of the big city theorised by Le Corbusier and Ludwig Hilberseimer assumes the achievement of high density, they are still based on the principle of clear separation of functions and roles. On the contrary, the densities in the contemporary city assume contamination of functions and roles.

The issue of urban voids is important. While voids in the modern city, in the form of open spaces, assume the role of factors of loosening and dilution of the tensions among the parts, in the contemporary city they

are thought of as active factors for promoting social opportunities that the city intends to offer, and become metaphoric “*places*” of possibility. Voids are thus the elements from which the design process starts for creating those conditions of the congestion and mutual hybridisation that was mentioned before, both on the scale of architecture and of the city. Voids have yet another important function in the contemporary city, that is, to create appropriate tolerances, or margins, on which to act in the ongoing process of transformation of the city. In this sense, the presence of architecture is a major limitation on freedom of use and urban modification. This factor also explains the refusal of the close correspondence between form and function established by the Modern. In fact, it is precisely because of this close correspondence, and the resulting lack of residual/waste spaces, or of “*superfluous*” areas, that Modern buildings rarely lend themselves to being upgraded for accommodating new functions.

Another theme that brings together a substantial part of the tradition of the Modern with current practice, but which, in use, immediately reveals the diversity of principles, is the issue of transparency. The Modern uses transparency because of an ethical need, particularly in countries with a Protestant tradition, that is, to show the honesty of the relationship that links the life that takes place within architectural space and its external forms. In this sense, a fierce criticism of the city of the nineteenth century, that is, of its dichotomy between being and appearing, is expressed indirectly. The transparency of the Modern also responds to another expectation, that of revealing the principles and modes of its construction, the logical and syntactical links of the structuring of its spaces, and the grammar of the new tectonics. In contemporariness, the return to the idea of transparency has a clearly different meaning: to show, to present the pure movement and interaction between people and activities performed. In other words, to reveal the multiplication of opportunities, unpredictable updating of the potential implicit in the space of the city and architecture, between individuals and plan. Transparency reveals to the exterior the new nature of architecture as a precondition for creating events. Architectural form thus dissolves in pure movement.

Structuralism criticises the strong specialisation of the city produced from the theories of the Modern, and especially from strict material and conceptual adherence of form to function. This specialisation has resulted in the loss of those characters of integration and coexistence that are typical of the traditional city. In addition, the Modern city excludes its transformability, given the inability to accommodate functions different from those that were projected at the beginning of the design process and that individual architectures are called on to represent. The possibility that, in substance, there can be a change in the needs and expectations of society in a more or less distant future is thus excluded in advance.

However, in the name of transformability and of coexistence and integration of needs, structuralism is guilty of having deleted the identity and recognisability of the parts, both at the scale of the city

Structuralism

and that of architecture, that is, of having cancelled all differences, whereby buildings mutually resemble each other and lack character. Paradoxically, this indifference towards diversity has led to a trend towards lack of respect for those settlements whose principles, in general terms, had been taken as the basis of new design processes. Structuralism, however, shares with the Modern the idea of progress understood as basically unlimited growth without a clear objective, which acquires consistency in the rejection of form as accomplished outcome of the design process under way and in its replacement with the notion of system and open configuration.

The idea of system, and the meaning associated with it of being an instrument that guarantees a flexible response to the ever-changing configurations of society and of its relations, is expressed through the definition of a general "*theme*" that is declined in all its possible meanings to meet the diverse needs of society. In structuralism, therefore, the serial logic characteristic of the Modern integrates with the desire to specify and identify spaces, that is, give them a substantial uniqueness. These issues are resolved in a "*classical*" way through a total integration among the structural, distribution and volumetric articulation aspects. Thus, Structuralism obtains an interesting result, especially when compared with more "*intellectual*" experiences conducted simultaneously in America and Italy (suffice it to mention the contributions of Peter Eisenman and those of Franco Purini and Costantino Dardi): that of reconciling the values of architectural presence - the endless variations on the theme with a unique and unrepeatable expressive characterisation - with those of the absence, or existence of a formal logic, of a "*language*" that, precisely because archetypal, is valid regardless of the existence of concrete architectural experiences that confirm it, that is, a language that presents a marked character of intrinsic "*naturalness*". Structure takes on a value of manifest neutrality thus making it possible to "*measure*" the quality of the operations that are transcribed on it. In this way, these operations are the essence of the structure.

Neo-structuralisms clearly tend to overcome the idea that the structure can be revealed only by systematically formalising its manifestations. Therefore, the research carried out attempts to present the structure without describing its possible operations and the induced effects. The structure is simply "*presentified*", suggested; it remains a potentiality and is not expressed in actual fact. This gives rise to that minimal and ascetic component for which the representatives of this tendency are often recognised.

It should also be added that structuralism is responsible for recognition of the role of the void, reduced to fit through its absorption within the logic of the system, as a factor that guarantees transformability and modifiability of architectural and urban space. A transformability and modifiability that meet the needs of adaptation to the needs of the individual, changing with changing social conditions. Change which, however, does not tend to find a confirmation in building techniques, which deny, that is, the historicity of architecture as tectonics. In this way, structuralism promotes an emphasis on the structural components, or to those that maintain the greatest inertia to change.

This emphasis becomes particularly embarrassing within the so-called megastructural imaginary, or in the experience that tends to interpret the need for change not in terms of a multiplication of opportunities for individualisation and personalisation of space, but in terms of sheer flexibility or of its availability for rapid consumption. In this regard, the experience of the Japanese Metabolist group is emblematic. Within its poetic, architecture is increasingly ideally projected into a future whose uncertainty and unpredictability is a source of energy and wealth, which translates into value. Within this imaginary, wavering of describing the present does not come from a utopian escape from the present, a trait common to all utopias, by overlapping the projection of a more reassuring - in any case, better - future, but from the simple impossibility of describing the present because of the rapidity with which it is "*swallowed up*" by the future and is therefore elusive.

This happens in the "*highest*" expressions, that is, where the need for transformability of space is not translated simplistically in its articulation through the addition of elementary modules in which the possibility of satisfying individual needs is recognised. Besides, the compositional method of structuralism takes as its point of departure an individual elementary space which, through a series of operations of merging and scaling, in accordance with the rules set by the system adopted, assumes that any type of building can be obtained.

Neo-structuralists use materials in a manner that is subordinated to the objectives of a conceptual nature that they wish to pursue. This means that the materials are a simple expressive component of a prevalent syntactic dimension, and never take on an emphasis such as to subordinate all other aspects of architecture to their characterisation. Another aspect that structuralism promotes and that is clearly present in the contemporary city, and that it shares with the neo-structuralists, is the integration of functions and multiplication of the possibilities of contact among the parts, that is, the great freedom present in the organisation of space. A freedom that is based on the principle of neutrality of the system present in architecture. This condition is clearly expressed by the contribution of Yona Friedman. His manifesto on Mobile Architecture, through multiplication of use of the land available above the historic city and the neutrality implicit in the self-regenerating potential of its light and constantly transformable spatial infrastructure, proposes an idea of architecture as an elementary support for all forms of settlement and connection with pre-existing structures, effectively expressing some issues central to the debate of contemporaneity.

A separate discussion has to be made for the relationship between contemporary culture and the radical experiences of the '60s. In particular, the Archigram group added much food for thought to the discussion. First, the hope of translating the then rampant pop culture into a new shareable language, opportunely cancelling its worst potential. A language, however, of a cross-cutting nature, capable of overcoming the material and conceptual barriers and divisions that characterised the engagement in the disciplinary sense of current

The radical experiences

production. The culture of performance, happening and Nomadism are values inherited from this era, even if updated to contemporary needs. If then the possibility of expressing a new way of understanding the collective dimension was at the centre of the debate, today the goal, on the contrary, is to translate the collective nature of space into a condenser and multiplier of individual opportunities which, through mutual interference or collision, amplify and echo the intensity and the informativeness of the spatial experience. This explains why the contemporary situation differs substantially from that era in all that concerns the refusal of the city and anti-urbanist pressures. Today, the city, or rather the metropolis, is seen as a positive place for building opportunities and therefore of continuous expansion of implicit requests for satisfaction, without wishing to express judgement on the merits of the long-term effects of this attitude.

