THEORIZING A NEW AGENDA FOR ARCHITECTURE

AN ANTHOLOGY OF ARCHITECTURAL THEORY 1965-1995

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PRINCETON ARCHITECTURAL PRESS
NEW YORK
CONTENTS

10 Acknowledgements
11 Preface
16 Introduction

CHAPTER 1
POSTMODERNISM: ARCHITECTURE/MODERNISM

72 Complexity and Contradiction in a Forthcoming Book (1965)
Robert Venturi

78 Post-Functionalism (1976)
Peter Eisenman

84 A Case for Figurative Architecture (1977)
Michael Graves

91 The Relevance of Classical Architecture (1976)
Demetri Porphyrios

98 New Directions in Modern Architecture at the Edge of Modernism (1975)
Robert A.M. Stern

CHAPTER 2
SEMIOLOGY AND STRUCTURALISM

110 Semiotics and Architecture: Ideology
Diana Agrest and Mario Gandini

122 A Plain Man's Guide to the "I" of Postmodern Architecture
Geoffrey Bawa
In this "call to order," Kenneth Frampton maintains that building is first an act of construction, a tectonic and not a scenographic activity. Building is ontological, a presence or a "thing," as opposed to a sign. This approach can be put in the context of other attempts to define the "essence" of architecture, for example as function, or as type, for Frampton the essence is the poetic manifestation of structure implied in the Greek (and Heideggerian) poesis, an act of making and revealing that is the tectonic. In this polemical essay, he identifies "the structural unit as the irreducible essence of architectural form." It thus deserves more attention than spatial invention and the pursuit of novelty.

A poetics of construction, Frampton says, offers the possibility of resisting the commodification of shelter, and the prevalent postmodern "decorated shed" approach to architectural design promulgated by Robert Venturi, Denise Scott Brown, et al. Tectonics is a potent antidote because it is stylistic, internal to the discipline (as opposed to autono­mous) and mythical.

Consistent with Martin Heidegger's recognition of the plenitude of human beings on the earth and under the sky, Frampton proposes that architects need to consider the ontological consequences of building with heavy mass walls or with light frames. The two systems represent cosmological opposites, with connotations of earth versus sky, and solidity versus dematerialization. To reinforce the value of such distinctions, he also asserts the importance of Gottfried Semper's alternative myth of origin, described in his book Elements of Architecture (1852).

Semper emphasizes the textile origins of tectonics and suggests that the knot was the first "nexus around which the building comes into being and is articu­lated as a presence." It can have ideological and referential roles, in that cultural differences emerge in the articulations, transitions and joints making up a tectonic syntax. Vittorio Gregotti and Mario Botta also posit a symbolic role for the knot in this chapter.

The joint is essential, not gratuitous, and it thus avoids the possibility of conspicuous consumption that plagues contemporary architecture and reduces it to fashion. Tectonics plays a part in the argument Frampton construct in his earlier essays on Critical Regionalism (chs. 1, 2). While he now seems to have distanced himself from Critical Regionalism, tectonics continues as an important part of resistance to the homogenization of the built environment. Frampton's 1995 book, Studies in Tectonic Culture, presents an expanded discussion of this essential part of architecture.
RAPEL À L'ORDRE. THE CASE FOR THE TECTONIC

I have elected to address the issue of tectonic form for a number of reasons, not least of which is the current tendency to reduce architecture to scenography. This reaction arises in response to the universal triumph of Robert Venturi's decorated shed: that all too prevalent syndrome in which shelter is packaged like a giant commodity. Among the advantages of the scenographic approach is the fact that the results are sufficiently amenable with all the consequences that this entails for the future of the environment. We have in mind, of course, not the planning decay of eighteenth-century Rococoism but the total destruction of commodity culture. Along with this sobering prospect goes the general dissolution of stable references in the late modern world: the fact that the precepts governing almost every discourse, save for the seemingly autonomous realm of techno-science, have now become extremely tenuous. Much of this was already foreseen half a century ago by Hans Sedlmayr, when he wrote, in 1941:

The shift of mark-spiritual centre of gravity towards the inorganic, his feeling of his way into the inorganic world now indeed literally called a cosmic disturbance in the modernist age, which now begins to show a one sided development of his faculties. As the other extreme there is a disturbance of macrocosmic relationships, a result of the special framework protection which the organic now enjoys, almost always at the expense of the organic. The toying and decoration of the earth, the manipulation of man, is an obvious example and one which is to us adress the dissonance of the human mutualism in the epoch.