Deconstruction shares with the experiences of contemporary design the belief that the determining factor which the world of design is called on to face today is, in substance, the management of the complexity of relationships at all levels - economic, cultural, social and political - and that this condition is in fact unpredictable not only in its most recent manifestations but rather, and above all, in the method of actual occurrence. As such, it should therefore be taken as a starting point for the project without it, paradoxically, being transformed into a conventional and shareable principle of articulation of space, or in a new theory of the design.

Deconstruction

Deconstruction and neo-structuralism also share the overcoming of the concept of architecture as "*presence*", or the subordination of its meanings to the tectonic responsibilities that the culture of tradition and its highest register, that is, of classicality, have always recognised in them, giving them the value of natural truths. By contrast, the concept of architecture as "*absence*" has become a common field of interest, although developed in a different way.

In fact, contrary to what emerges from contemporary experimentation, the deconstructive attitude denies that architecture and the city must lose the traditional - or, if you will, "*classic*" - capacity of "*representation*", thereby giving up the role that form, and its implicit presence, claims in the contemporary city, in favour of a deliberate intensification of the procedural dynamic of needs and, above all, of the opportunities that nourish them in the current consumer society, which in fact constitutes its content.

In this sense, the attention of the deconstructive attitude is completely focused on the formal problem and on the search for a new language and a new aesthetic which are capable of expressing the complexity of the contemporary world in a complete and systematic way, and much less concerned about the quality control of the spaces that are created and of their correspondence to programmatic limitations that cannot, however, be disregarded. Even if deconstructive experimentation abandons, in substance, the Euclidean world in favour of the non-Euclidean world, it still favours the possibility of expressing the complexity of contemporary society in geometric terms.

This strategy is pursued through the reduction of architecture to programmatically interrupted “*factual*” spatiality – as in the prefigurations of Colin Rowe in *Collage City* – that is, through systematic deformation of space in such a way as to ensure that its appearance is closely pertinent to the unpredictability and multiplicity of actions that take place within it. Albeit in different terms, therefore, correspondence between form and function is promoted, where the latter is interpreted in terms of a pure network of relational opportunities. This condition induces a persistent disturbance of architectural structure, of the structuring of its spaces and of its volumes. For these reasons, deconstructive architectures bend, twist and cancel each other out in order to absorb internally all the fortuities of that continuous performance which has become contemporary life, also making the conflictuality of the site, and the improbable collimations of its settlement stratifications their own. Research aimed at exploring the ultimate possibilities of architecture understood as a formal language can be recognised in such openness to hybridisation and deformation. However, the results of this research “*interfere*” in an inappropriate manner with the real usability of space and are a concrete limit to the possible different configurations that may be needed in the future to cope with unforeseen needs.

By contrast, the landscape of contemporary architecture aims at an ideal cancellation of architectural presence, or of its materiality, and consistently tends towards a substantial composure of its logic, through a desired formal neutrality which, by contrast, is able to record and emphasise the multiplication of performances, of unpredictable events, and of the changes that occur simultaneously within it. Its model is the information society, which expands the network of opportunities in real time, removing any material form of inertia to change, and multiplies the spectrum of needs and the desire for their fulfilment in ways that were unthinkable until now, that is, through a drastic reduction of the times for moving and consumption. Contemporary architecture therefore increasingly tends to take on the features of a script of “*degree zero*”, on the success of which will depend the quality and intensity of the story – or stories – told, whose main task is to extend the possibilities for development of the story well beyond the assumptions made in the creative phase by the author, or through a continuous and structural involvement of the reader who becomes an integral part of a barely hinted-at plot to whose full performance he/she is invited by the author. This attitude is substantially different from that developed by Deconstruction, which promotes a continuous hermeneutic work on a “*text*” endowed with completeness, simply changing the linguistic framework of reference from time to time and then superimposing all the “*readings/interpretations*”, creating a superabundant “*hypertext*”.

A substantial minimalism therefore informs contemporary practice, which aims to make significant architectural form increasingly essential, increasingly reduced to a simple conceptual warp, gradually dissolving it into a pure network of relations, relationships, opportunities and events, in a plot that is simply hinted at and never complete. A neutrality which, by questioning the stability of the disciplinary boundaries of architecture as a self-sufficient language, increasingly tends towards the hybridisation and mutual contamination of languages. The crisis of the

“design culture” and the statute of the discipline is thus affirmed in that sense. It is opposed by research aimed at identifying artificial landscapes in which the dynamics of relations prevails over the immobility of forms. The definition of hybrid landscapes is therefore that which describes the contemporary condition with greater appropriateness. In this sense, there emerges a substantial difference with the deconstructive attitude, which seems to want to exploit all the possibilities of architectural language without ever pushing beyond the *“point of no return”*, that is, constantly questioning disciplinary boundaries without actually overcoming them. For this reason, it is possible to establish strong connections between contemporary experimentation and the radical adventure of the ‘60s.

5.1.5) The creation of architectural *“language”*

The contemporary situation is clearly marked by the supremacy of the culture of *“intangibles”*. This situation is due to the exponential increase in services and computerisation of the networks within each production activity. As an immediate consequence there are increasingly less people working directly on observable and concrete entities, that is, modifiable in the traditional way, while there is a very rapid increase in workers whose work is largely conceptual.

While the traditional way of operating on reality, even within the modern *“mechanical”* universe, has always been characterised by a fair balance of *“thought”* and *“action”*, or of performance of intellectual and manual work, the contemporary situation is increasingly reducing the amount of manual work to the advantage of conceptual work.

To this we must add that the same entities to which intellectual work is applied are thoughts, concepts, which do not find an immediate confirmation in objective reality. The subject of traditional work, provided that it is correct to use this term in the service society, is increasingly a system of logical entities.

This situation was immediately recorded by the *“language”* of contemporary architecture. The most immediate consequences have led to a loss of interest in material culture and in the traditional expressive characters of architecture, in favour of a clear imbalance in terms of image. The logical-conceptual dimension of architecture has assumed an undoubtedly preponderant role, even in architectural practice. The architect is therefore increasingly more a manipulator of concepts and logical systems than of forms. In this sense, the progressive distancing from the most extreme forms of deconstructive production is justified. The young Americans, Dutch and Japanese on whom the attention of contemporary critics is rightly focusing emphasise, within their research, the role of the logical-syntactic dimension of language, or *“tongue”*, against any other aspect that can evoke any form of objectivity. The same design operations are performed not on architectural and urban matter as such, but on the logical categories that govern it from the inside, or, in other words, operate systematically on intangibles, on the logical-conceptual operators that govern its operation. In this

Language as a “place” of the possible

way, they develop a personal research aimed at the dematerialisation of architecture and the city. And inevitably the natural point of arrival for a research of this type can only be the attempt to reduce reality to its virtual dimension.

By this term we do not mean that architecture should be brought back to its pure image, to its simulacrum. To us, this seems to be a reductive interpretation, in the negative sense, of architecture and of its same credibility. By virtual dimension we mean that in which architecture remains - once deprived of all its physical connotations - pure language and structure of simple logical relations.

In this sense, there is an implicit overcoming of the positions of structuralism, in which, through the concept of words and performance, there is a desire to express individual, thus material, completion of the purely "*speculative*", intellectual, operation that precedes it.

It has also been repeatedly observed how the experiences analysed, and perhaps improperly brought together under the definition of neo-structuralisms, differ from the structuralism of the '60s and '70s because of the attitude with which they give shape to the very idea of structure. Thus, there is a categorical rejection of the attitude with which the systemic logic is formalised through the explanation of all possible interpretations of a common theme, highly integrated from the structural, distributive and volumetric points of view, in an attempt to reconcile the aspiration to a lost classicality and the serial and repetitive logic of the new industrial culture. A balance that seemed possible through a skilful compromise for which all was presented indirectly via a process of articulation-identification of substantially identical, repeatable parts.

The spirit with which today there is the intention of formalising the structure departs from an inverse procedure, that is, giving form to a whole while renouncing the explanation of its possible occurrences, reducing this whole to a simple conceptual warp and superficially referring to the weft that might develop in the near future. Just as structuralism argued that language does not exist except in its infinite occurrence in unique and unrepeatable episodes, whereby we can give form only to linguistic acts and, indirectly through them, to the code that governs them, neo-structuralism seems to argue that architecture and city cannot be "*given*" regardless of the existence of a "*tongue*" that includes all its occurrences: those of the past, those being implemented now and those that have yet to be expressed. "*Representation*" of current society as a society of the possible thus passes through the attempt of "*representation*" of a code as a place of the possible. But the paradox is that, in its essence, the code is not "*representable*". The reduction of space to a simple linguistic warp passes through the negation of architectural form as "*representation*" of the values of a society. If only the language is the place of the possible, and if architecture wants to express this condition fully, it must renounce expressing itself as formal language.