Against this prospect of cultural degeneration, we may turn to certain regnant positions, in order to recover a basis from which to resist. Today we find ourselves in a similar position to that of the critic Clement Greenberg who, in his 1961 essay “Modernist Painting,” attempted to reformulate a ground for painting in the following terms:

Having been denied by the Enlightenment of all tasks they could take seriously, they (the arts) indeed as though they were going to be assimilated to entertainment pure and simple, and entertainment itself looked as though it were going to be assimilated. The religious, to therapy. The art could save character from this leveling down: only by demonstrating that the kind of experience they provided was valuable in its own right, and not to be identified with any other kind of activity.

If one poses the question as to what might be a comparable ground for architecture, then one must turn to a similar material base, namely that architecture must of necessity be embodied in structural and constructive form. My present stress on the latter rather than the prerequisite of spatial enclosure stems from an attempt to evaluate twentieth-century architecture in terms of continuity and inflection rather than in terms of originality as an end in itself.

In his 1936 essay, “Avant Garde and Continuity,” the Italian architect Giorgio Grassi had the following comment to make about the impact of avant-garde art on architecture:

...as far as the vanguard of the Modern Movement are concerned, they inextricably follow in the wake of the figurative arts... Cubism, Suprematism, Neoplasticism, etc. are all forms of investigation born and developed in the realm of the figurative arts, and only as a second thought carried over into architecture as well. It is actually pathetic to see the architects of that “heroic” period and the best among them, trying with difficulty to accommodate themselves to these “arts” experiencing in a perplexed manner because of their fascination with the new doctrines, measuring them, only later to realize their ineficiency.

While it is disconcerting to have to recognize that there may well be a fundamental break between the figurative origins of abstract art and the constructional basis of tectonic form, it is, at the same time, liberating to the extent that it affords a point from which one may turn to the structural unit as the irreducible essence of architectural form.

Needless to say, we are not alluding here to mechanical revelation of construction but rather to a potentially poetic manifestation of structure in the original Greek sense of poiesis as an act of making and revealing. While I am well aware of the conservative connotations that may be attached to Grassi’s polemic, his critical perceptions none the less cause us to question the very idea of the new, in a moment that oscillates between the cultivation of a resistant culture and a descent into value-free aesthetics. Perhaps
the most balanced assessment of Grassi has been made by the Catalan critic, Ignasi de Sola-Morales Rubió, when he wrote: 

Architecture is joined as a craft, that is to say, as the practical application of established knowledge through rules of the different levels of intervention. Thus, the action of architecture as problem-solving, as reasoning, or as activity at work, is present in Grassi’s thinking, since he is interested in showing the permanent, the evident, and the given absence of knowledge in the meaning of architectural.

The work of Grassi is born of a reflection upon the acts the resources of discipline, and is focused upon specific media which determine not only within itself, but also the ethical content of its cultural contribution. Through these channels of ethical and political will, the concern of the Enlightenment becomes entrenched in its most critical tone. It is not refer the superiority of reason and the analysis of form which are instantiated, but rather, the critical role (in the Kantian sense of the term) that is, the judgment of values, the very lack of which is felt in society today.

In the sense that his architecture is a cross-section, a reflection on the combination of its own presence, its work assumes the appeal of something that is both frustrating and noble...

The dictionary definition of the term "tectonic" to mean "pertaining to building or construction in general, constructive or structural" is a little seductive to the extent that we intend not only the structural component in so an also the formal amplification of its presence in relation to the assembly of which it is a part. From its conscious emergence in the middle of the nineteenth century, the writings of Karl Bötticher and Gottfried Semper the term not only indicates a structural and material priority but also a politics of construction, as that may be privileged in architecture and the related arts.

The beginnings of the Modern, dating back at least two centuries, and the much more recent advent of the Post-Modern are inexorably bound up with the ambiguities introduced into Western architecture by the primacy given to the sculptural in the re-invention of the modern world. However, building remains essentially serious rather than semiotic in character and it may be argued that it is an act of construction first, rather than a discourse predicated on the surface volume and plan, to cite the "Three Reminders to Architects," of Le Corbusier. Thus one may assert that building is structural-rather than representational-in character and that built form is a presence rather than something standing for an absence. In Martin Heidegger’s terminology we may think of its as a "thing" rather than a "sign."

I have chosen to engage this theme because I believe it is necessary for architects to re-position themselves given that the predominant modernity today is to isolate all architectural expression to the terms of commodity culture. In as much as such resistance has little chance of being widely accepted, a "resilience" position would seem to be an appropriate space to adopt rather than the dubious assumption that it is possible to continue with the perpetuation of an avant-garde. Despite its concern for structure, an emphasis on structural form does not necessarily favor either Constructivism or Deconstructivism. In this sense it is byzantine. Moreover it does not seek its legitimacy in science, literature or art.

Greek in origin, the term "tectonic" derives from the term tekton, signifying carpentry or building. This is a term stems from the Sanskrit tektona, referring to the craft of carpentry and to the use of these. Remnants of a similar term can also be found in Vedic where it again refers to carpentry. In Greek it appears in Homer where it again alludes to carpentry and to the art of construction in general. This poetic connotation of the term then appears in Sappho where the tekton, the carpenter assumes the role of the poet. This meaning undergoes further evolution as the term passes from being something specific and physical, such as carpentry, to the more generic notion of construction and later to becoming an aspect of poetry. In Antiquity we even find the idea that it is associated with machinery and the creation of false things. This etymological evolution would suggest a gradual passage from the ontological to the representational. Finally, the Latin term "architectus" derives from the Greek archi (a person of authority) and tekton (craftsman or builder).

The earliest appearance of the term "tectonic" in English dates from 1656 where it appears in a glossary meaning "belonging to building" and this is almost a century after the first English use of the term "architect" in 1563. In 1570 the German oriental scholar K. O. Mollet was to define the term rather rudely as "A series of arts which form and perform woods, implements, dwellings and places of assembly." The term is then elaborated in a modern sense with Karl Bötticher's The Tectonic of the Hellenes of 1843-52 and with Gottfried Semper's essay The Four Elements of Architecture of the same year. It is further developed in Semper's unfinished study, Style in the Technical and Tectonic Arts of Practical Architecture, published between 1863 and 1868.

The term "tectonic" cannot be divorced from the technological, and it is this that gives it a certain ambiguity to the term. In this regard it is possible to identify three distinct conditions: 1) the technological object that arises directly out of meeting an incremental need, 2) the conversational object that may be used equally to allude to an object of hidden element, and 3) the conversational object that appears in two modes. We may refer to these modes as the ontological and representational." The first involves a constructional element that is shaped so as to emphasize its static role and cultural status. This is the tectonic as it appears in Bötticher's interpretation of the Doric column. This mode involves the representation of a constructional element that is present, but hidden. These two modes can be seen as paralleling the distinction that Semper made between the structural technological and the structural-symbols.

Aside from these distinctions, Semper was to divide built form into two separate material procedures into the tectonic of the frame in which members of varying lengths are connected to encompass a spatial field and the stereotomic or constructive mass that, while it may embody space, is constructed through the piling up of identical units the tectonic deriving from the Greek term for solid, stereo and cutting, -tome. In the first case, the most common material throughout history has been wood or in recent equivalents such as bamboo, wattle, and bamboo. The second case, one of the most common materials has been brick, or the compressive equivalence of brick such as stone, sandstone or concrete. These have been significant exceptions to this division, particularly where, in the interest of permanence, stone has been cut, dressed, and erected in such a way as to assume the form and function of a frame. While these facts are to familiar to hardly need repetition, we tend to le
In more ways than one Semper grounded his theory of architecture in a phenomenological conception of the architectural form. Semper’s emphasis on the joint implies that fundamental syntactical transitions may be expressed as one passes from the sequential base to the tectonic frame, and that such transitions constitute the very essence of architecture. They are the dominant constituents whereby the culture of building differentiates itself from the rest.