Minimalism, asceticism and renunciation of figurability are all aspects that are consistent with the aspirations of neo-structuralism. In this way, research aimed at archetypal configurations is justified. But the nature of this same choice prevents, in substance, an identification of the characteristics of languages which, from time to time, are formalised

in individual projects.

The research carried out by Neo-structuralisms also takes its distance from the definition of architecture as “*text*”. It could not be otherwise. In fact, the definition mentioned justifies itself as a search for a meaning of architecture within those pragmatic limitations that are suggested by the context, by the plan and by the different interpretability that is given by the potentially infinite spectrum of its users. Deconstruction thus focuses on the grammar of text, on its specificities and unique rules of composition and articulation. On the contrary, Neo-structuralism is interested in the language system as such, in its purity and crystalline logic, in its essence, in language as such and not as sedimentation of a theoretically unlimited number of archaeological “*sections*” endowed with unique specificity and identity.

5.1.6) The role of “*type*”

The contemporary situation is characterised by a high degree of “*volatility*” of needs created by technological innovation in the consumer society and by the consequent difficulty of understanding the behaviours and strategies pursued by individuals in the organisation of their choices. An equally clear difficulty in being able to foresee collective and/or individual behaviours follows.

Economic uncertainty and instability of spaces

The concept of type, even in the various historically defined meanings, presupposes on the contrary a priori identification of the needs of a defined community. In this sense, the definition that is given of concise prefiguration of the needs and related opportunities created to be able to satisfy them acquires meaning. In this sense, the concept seems to be undermined by the current logic of the market, based on high dynamism and a limited investment horizon. Therefore, there remains only the possibility of accepting typology as an “*a posteriori*” operation, a check of any similarities or trends in the articulation of space and its fruition. There follows, however, the difficulty - if not downright impossibility - of taking the “*type*” as the starting point of the design process.

In addition, the contemporary city, having abandoned the goal of ensuring a minimum basis of opportunities for its inhabitants - the recurrent slogan of the Modern era - increasingly aspires to maximise the satisfaction of individual expectations which are strongly differentiated within them, in the belief that the information society will be able in any case to satisfy every legitimate aspiration. In this sense, it is no longer possible to interpret the “*type*” as a trace for understanding behaviours of a collective nature.

In conclusion, the paradigms of the contemporary situation do not recognise the role of the “*type*” as the basic criterion of the design process and of “*plural*” expression of society.

Although many aspects of structuralism have been largely superseded by the disciplinary debate in progress, the belief remains, especially

Serial logic and development by temporal phases

within project experiences, that the economic-cultural instability of contemporary society presupposes a certain serial logic also in the field of design, understood as the ability to modify balances and temporary relationships between parts that are highly defined in their functional traits, in other words, highly specialised.

Such a modification, however, acquires a different meaning from that of the '60s and is more properly understood as a deliberate strategy to increase the possibilities of modifying relations, expanding the areas of contact among the different functions and maximising permeability of exchange and cross-fertilisation. The result is therefore the search for a conceptual and operational support network, based on the repetition of homogeneous spatial partitions that mutually relate functional areas and guarantee the activation of the corresponding tensions whose multiplication is responsible for the success of initiatives.

In this context, a revaluation of archetypal configurations can find space - and the projects seem to prove this - provided that they maintain the role of neutral background for the programmatic tensions that will develop inside.

The space of architectural criticism has followed developments in the literary and, more generally, artistic field in parallel. The '80s saw the gradual decline of structuralist and historicist interpretations. The first because of the emphasis that they placed on history as the guiding principle of disciplinary progress and on recognition of the values of form, and of their impact on the semantic level (see the principles of formal derivation and role of the origin, symbolic implications, primacy of time as sedimentation of knowledge, etc.).

The second because of the obsession of referring, in any case, the value and meaning of architectural forms to the logic of the components and their relations and to the objective qualities of the materials used in the construction of space. In other words, form as a self-referential mechanism, organised as a self-sufficient language that is able to adapt to changed conditions of use simply by acting on the system that governs it.

The temporary condition, the beginnings of which are to be found in the firm opposition of the early '80s to rampant post-modernism, tends to take architecture as a pretext for a subtle and continuous interpretive game through which the role of the reader/user as the privileged subject in the design for the construction of space emerges. This means not only that criticism today has a position of strength, perhaps like never before, but also that artistic production itself, including architectural production, tends to emphasise and recognise the active and irreplaceable active role of the individual in the process of building/organising space. Accordingly, the condition of "*authorship*" of neo-Romantic inspiration weakens and it is replaced by the task, nevertheless complex, of promoting opportunities that it will be up to others - i.e. to users - to define in detail. Today, the architect is not being asked to condition the project with his choices, but to create the conditions so that the project can be manifested, in the most appropriate forms that specific circumstances, which are unforeseeable

Identity of built space and the user's role

upstream of the design process, suggest.

Carefully observing the most interesting experiences in the field of architecture and urban planning, which are essentially American, Japanese and Dutch, one recognises a common cultural background, regardless of the diversity of the countries of origin and specific variations.

*System versus configuration,
method versus type*

This denominator can be recognised in a clear minimalism, in the common asceticism in characterising spaces, or in the waiver of an excessively architectural qualification of spaces. Further, the different proposals seem to be marked by a significant conceptual potential and by the waiver of a formally completed prefiguration of architecture.

There is no longer the search for latent, expressed conflictuality - such as within deconstructionist practice - capable however of connoting projects with an exasperated, even if non-conventional, figuration but the researched suspension of any judgement on the characterisation of spaces.

The search, therefore, of the essential elements that can justify the use of the word architecture, accompanied however by the deliberate decision not to spell out all the potential that the same architectural essence, once defined, is capable of producing. In a sense, it is a clear stance against architectural deconstruction, while on the other hand it is a partial recovery of the same deconstruction applied to the generative-transformational structures so dear to the culture of the project during the '60s and '70.

In this sense, we can speak of the recovery of the concept of structure as a principle capable of generating a sense of unity through the multiplication of its implicit diversity, that is, as a place of the possible, but nevertheless deprived of the degree of internal consistency among the different aspects that contribute to its organisation, as if wishing to demonstrate the impossibility of a total reconciliation even in the denial of architecture as "*presence*". While in the first aspect we recognise the tribute of structuralism, even if only suggested, in the second we find the legacy of deconstruction.

In fact, structuralism is characterised in the manifestation of a theme through its theoretically unlimited variations, or through the multiplication of its actions. The new conceptualism opposes this attitude with simple presentification of strength.

At the same time, deconstruction places self-sufficient systems in opposition to one another. On the contrary, the exponents that we are speaking about settle conflictuality in reciprocal autonomy without obvious interferences with each other.

Typological thinking is historically conditioned by the existence of a relationship with urban form, in which architecture and city appear to be two clearly distinguished poles that feed the dialectical tension through which the experience of built space is consumed. It is no coincidence that all cultural movements that have aspired to overcoming this antinomy have always declared themselves to be

*Autonomy of the house in the city,
or the house as city*

deeply anti-typological (among recent experiences, one can see the positions of structuralism, high tech and structural imaginary).

The present condition, seen in the perspective of multiplication of the areas with a metropolitan character, clearly tends to destabilise this relationship and replace it through sheer repetition of situations with a high level of internal congestion, called on to artificially recreate the conditions of complexity present in the traditional city, yet subjected to a deliberate process of spatial-temporal acceleration. Shopping centres, multiplex cinemas, conference centres, cultural poles, theme parks, recreation areas, etc. belong to such initiatives even if the tendentially most widespread ambition is to see significant shares of each activity listed present at the same time. More generally, the current trend is to have large concentrations of activities in parts of the territory characterised by infrastructural multi-optionality. This condition clearly places the centrality of the home as a matrix element of urban organisation in crisis, from both a strictly economic and more clearly formal point of view. If anything, it is true that the house, even in its more limited scalar expressions, stands as a very stratified reality of functions, only a small part of which is residential. Through telematic organisation, it is increasingly the place of work, consumption and entertainment. The house, in other words, reproduces within itself, as in laboratory conditions, the rhythms and pace of the city and increasingly replaces it.

This process of gradual replacement is powered by the consumer society which, for evident economies of scale, increasingly tends to delegate to the single individual the costs and responsibilities of artificial reproduction of the dense network of opportunities once spread throughout the territory, in a kind of process that resembles the principles of cloning. Architecture increasingly tends to act as a symbolic space that accommodates within itself the persistent need for collectivity which was once guaranteed by public domain. Space for a typological reflection thus decreases drastically because of the difficulty of controlling processes and coexistence among conflicting and inter-scalar functions within the same domain.

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6) CONCLUSIONS

6.1) The “Type” as a project

6.1.1) Dwelling versus building

In the light of this PhD thesis, *Building Typology* is the study of “dwelling”⁽¹⁾ regarded as a civil phenomenon, or as a process of civilization. The *Building Type* is the concept, or the “idea”⁽²⁾, underlying the above mentioned process overall effect, which is intended as a product of civilization ⁽³⁾ or a collective work. More precisely, the Building Type “is something which stands for” the close relation between space and society ⁽⁴⁾.

The idea of “Dwelling” is richer than that of “Building” in the sense that it does not simply relate to the technical act of construction, but additionally it implies all the civil aspects performed through the act itself and the social, economical, political and cultural meanings conveyed by the construction phase and its results ⁽⁵⁾. Furthermore, the idea of “Dwelling” also implies a complete awareness of the relation between the civic space and the civic way of thinking.

6.1.2) The meaning of building typology

As such, *Building Typology* implies a very specific disciplinary field, or domain of investigation, according to which it is assumed as historically determined- it belongs to a specific space and time- causally related- it implies correspondence between what precedes and what follows -socially constructed- it is an implicit or explicit collective project, or an intentionality product, within a community of individuals- and

1. See Heidegger Martin, *Building, Dwelling, Thinking*, lecture performed in 1951 at the “Darmstädter Gespräche” and, on a more general basis, the epistemological foundation of Existentialism. According to this PhD thesis, the starting point of *Building Typology* is the analysis of existence, which is not mediate and objective but immediate, encompassing both intellectual and practical activity. To sum up, Existence always implies a Project.

2. The term “idea” is here assumed according to the old greek etymology of *eidos*, *εἶδος*, which imply a quality which is not immanent to reality, but is rather the result of an abstraction from reality itself, through intellectual activity. Therefore, Idea as an act of will imprinted upon reality.

3. The concept of civilization is here used in the sense addressed by Albert Schweitzer in his books *Cultural Philosophy I: The Decay and the Restoration of Civilization*. (*Kulturphilosophie I: Verfall und Wiederaufbau der Kultur*, Bern, Paul Haupt, 1923.) Translated by C.T. Campion. London, A. & C. Black. 2nd ed., 1932; *Cultural Philosophy II: Civilization and Ethics*. (*Kulturphilosophie II: Kultur und Ethik*, Bern, Paul Haupt, 1923.) Translated by John Naish. London, A. & C. Black, 1929.

4. According to this definition, the building type is the explicit rule or the implicit habit underlying the above mentioned relation.

5. See Martin Heidegger, *The Question concerning Technology*, lecture offered in 1955.

evident in existence - it manifests itself through the building activity, its effects and its use. One can say it directly refers to the construction of the social reality.

The holistic and all-embracing quality envisioned by the concept of *Building Type*, implies a systematic focus on all the aspects of civilization: primarily the natural sources availability, economics, politics and social system, culture. Last, but not least, the assessment of reality does not imply the acceptance of the same reality, but a critical attitude towards it.

As a corollary, being the "*dwelling*" a concept which encompasses the entire built environment, or the way of transforming the natural and the built landscape according to a socially constructed intentionality, *Building Typology* implies a holistic interpretation of the inhabited world and it prompts different outputs which express their belonging to that world according to different degree of relational complexity, or "*scales*". All of them are essential to understand the built environment as a relational entity: the Architecture, the Building fabric, the City and the Territory. All these aspects, mutually related, witness the human being mankind under process of endless realization.

Deeply analyzing the history of the relationship between the City and the Territory - i.e. the anthropogenic of the natural landscape as a consequence of a collective project, which changes according to different historical perspectives- from the Enlightenment onward it becomes evident that the concept of the *Building Type* respects the above mentioned basic principles, always preserving a strong civil concern. However, it is similarly evident that, approaching the 60' of the last century, progressively it flourished a new cultural tendency in close conjunction with the shifting from Modernity to Post-Modernity.

6.1.3) The Post-Modern shift in perspective

The new trend corresponds to an increasing interest towards Structuralism, especially in the field of Linguistics and Anthropology, which aims at overcoming the hegemony of Existentialism into philosophy. According to it, the significance of every human act, within a community intended as a coherent totality, or a whole, relies upon the system of internal relations among its components, assumed as a preexisting codified status on which there is a wide consensus.

As a consequence, the problem statement shifts from the relation between the Subject and the Object (6) - as the main core of Gnoseology since the Renaissance onward- to the autonomy of the Object, as the main focus of Ontology. Therefore, the Subject purpose is simply to contemplate the Object, according to the etymological meaning of "*theory*", to make intelligible its intrinsic quality and organic correspondence between the *parti* and the *ensemble*.

6. Within Existentialism the two aspects are not distinguishable from each other.

This shifting in perspective implied a strong political meaning within all fields of human mankind. In fact, the emphasis on principle and rules leads to a clear limitation of the individual freedom with respect to the overwhelming importance of the system, to which the individual is subject to; the weakening of the individual willpower with respect to the collective one, or simply with respect to what seems to be self-determined according to the latter rules; the increasing importance of what already exists, the *status quo*, with respect to the aim to “*come into existence*”.

On a broader perspective, one can assume that the passage from Existentialism to Structuralism implies a critical threshold between a “*spontaneous*” approach to Reality to a “*ruled*” approach to a Reality revisited. Spontaneity has to be assumed here as a sort of pre-political attitude to act into the world, according to a way of making which defines itself through its process of “*coming into existence*”. Spontaneity therefore fills the gap between the endless transformation of a “*way of being*”, or a *status*, and the appearance of a new one, emphasizing the topic of the “*becoming*” as the space of the possible, subject to individual responsibility. Existentialism is therefore more an attitude than a stable philosophical system; a condition where rules remain implicit within the attitude unstable manifestation itself, to be experimented, suspended between an existing status and the promise of a new one; between the “*not anymore*” and the “*not yet*”. Existentialism refers to the “*becoming of things*”. Moreover, Existentialism needs the concept of emulation to describe the shifting from individual acting to collective acting. People group by following the behavior of someone which has the capacity to lead and convince them.

Structuralism aims at making explicit what Existentialism simply preserves as an implicit tendency, which is into a condition of endless transformation. It focuses on the “*being of things*” when that “*being of things*” gains a certain wide consensus and, consequently, comes to be translated into a clear set of rules. The idea of the *system* is therefore the explicit output of its approach, and its main focus. It therefore leads to a strong emphasis on politics and relies on institutional facts, where the term identifies all those products of civilization which make possible the coexistence among individuals. Structuralism therefore aims at analyzing the set of rules, or system, according to which individuals group into society, to understand the collective intentionality which relies on that society idea.

To rescue back the idea of freedom that was implicit into Existentialism (the capacity to change the existing status of things by individually selecting, processing and projecting its becoming, while avoiding a possible crystallization into a standard), Structuralism introduces the idea of interpretation. A commonly accepted set of rules can be individually interpreted in order to manifest and render explicit the space of democracy made possible by the system itself. Interpretation leads to specification, which tends to be unique and not repeatable. However, one has no doubts that the degree of freedom opened by

individual interpretation has not the capacity to subvert the consistency of the system, but simply to rhetorically confirm it. In fact it acts within the system itself and not outside it, because all of them- the system and its specifications- are social facts reciprocally coherent and interconnected. To subvert the system you have nothing but to act outside it, undermining its certainties.

6.1.4) The role of building typology

In the light of this new theoretical framework, the term *Building Type* suddenly reached a crucial importance, becoming a fundamental concept to understand the changing reality in the specific field of architecture and urban design. In fact, according to Structuralism, the term identifies a product of the collective intentionality, or a social product. The Building type concept therefore became central into the disciplinary discussion to the extent that it permitted to explicitly refer to architecture and urban design as institutional facts, coherently to the philosophical contemporary concern.