There is a spiritual value residing in the particularity of a given joint, in the “thingness” of the constructed object, so much so that the generic joint became a point of ontological condensation rather than a mere connection. We need only to think of the work of Carlo Scarpa to such a contemporaneity of manifestation of this materialism.

The first volume of the fourth edition of Karl Bötticher’s Tektonik der Ortenen, appeared in 1843, two years after Karl Friedrich Schinkel’s death in 1841. This publication was followed by three subsequent volumes which appeared at intervals over the next decade, the last appearing in 1851, the year of Semper’s Post Elements of Architecture. Bötticher elaborated the concept of the tectonic in a number of significant ways. At one level he envisaged a conceptual juncture, which came into being through the appropriate interlocking of constructional elements. Simultaneously articulated and integrated, these conjunctions were seen as constituting the body-form, the Variations of the building that not only guaranteed the material fabric, but also enabled this function to be recognised as a symbolic form. At another level, Bötticher distinguished between the Teckform or nucleus and the Teckform or decorative cladding; the latter having the purpose of representing and symbolising the institutional status of the work. According to Bötticher, this shell or revetment had to be capable of revealing the inner essence of the building that not only guaranteed the material fabric, but also enabled this function to be recognised as a symbolic form.

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meaning literally "to make a hearth." The latent institutional connotations of both hearth and edifice are further suggested by the verb in Greek which means to educate, strengthen, and instruct.

Influenced by linguistic and anthropological insights of his age, Semper was concerned with the etymology of building. Thus he distinguished the massivity of a fortified stone wall as indicated by the term Markus from the light flaxen and infill, wattle, and chub say, of mediæval domestic building, for which the term Wanda is used. This fundamental distinction has been nowhere more graphically expressed than in Karl Gruber's reconstruction of a mediæval German town. Both Markus and Wanda reduce to the word "wall" in English, but the latter in German is related to the word for dress, Gewand, and to the term Pfand, which means to embroider. In accordance with the primacy that he gave to textiles, Semper maintained that the earliest basic structural artifact was the knot which predominance in mediæval building form, especially in the Bedouin tent and in textile interior. We may note here in passing Pierre Bourdieu's analysis of the Bedouin house wherein the town is identified as the female place of honour and the art of the interior. As is well known, there are etymological connotations residing here of which Semper was fully aware, above all, the connection between knot and joint, the term in German die Knoten and the former die Knoten. In modern German both words are related to die Verbindung which may be literally translated as "the binding." At this evidence tends to support Semper's contention that the ultimate constituent of the art of building is the joint.

The primacy that Semper accorded to the knot seems to be supported by Gunther Nitschke's research into Japanese binding and untidying rituals as set forth in his seminal essay, "Die Idee" of 1957. In Shinto culture these proto-tectonic binding rituals constitute agrarian renewal rites. They point once to that close association between building, dwelling, cultivating, and being, remarked on by Martin Heidegger in his essay "Building Dwelling Thinking," of 1954.

Semper's distinction between tectonic and stetaesthetic returns us to the theoretical arguments recently advanced by the Italian architect Vittorio Gregotti, who proposes that the marking of ground, rather than the primitive hut, is the primary tectonic act. In his 1983 address to the New York Architectural League, Gregotti states:

...the very essence of modern architecture is the idea of space conceived solely in terms of its economic and technical exigencies different from the idea of the site.

The built environment that surrounds us is, we believe, the physical representation of its history and the way in which it has accumulated different levels of meaning to form the specific quality of the site, not just for what it appears to be, in perceptual terms, but for what it is in structural terms.

Geography is the description of how the signs of history have become forms, therefore the architectural project is charged with the task of revealing the essence of the geographical context through the transformation of form. The environment is therefore not a system in which to dissolve architecture. On the contrary, it is the most important material from which to develop the project. Indeed, through the concept of the site and the principle of settlement, the environment becomes the essence of architectural production. From this vantage point, new principle...