Something is a social fact to the extent that it is the application of a set of rules; those rules are established by human beings and their quality is based upon a general consensus among the members of a specific community. Consequently, a social fact implies the existence of a collective intentionality -or a plural agent- opposed to the individual one- or the singular agent. The social object rules are both constitutive and regulative of the system itself. While the former make into existence the system, the latter simply define its functioning and maintenance over space and time. Social facts play a fundamental role within society simply because they imply power assertions.

The collective intentionality, which is responsible for the creation of social facts, performs at each level of civilization: social, economical, political and cultural. To fully exploit its statement, it needs consensus upon its set of rules. To do that, it requires to shift from the “*condition of becoming*” to the “*state of being*”; from an “*unconscious*” developing to a “*conscious*” behaving; to flourish from the implicit level to the explicit one. To sum up, the collective intentionality needs the Language. Because of the language one has the capacity to imprint an act of will upon reality.

6.1.5) The language

The Language is a social product *par excellence*. It depends from human being willpower; it is grounded on a set of rules; it implies consensus upon them and specification through individual acts of speech. The power of the Language is twofold. On one side, it has the capacity to address a specific meaning to brutal facts, or a real occurrence. On the other, it has

the possibility to properly build a real condition that did not exist before, manipulating brutal facts themselves. This distinction is fundamental. The Language is not a natural object, or an object which exists independently from individuals grouped into a community, whose members are willing to communicate to each others, or to share ideas. Once assumed that the Language itself is a social product, or an institutional fact, we recognize that it has the capacity to construct different aspects of a social reality.

To come into existence, the social reality needs to introduce the concept of “*sign*”. The term sign defines “*what stands for something*”. The term sign therefore implicitly distinguishes two levels: the level of the “*character*”, which is intrinsic to brutal facts, or the natural Real, as something which is independent from human intentionality, and the level of the “*quality*”, which is an extrinsic aspect of the social Reality, or an intentional attribution to the Real itself which comes into existence because of the language itself.

The Language therefore, has the possibility to attribute specific qualities to brutal facts, by giving them a special status, or role, transforming them into signs, icons or symbols (7). By attributing them a special status, the language makes possible to construct social objects, or objects which differs from the natural ones, because they do not exist independently from the human being intentionality expressed through the language itself.

The Language operates as an “*artificial environment*”. Similarly to the natural environment it makes possible to individuals to act as members of a community. However, the Language seems to have a certain degree of neutrality with respect to social facts, to the extent they have specific qualities depending from human internationalities. In other terms, if the Language itself is a social fact and to construct social facts implies the Language, its use entails volition. Therefore, the collective intentionality in the use of the Language becomes central in the construction of social facts.

The Language, affecting our own historical way of thinking and acting in the world, is responsible for the creation of as many as possible specialized languages, all of which are of course social facts. To distinguish them from the generic ability to speak performed by human beings, one can call them codes. Every discipline, ranking between humanities and science, has its own code, and the related set of rules. Additionally, they also have the possibility to create other kind of objects with respect to spoken and/or written languages.

Each specific code expresses a space displacement of the written/spoken language principles, categories and catalogues. The uniqueness of the architectural code is to make that logical migration “*inhabitable*” in the urban body. Only under these circumstances, any process of Civilization comes into existence. Cross fertilization among codes is fruitful to an extent that each of them preserves its own identity. If not, this causes disciplinary distortions and alienation from the corresponding society.

7. The distinction refers to Charles Sanders Pierce work on Linguistics.

6.1.6) Artistic objects and ideal object

Among those, we can quote artistic objects and ideal objects. The former differ from the social ones in the light of a specific aspect: they are the product of an individual intentionality, which is also responsible for the constitution of its own rules and application, and they do not necessarily require consensus for their “*coming into existence*” or “*being*”. In fact they are often recognized as artwork after the author’s passing by, within external condition completely different from those which prompted its inception and realization. The latter differ from social objects to the extent they do not depend from human intentionality at all, belonging to an unconscious world and the language simply help to let them flourish and being to the surface.

This observation also leads to a fundamental consideration. The fact that Language itself operates as a social object and that it makes possible to construct any institutional fact does not imply that a social fact can be independent from the reality. In fact, the same definition of social fact implies an act of conscious will projected upon reality. This is true even in the case we use Language to build other specialized languages, as mentioned before, like in the case of artistic languages or scientific languages. It operates as an all embracing infrastructure which lets it possible all the social facts to perform, by attributing to a specific reality a specific status or role function, independently from the reality character, which is addressed via people consensus.

According to these premises, we need now to concentrate on a crucial conceptual aspect. We made a statement about social facts. They imply a language; the language requires a wide consensus on its rules; the consensus refers to the existence of a collective intentionality; the attribution of a specific quality to an existing brutal fact leads to the construction of a sign; the coming into existence of a sign brings to ethical consequence, or the coming into existence of a specific reality as a social fact, according to which individuals act within the community on a different manner if compared to human being behavior itself outside the community. What does it happen when an already existing institutional fact does not anymore cater the required consensus, because of a system of expectation change? To change a social fact, which means to change its qualities and values, it is fundamental to move back to the premises of the social reality, or to the brutal facts.

This observation immediately leads to recognize a fundamental aspect of the social facts. The social reality identity relies on the fact that it requires an endless process of reattribution of quality to the reality itself previous to becoming a social reality. The transformation of the social reality cannot therefore imply a direct transformation of the social reality itself, but always require an indirect transformation via the previous deconstruction of the social reality- or the discovery of its latent ideology independent from the existence of a supporting reality- and the consequent projection on its brutal facts of a new set of values,

related to a forecoming new ideology (8). In the light of this process the transformation can address its power to the same facts or simply changing the facts to which they refer to. In the first case we will have an incremental transformation, according to continuity, in the second a radical one, according to discontinuity.

Only within the artwork production it is possible to directly transform artworks themselves. In fact the art object does not necessarily need a reality outside itself to come into existence and becoming meaningful, but has the possibility to build its own reality through its own appearance, or according to its own process of “*coming into existence*”. In other terms, the reality of art can identify with art itself, not asking an attribution of artistic quality to a reality existing outside of its domain (9). This also explains the great critical fortune Existentialism had in both art theory and practice still up to now, supporting the idea that the artistic practice autonomously defines its set of rules in the course of its own deployment (10).

6.1.7) The Schism in the social reality

This distinction is fundamental to understand what happened during the '60 in the building field. Aiming at contributing to a major transformation of the social reality at every level of its manifestation- social, economical, political and cultural- many critical positions introduced a shift in perspective without any precedents into history. Their criticism towards the social reality was not directly addressed to the social reality as such, acting within the internal dynamics between its “*referent*”, i.e. the relation between *Space and Society* (11), and the process according to which that relation had been addressed by a specific status. On the contrary, claims were mainly addressed to the spatial issue, intended as an autonomous entity independent from society, aspiring to the status of a new kind of reality.

Architecture and Urban Design suddenly aimed to be not anymore the working Expression of a civilization process- subject to becoming, development, progress and unavoidable superseding - but merely its Representation. The distinction of the two layers leads to a new concept of the above mentioned disciplines, which are not anymore the direct manifestation of a civil consciousness but simply the individual poetic interpretation of the community internal structure, or its socio-political-economical configuration, which is independent from it.

From this critical threshold onward- which refers to the clear distinction between structural and super structural aspects (12) - building domain refers to the level of the artistic expression, so directly producing its own reality. To assimilate the architecture, the building fabric, the city and the territory to artistic forms, or representations, convey them at the very edge of the current civilization main stream. As a consequence, those terms do not signify anymore coexistence and compliance with

8. To understand this crucial process we can refer to the marriage as a very interesting case study. If one would be intended to modify the institution of the marriage, we cannot directly refer to the status of the marriage as such, as an autonomous system of abstract rule, or as a contract, independently from the reality to which it is applied to. We need to rescue back to its real component, to question whether or not they are still actual. In fact one could be interested to confirm the subject of matter, i.e. the relation between a woman and a man, simply changing the content of their relation, i.e. the reciprocal responsibilities or, more radically, one could be interested to question the subject of matter itself, assuming a relation between individuals of the same sex, confirming the content of their relation or even changing it.

9. This observation leads to the crucial distinction between realism and abstraction in art. The former expression refers to the recognition of a reality, whose existence is independent from the artistic object appearance, and lead to the idea of art as its representation; the latter refers to the construction of a new reality because of the artistic object and its own process, which relies on it.

10. See Pareyson Luigi, *Estetica. Teoria della Formatività*, Torino, Edizioni di “Filosofia”, 1954. On a more general basis, all the members of the so called “*Humanistic Existentialism*”, like the Italian representatives, M. Merleau-Ponty and A. Camus, took advantage from this specific application field.

11. We explicitly refer to the well known journal edited by Giancarlo De Carlo

12. The distinction refers to Historical Materialism of Marxist derivation.

the built environment agents of transformations- or sharing the same all-embracing substance- but simply its perception and interpretation. The subject is now facing the object, not being at all an indissoluble part of the same environment, not sharing at all its contents.

6.1.8) A new Rethoric

If building - encompassing in its definition every level of complexity, ranging from architecture, to building fabric, the city and the territory - progressively tends to be a form of narrative (a story-telling and not anymore a conscious project of History), the *Building Type* immediately registers the change of paradigms. Architecture, the city and the territory become rhetorical figures related to the social reality according to an Analogical correspondence, even more assuming the quality of a *Neo-Avanguard*. Linguistic structuralism seems to offer a theoretical key to establish rules according to which it is possible to firmly set that kind of correspondence.

Coherently, *Building Typology* own focus is on “*dwelling*” regarded as an autonomous entity respect to the reality of civilization, a complex text, and the Language issue, eradicated from the field of the social facts to be grafted into that of the artistic facts, seems to be grounded on a similar structural interpretation which supersedes the original inception of what should have been a civil artifact, or a product of civilization.

Everything in the field of architecture, urban design and territorial management does not seem anymore an *index*- something which stands for the presence or the existence of a fact or a condition elsewhere (its own object) by a factual connection to it, regardless of resemblance with the object and of the interpretative rule to which it refers to -but merely an *icon*- something which stands for the presence or the existence of a fact or a condition elsewhere (its own object) by its own specific quality, regardless of resemblance with the object and of the interpretative rule to which it refers to -or a *symbol*- something which stands for the presence or the existence of a fact or a condition elsewhere (its own object) by the interpretative rule to which it refers to, regardless of resemblance with the object and of its own specific quality. As a consequence, *Building Typology* becomes the art of decoding the text internal logic, leading it to the referring system of notation, or a Code, being assimilated to Hermeneutics. Everything is nothing but an interpretation of a reality criticized from the outside, deliberately avoiding any possible direct implication. Participation to the construction of a common ground seems to be banished.

Many reasons caused the shifting of paradigms and the “*strategic retreat*” from the social reality - the failure of Functionalism in Modern society; the increasing awareness that labor within mass production society was not anymore the driving force for individual emancipation,

as occurred during the '50, but simply the cause of societal alienation (13) ; the belief that intellectual speculation should take the place of craftsmanship; the utopian escape from current socio-economical conditions; the ideological support of political antagonism between classes; the substitution of individuality with anonymity -but the consequence were clear at all. Instead of "*dwelling the world*" - even within its own idiosyncrasies, disillusion, incoherencies and unavoidable compromises- since 60' onward we have been progressively invited to "*dwell the world representation*", or to become *Voluntary prisoners of Architecture* (14).

6.1.9) The power of Reason

Building, assumed as an organic entity divisible into parts, whose value is the result of the system of relation among all the level of its own artistic construction, merely becomes a new kind of formal Language, encompassing a wide range of highly specialized codes. This is not completely new into the building and urban history. It appeared during the Renaissance and Enlightenment periods, but under very different socio-economical conditions and however it was subject to strong limitations.

During the Renaissance, when Building and Dwelling still identify, their contamination with a formal language was prompted by subordinating Building to Design, substituting the space of the building site with that of the perspective, as a political device of weakening and controlling the current socio-economical system through the passage from Municipality to Lordship and Monarchy. In this respect it mostly appeared through the superimposition of the architectural order, and its proportional metric system, to the built artifact to state and represent the overlap of a new political frame to the medieval guild system.

During the Enlightenment, the shifting from reality to representation emerged through the substitution of the Composition to the traditional Art of Construction and led to the introduction of the French *parti* as a new abstract device of organizing the space coherently to the aim of the emerging *bourgeoisie* to get rid of the *Ancien Régime* and its latent civil institutions, namely the Académie royale d'architecture. Coherently, the diffusion of the *Encyclopédie ou Dictionnaire raisonné des sciences, des arts et des métiers*, edited by Diderot & D'Alembert, making explicit the system of knowledge which was still implicit at that time, was similarly radical in political terms with respect to the current society.

6.1.10) The power of Representation

In both cases the explicit reference to a formal language existence

13. See the Italian journal *Quaderni Rossi*, and its research on the new capitalistic organization of labor.

14. The quotation refers to Rem Koolhaas artwork *Exodus*, or the *Voluntary Prisoners of Architecture*, 1972.

within the domain of Building was assumed as a vehicle to address criticism to overcome the contemporary society, coherently with an all encompassing vision. This is not the case of the late '60, during which the change mainly occurred on occasion of the Welfare State rising. Instead of assuming socio-economical content of the New Order as an emerging paradigm for building, a new Utopia of Form arose, which lasted for almost two decades, with few important exceptions.

The method of disconnecting the level of Reality from that of Representation in the building domain, reducing it to a form of Art, to undergo to an Hermeneutic work of interpretation, led to very specific theoretical approaches, to whom the Italian debate gave a fundamental contribution, through a deep disciplinary translation of Structuralism.

The assimilation of Building to a form of Narrative -and architecture to a Text, whose evidence just required being recognized and analyzed- was mainly evident in Aldo Rossi and Gianfranco Caniggia work on *Building Typology*. In both cases, the authors made systematic reference to Ferdinand De Saussure work on *Linguistics*, to which *Building Typology* was implicitly assimilated. However, they made use of it on a slightly different manner. According to them, architecture should not find anymore its own focus on the relation between space and society, but simply on space as an autonomous discipline. This unavoidably led to a tautological and meta-linguistic approach to Architecture: it refers to itself and finds out into itself its own reasons, objectives and qualities. The two authors differ from each other in the way they tended to reach this result.

Aldo Rossi's rationalism was more inclined to find out the changeable relations underlying the construction of the city according to history, by investigating the correspondence between building type- the *partie*- and urban form- the *ensemble*. According to his point of view, the basic components were elementary configurations -i.e. *Elementi Primari*- whose distinctive characteristic is to preserve a stable system of internal relation independently from the complexity of the design and its level of resolution, or "*scale*", opposed to *Aree Residenza*, which systematically change in relation to the different processes of civilization. In fact, it is properly the possibility of finding out the stable character of these formal configurations through different level of structural complexity, namely the architecture and the city, which enables Rossi to talk about the existence of the building type. In addition, being those formal configurations recognizable into different historical conditions, which means looking independently from civil reality, they appear timeless and completely appropriate to depict a condition of architectural autonomy with respect to the collective responsibility of the social facts.

As a consequence, the city itself was intended as a unique artifact made of distinctive parts referring to the coexistence of the different historical interpretations of it, layered on the ground. Each part was the ultimate result of recurrent components and internal changing relations,

producing figures, all floating within a mythological atmosphere made possible by a language out of the time, referred to as *the architecture of the city*. Aldo Rossi ideology mainly lies in the attempt to find out historical evidence of his poetic.

Aldo Rossi followers, roughly grouped under the ambiguous name of *Tendenza*, developed further on his principles, recognizing into fragmentation the value of the city itself to be preserved and fully exploited. Nurturing even more Rossi's ideas, they fostered even more the definition of the *Type* as a timeless stable basic configurations from whom manipulation any magnificence of architecture could arise. In this respect, their ideas were very similar to that of Jung's psychoanalytical definition of the Archetype.

Gianfranco Caniggia's classicism was more intended to find out the stable relations underlying the inception, construction and ongoing transformation of the city according to history, by investigating the recurrent relation between its components and the whole. He recognizes two level of correspondence. The former is timeless, and refers to the distinction among scale, or level of relational complexity -i.e. architecture, building fabric, city and territory- according to which the natural landscape has been and always will be subject to a systematic anthropogenetic. Referring to this perspective, as a case study, building type is the whole at the scale of architecture, but become the basic element at the scale of the building fabric. The latter is historically determined, because every level of relational complexity assumes a specific appearance whose stability relates to a specific phase of territorial evolution. Accordingly, building types change during different historical phases, even within the same community.