With the tectonic in mind it is possible to post a revised account of the history of modern architecture for when the entire trajectory is reconsidered through the lens of some certain patterns emerge and other recede. Seen in this light a tectonic impulse may be traced across the century unifying diverse works irrespective of their different origins. In this process well-known affinities are further reinforced, while others recede and hitherto unremarked connections emerge asserting the importance of criteria that lie beyond superficial stylistic differences. Thus for all their stylistic idiosyncrasies every similar level of tectonic articulation patently links Henri Sauvage's Stock Exchange of 1875 to Frank Lloyd Wright's Larkin Building of 1904 and Herman Heisberger's Central Building office complex of 1974. In each instance there is a similar concatenation of span and support that amounts to a tectonic syntax in which gravitational force passes from point to plane, to wall, to column, to arch, to wall, and to element. The contact of this load passes through a series of appropriately articulated transitions and joints. In each of these works the constructional articulation endorses the spatial subdivision and vice versa and this same principle may be found in other works of this century possessing quite different stylistic aspirations. Thus we find a comparable concern for the revealed joint in the architecture of both August Perret and Louis Kahn. In each instance the joint guarantees the purity of the form while adhering to distinct ideological and referential antecedents. Thus where Perret looks back to the structurally rationalised classicism of the Graeco-Gothic ideal, dating back in France to the beginning of the eighteenth century, Kahn evokes a "timeless archaism," at once technologically advanced but spiritually antique.

The case can be made that the prime inspiration behind all this work stemmed as much from Eugène Viollet-le-Duc as from Semper, although clearly Wright's conception of built form as a petrified fabric was large, most evident in his textile block houses of the 1960s derives directly from the cultural priority that Semper gave to textile production and to the knot as the primordial tectonic unit. It is arguable that Kahn was as much influenced by Wright as by the Franco-American Beaux-Arts line, stemming from Viollet-le-Duc and the Ecole des Beaux Arts. This particular genealogy enables us to recognize the links tying Kahn's Richards' Laboratories of 1955 back to Wright's Larkin Building. In each instance there is a similar "knot," textile-like preoccupation with dividing the enclosed volume and its various appointments into segments and seated spaces. In addition to this there is a very similar concern for the expressive rendering of
Mechanical services as though they were of the same hierarchical importance as the structural frame. Thus the monumental brick ventilation shafts of the Richeldi Laboratories are, as anticipated, in the hollow, ducted, brick basements that establish the four-square monumental core of the Lausanne Building. However, Lemaître’s design is a comparable distinction between servant and served spaces in Norman Foster’s Schindler Centre of 1978 combined with similar paradox for the expressive potential of mechanical services. And here again we encounter further proof that the tectonic in the twentieth century cannot concern itself only with structural form.

Wright’s highly poetic approach and the influence of this on the later phases of the modern movement have been underscored, for Wright is surely the primary influence behind such diverse American figures as Carlo Scarpa, Frank Lloyd Wright, and Leonardo Ricci, Gino Valle, and Umberto Riva, to cite only the Italian Wrightian line. A similar Wrightian connection runs through Scandinavia and Spain, serving to connect such diverse figures as Jorn Utzon, Xavier Milla de Olia, and most recently Rafael Moneo, who as it happens was a pupil of both.

Something has to be said of the crucial role played by the joint in the work of Scarpa and to note the synchronically semantic nature of his architecture. This discussion has been brilliantly characterised by Marco Frascari in his essay on the mutual reciprocal of construction and deconstruction.

Technology is a strange word. It has always been difficult to define in semantic terms. The changes in meaning, at different times and in different places, of the word “technology” from its original components of techne and logos, it is possible to see as a micro-like relation between the terms logos and the logos of origin. At the time of the Enlightenment the rhetorical notion of logos was replaced by the scientific logos of the modern. However, as Scarpa’s own architecture replacement the discourse of technology is not with the form in a plastic quality. Translating this plasticity into a language proper to architecture is the saying that there is no construction without a deconstructing and no deconstructing without a constructing.