As a consequence, the city itself was intended as a finite growing organism made of finite growing parts referring to the unitarian transformation of the different historical interpretations of it, referring to an holistic vision of reality, which started from an all-embracing awareness of the territorial dimension. Accordingly, each part is the ultimate result of already existing components newly arranged according to recurrent internal structural relations, producing new types, all coexisting into an organic atmosphere made possible by the endless assimilation of the languages to each other, referred to as "*the typological process of the city*". Gianfranco Caniggia's ideology mainly lies in the attempt to transform a logic which was coherent to pre-modern society into a timeless condition.

Gianfranco Caniggia followers, under the definition of School of Processual Typology, developed further specific part of his lesson, the so called scales, recognizing into unity the value of the city itself to be aimed at into practice and theorization. Type was not intended as a stable configuration of internal relation if not under the same historical condition of space and time.

At the end of the '80 it was already clear that it was not possible

anymore to boost further those methodological and theoretical approaches, deeply grounded on Structuralism. A crucial role had been playing by the critical energy of Deconstructivism to existing positions. It pushed to the extreme consequence the idea of building as a text. The city becomes a highly layered Palimpsest of not reciprocally related fragments which coexist without aiming at a new kind of meaningful totality. Bernard Tschumi (15) and Peter Eisenmann (16) fully exploited the potential of the new critical position, consciously not escaping the field of textuality. As a result, it was evident the limit implicit in the decision to consider building at the mercy of Narratives. Not by chance, they were theoretical projects. “*Everything goes*”, quoting Feyerabend, or everything seems to be equal out of the civil framework.

6.1.11) Back to the reality

Koolhaas was the first who, around the mid of the '80, clearly recognized the necessity to overcome the distinction between Reality and Representation in architecture, claiming for blending the building back into the “*dirty reality*” (17) mainstream. He was of course prepared by his own research on New York City (18) and further suggested by the shocking ongoing socio-economic revolution named as globalization and its drastic effects on a worldwide perspective. To him, the current phenomenon was the driving force of a new process of civilization, which had the capacity to get rid of any previous statement on the person. In the light of this perspective, the architectural responsibility needs to be reframed within a new idea of architecture as a social fact, facing the challenging logistical, social, economical, political and cultural prompted by the current conditions.

Primarily, globalization challenged the current idea of the National State sovereignty and citizenship, strongly opposing to it a new interpretation of the territory which is endlessly redesigned by unpredictable flows of people, goods, services and finance investments, claiming for new possibilities of fully exploiting their potential outside traditional border limits, questioning their stated legacy. These flows indeed are intended to destabilize the lasting, still current, idea of continuity between socio-economical content and political institutional devices. Borders have been becoming even more porous and permeable than ever before, being transformed into boundaries. The increasing demand of fast connections in order to reach on a regular and comfortable basis long distance destinations introduced the new concept of a Network society (19), of which the Network Cities (20) were the physical emerging counterpart.

As a main consequence, global cities started being reciprocally more connected than to their own territorial administration limits based on continuity, substituting the traditional vertical and hierarchical inclusive relations -where architecture, building fabrics and the city directly refer to the same territory- with more complementary horizontal

15. See Tschumi Bernard, *The Manhattan Transcripts*, London, Architectural Design, 1981.

16. See Eisenmann Peter, *Diagram Diaries*, New York, Universe Publishing, 1999.

17. See Lafaivre Liane, “*Dirty Realism in European Architecture Today*”, *Design Book Review*, n°17, pp. 17-20.

18. Koolhaas Rem, *Delirious New York*, Academy Editions, London, 1978.

19. See Sassen Saskia, *Global networks, linked cities*, New York, London, Routledge, 2002.

20. See Castells Manuel, Borja Jordi, *Local and Global: The Management of Cities in the Information Age*, London, Earthscan, 1997.

connections- where some level are simultaneously linked with different territories - resulting into a quite evident disconnection of reciprocal interface among scales and into an ever increasing complexity of the built environment. Stressing those attitudes would imply for the time being transforming cities into stranger traces of an even lost territory.

6.1.12) The territorial hybridism

The violent schism between the cities and their original territories, generated by the globalization process principle and prompted by the Network City phenomenon, is widely witnessed by the hybrid building diffusion on a worldwide scale. In fact they are multiple connectors among every aspect of the built environment, which are mutually related according to ever-changing configurations. Especially, they counteract every aspect of the traditional city. Within the hierarchical distinction of scale -the architecture, the building fabric, the city and the territory- hybrid buildings introduce the coexistence of scale -i.e. architecture which encompasses the city or new kind of cities which absorb their own territory; to the gradual and horizontal sequence of public/private domains, they oppose reciprocal inclusion, connecting both the vertical and the horizontal dimension within a new one; within the subdivision of living, working, connecting, educating and having fun, they create conditions in order to let all of them acting together; to the experience of continuity of space and time, they object the conflicting discontinuity of their endless unclear leap; to the coherence of self-consistent languages they counter *pastiche*; within a clear distinction of expectation and roles, they oppose the “*crossing channel*” approach; instead of distinguishing the behavior of who stays and who moves, they mix up settlers and commuters within the same atmosphere. To sum up a different behavior, hybrid buildings relate the finite and the indefinite, the local and the global, the handicraft and the digital, the private and the public, the solid and the empty spaces.

But globalization does not simply act at the level of the urban form, substituting the idea of the Western city, conceived in the Old World and migrated in the New one, with that of the Network City, generated everywhere. It radically subverts our own idea of the society as a structured entity. The unstable character of the flows it generates never succeeds to reach a stable status. Furthermore, it seems that its ideology lies on an endless postponement of any status of temporary balance. As a consequence, the *dérive* of the individual from the society of which he is the often unconscious product, seems to be the counterpart of the alienation of the form from the society itself, prompted by Post-Modernity since the beginning of the '80. This phenomenon seems to be, for instance, at the basis of the forerunner Japanese architecture, especially in the case of Toyo Ito's and Kazuyo Sejima/Sanaa's design strategy.

6.1.13) The globalization crisis

Under these premises, at least since 2007 onwards, acted an unprecedented financial and economic crisis we are still facing in the contemporary age. Globalization processes, which were programmatically out of control, suddenly implode. Settlements for the first time since the '80 experience a progressive standstill. As a main consequence, the widespread diffusion of waiting lands and vacant building (21) appears as the side effect of the above mentioned process crisis. Similarly, the claim for a more sustainable world considerably increased because of the network city phenomenon (22). Building recycle and subject matters dealing with sustainability become crucial aspects to reestablish a social role for architecture. Both are in fact aspects of the current condition claiming for experimentation.

Notwithstanding the phenomenology of the crisis manifested itself mostly at the financial and economic level, it imposes a way of thinking turnover. The principles, the categories and the catalogue of the globalization are therefore today under a deep critical scrutiny, to reveal how they acted unconsciously, conditioning the human being behavior, and to understand whether it is possible to overcome them. Of course, as always happens during any transformative phase, we still witness a strong resistance to change, opposed by those agents who nurtured themselves from the previous conditions.

6.1.14) A landscape of ruins

As a consequence of the globalization process progressive standstill, we are today facing a major "*landscape of ruins*", an archeology of building knowledge fragments, where reality and representation, local and global effects, brown fields and congested areas, settlements and green fields, traditional habits and contemporary tendencies, new and existing subject matters urgently need to be metabolized in the light of a different world to be built. We therefore need to update our paradigms to explain and manage the conflicting coexistence between the remains of the contemporary global society and the discover of the hints of the unexpected, at every level of organization: natural, logical, economic, social and institutional. Aspects of the old world, expressing the "*not anymore*", and aspects of a possible new one, forecasting the "*not yet*", are therefore merged together and this explain the complexity of the present time.

In this respect, for the time being we will have to face a new challenge: new strategies to relate the old traditional conditions, where everything is discernible and finite, prompted by an increasing awareness of the source scarcity, with the new hybrid one, supported by a still alive globalization process, where everything blurs. A new kind of *Artificial Organicism* is therefore required, where every aspect relates to the others, leading to a challenging and creative *Structure of the Environment*: not

21. This subject is one of the most prominent one for the future agenda. The reuse issue is increasingly becoming popular over the last decade. Among those who more intensively are working on the subject on a worldwide perspective we remind Kees Christiaanse, Rietveld Landscape, Philipp Oswald, studio Hartzema, Gravalosdimonte Architects, Gilles Clemonts. For an all encompassing perspective, see the exposition catalogue edited by Pippo Ciorra and Sara Marini *RE_Cycle. Strategie per l'architettura, la città e il pianeta*, Milano, Electa, 2011.

22. See Balzani Marcello, Marzot Nicola, *Architetture per un territorio sostenibile. Città e paesaggio tra innovazione tecnologica e tradizione*, Milano, Skira, 2010.

anymore a self consistent discipline but a new kind of craftsmanship attitude capable to metabolize the existing substance into a new essence.

This approach is a provoking oxymoron, which aims at combining the classical idea of the *structure* with the dynamic one of the *environment*. The former searches for stable equilibrium configurations among its constituent parts within the whole, and conventionally assumes a necessary standstill of the social reality, under very specific conditions of space and time. It states the possibility to abstract from the real itself, or from the external world beyond it and its indefinite character, and simultaneously confirms the distinction between the subject and the object. This approach implies an act of will by the individual on the real to declare its project and to claim a total control on it. This idea efficiently answers the question about how the social reality works.

The latter, looking for unstable and ever-changing equilibrium configurations of particles within the nature, to which the idea itself of the “*phenomenal*” clearly refers, gives us the chance to follow and to understand processes of continuous and unpredictable transformation. One has therefore to accept that, under specific circumstances of crisis, we share the same substance of that which we are looking at, and therefore the subject and the object define each other in the course of a reciprocal interaction. This approach implies a process of endless transformation of both the social reality and the individuals. This idea efficiently answers the question about how the reality changes. This method, by combining the complementary aspects of the limit and its transgression, seems to be coherent with the experimental character of the contemporary time, casting a new light on the notion of the hybrid way of thinking itself.

6.1.15) A new agenda for the “*type*”

At the same time we have to set up a new agenda for *Building Typology*. First of all, it is fundamental to guarantee a deep rooting to the real, whatsoever it is. For a long time we have been living not according to “*the world we have*”, to subvert it, but according to “*the world we would like*”, to project it, abruptly substituting Utopia to Reality, and coherently our analysis has produced a misunderstanding of the existing conditions. The crisis we are still facing is the ultimate result of the Dystopia between the two behaviors, of which we are dramatically the unconscious cause. Every reflection on the possibility of contemporary acts of civilization should start from a systematic analysis of the environment we are part of, trying to discover hints of a collective will, or fragments of it, according to which a new world could be eventually incepted, constructed and, maybe, transformed (23).

Secondly, it is necessary to reestablish the disciplinary interest on the embodiment of the society into its material culture- with a special regard to space anthropization- where the former is the subject and

23. See Ferraris Maurizio, *Manifesto del nuovo realismo*, Laterza, Bari, 2012.

the latter is the collective object, forged in relation to the changing set of values of the first. If we assume the Civilization as the main “*device*” of transformation of the real into a social reality, we will also succeed to attribute to the individual effort the valuable role of being its agent via the architecture.

Thirdly, we have to relate back the definition of “*dwelling*” to a specific idea of the “*territory*”, where it identifies an all-encompassing strategy of living the earth. For many years, building interpretation has been conceived independently from the changing idea of its all-embracing context, producing distortions and misinterpretations.

In conclusion, the type is the order, or the conventional law, which rules the relationship between space and society, between the material and the immaterial culture, under specific historical conditions. As such, it is a social object and needs to be investigated applying the critical tools offered by the Social Ontology via the Language Philosophy (24).

24. In this respect, traditional building typology failed in its own purpose by substituting to the above mentioned relation that between architecture and the city, condemning itself to autonomy and academy isolation, while sociology failed by simply focusing on the relation between the individual and the societal, forgetting the spatial issue. The discipline which seems closer to the agenda building typology has to face for the coming future is Urban History.

About the Author

Nicola Marzot was born in Imola (Bologna), 27/11/1965. He has obtained his Degree in Architecture at Florence University, with a thesis on Ferrara building history, supervised by Prof. Mario Zaffagnini. After being unpaid assistant at the Faculty of Architecture, Ferrara, involved in the teaching of "*Urban Morphology and building Typology*" (1994), and Temporary Lecturer at the same Faculty, involved in the teaching of "*Urban Morphology and Building Typology*" (1995/96/97), he has become Temporary Lecturer at the Faculty of Architecture of Florence, Italy, involved in the teaching of "*Theory of contemporary architectural research*" (1997) and "*Typological and Morphological Characters of Architecture*" (1998). Since 1998 he has been PhD student at the Faculty of Engineering, Bologna.

Once obtained his first PhD in "*Building and Territorial Engineering*" in 2000, since that time he has been Temporary Lecturer at the Faculty of Architecture, Ferrara, involved in the teaching of "*Urban Morphology and Building Typology*" and Temporary Lecturer at the Faculty of Engineering, Bologna, responsible for the design Laboratory of "*Technical Urbanism I*". Since 2004 he has been Assistant Professor at the Faculty of Architecture of Ferrara, responsible for the design Laboratory of "*Architectural Composition I A*", the design Laboratory of "*Architectural Composition II A*" and the Final thesis design Laboratory of "*Urban Renewal*". His research activity mainly focuses on theory and method of architectural and urban design, with a privileged concern for Urban Morphology and Building Typology.

He has been visiting professor at Hosei University, Faculty of Architecture, invited by Prof. Hidenobu Jinnai; at Lund University, Faculty of Architecture, invited by Prof. Göran Sandberg, and at TU Delft Polytechnic, Department of Architecture, associated to the chair of Public Building, invited by Prof. S. Umberto Barbieri, where since 2009 he has been Assistant Professor, involved in the teaching of Msc3, Msc4 and Seminars. He additionally has been teaching in the Master Course on "*City Manager*" (Faculty of Architecture, Ferrara, 1995-96/1996-97/1997-98), in the Master Course on "*Territorial Engineering*" (Faculty of Engineering, Padova, 1995-2002) , in the Master Course on "*Urban Renewal*" (Oikos/Faculty of Architecture, Ferrara, 2002-03).

Vice director of the international journal *Paesaggio Urbano* and former member of the Editorial Board the international reviews *Urban Morphology*, *Opera/Progetto* and *Rassegna* (under the direction of François Burkhardt), he is the author of more than 250 writings on the subject matter of architectural and urban design, many of which presented on occasion of national and international conferences.

Since 2007 he has been PhD student at TU Delft Polytechnic, Department of Architecture, Chair of Public Building. He is currently member of the Board of Ferrara Department of Architecture International PhD program on "*Architecture and Urban Planning*" and he is also active in many international research programs in the field of Complex Urban Design Strategies.

Since 2002 he has been urbanism advisor of *Oikos Centro studi sull'abitare* and of *Nomisma Spa REAL ESTATE*, of which since 2006 he also has been Head of Urban Planning. Since 2012 he is advisor of the Bologna Metropolitan Area Strategic Plan. He has been member of the scientific committee of MARKITECTURE, international architectural event prompted by Bologna Ente Fiera, now at its third edition. He has been member of the organizing committee of the Italian Pavilion, X International Venice Biennale of Architecture, curator Prof. Franco Purini (2006) and member of the organizing committee of the Dutch Pavilion, IV International Moscow Biennale of Architecture, curator Prof. Susanne Komossa (2014). Since 2005 he has been member of the Council of ISUF, International Seminar on Urban Form. In the period 2006-2009 he has also been Secretary-General of the same Institution.

Since 1994 he starts working as a Professional Architect, while since 1996 he shares his office with the Architect Luca Righetti, founding together in 2002 the architectural firm PERFORMA A+U, mainly focusing on Complex Urban Design Strategies and Regeneration Programs.

Among the most remarkable realized works are to be reminded the new Coop Adriatica headquarter at Villanova di Castenaso, Bologna (project 1997-1999; construction 1999-2002); a 220 rooms Jolly Hotel at Villanova di Castenaso, Bologna (project 1998-2000; construction 2000-2002); a residential building in the INA CASA quarter "*Barca*" (project 2001, construction 2004-2005). Since 2007 he has been involved in the "*Parco delle Stelle*" design, the new Bologna Sport city nominated by Italy to host the 2014 International Basketball Championship. He participated to several international design competition, resulting also winner and being signalled, especially in the field of Complex Urban Design Strategies. In 2007 his team (MVRDV, PERFORMA A+U, Arcadis e Atelier 10) has been selected between the 12 finalist to the International Competition for the New Bologna High Speed System Station. Currently he is advisor of *FS Sistemi Urbani*, the Real Estate company of the Italian National Railway System, focusing on Brownfield Regeneration Programs.