Elsewhere Frascari writes of the irreducible importance of the joint not only for the work of Scarpa but for all modernist endeavours. That we read in a further essay entitled “The Tell-tale Detail”:

Architecture is an art, because it is interested not only in the original need for shelter but also in putting together, spaces and materials, in a meaningful manner. This means the use of forms and logical jocks. That is, the context of the place, the place where both the construction and the forming of architecture takes place. Furthermore, it is used to complete our understanding of the essential role of the joint in the place of the process of signification to recall that the meaning of the original form-european ear of the word art is joining.

If the work of Scarpa assumes paramount importance for Scarpa, the seminal value of Utzon’s contribution to the evolution of modern tectonic form resides in his reinterpretation of Semper’s Four Elements. This is particularly evident in all his “pagoda/podium” pieces that invariably break down into the earthwork and the structure heath embossed on the podium and into the roof and the Tulip-like slab to be found in the form of the “pagoda.” Interpretation of whether the crowning roof element comprises a shell vault or a folded slab (at the Sydney Opera House of 1973 and the Bagnoli Church of 1977). As we are searching for Semper’s 19th-century and almost to be found in the form of the “pagoda”/podium” pieces that invariably break down into the earthwork and the structure heath embossed on the podium and into the roof and the Tulip-like slab to be found in the form of the “pagoda.” Interpretation of whether the crowning roof element comprises a shell vault or a folded slab (at the Sydney Opera House of 1973 and the Bagnoli Church of 1977), it says something about the nature of Scarpa’s art and the unification of earthwork and earl is evident in his Roman archaeological museum completed in Merida, Spain in 1986.

As we have already indicated, the tectonic lies suspended between a series of opposites, above all between the ontological and the representational. However, other dialogical conditions are involved in the articulation of tectonic form, particularly the contrast between the culture of the heavy-concrete, and the culture of the light-structures. The first implies load-bearing masonry and tends towards the earth and mystery. The second implies the democratised A-frame and lends towards the sky and transcendence. At one end of this scale we have Semper’s earthwork reduced in primordial times, as Gregori reminds us, to the marking of ground. At the other end we have the celestial, democrat­ised aspirations of Joseph Paxton’s Crystal Palace, that which Le Corbusier once described as the victory of light over gravity. Since few works are absolutely one thing or the other, it can be claimed that the poetry of construction arises in part, out of the tension and positioning of the tectonic object. Thus the earthwork extends itself upwards to become an earth or alternatively withers first and becomes a mass, consisting of a pole, elevated from the earth, on which an entire framework takes its anchorage. Other common sense to articulate this dialogic movement further such as smooth versus rough at the level of material (cf Adrian Stokes) or dark versus light at the level of illumination.

Lastly, something has to be said about the significance of the “break” or the “dis-joint” as opposed to the signification of the joint. I am alluding to that point at which things break against each other either with or without contact, that significant fulcrum that is the hallmark of construction. Thus may be this relaying through the interplay between “joint” and “break” in this regard rupture may have just as much meaning in connection. Such considerations sensitise architecture to the semantic risks that attend all forms of articulation, ranging from the reverse articulation of joints to the underarticulation of form.

POSTSCRIPTUM: TECTONIC FORM AND CRITICAL CULTURE

As Sigfried Giedion was to remark in the introduction to his two-volume study, The Eternal Flame (1962), among the deeper impulses of modern culture in the first half of the century was a “transavantgardist” desire to return to the timelessness of a prehistoric past; to recollect in a literal sense some of the original and elemental forces in the earth, on which an entire framework takes its anchorage. Other common sense to articulate this dialogic movement further such as smooth versus rough at the level of material (cf Adrian Stokes) or dark versus light at the level of illumination.

The
This is the primaeval history of the logos to which Vico addressed himself in his *Nuova Scienza* in an attempt to adduce the poetic logic of the institution. It is a mark of the radical nature of Vico's thought that he insisted that knowledge is not just the province of objective fact but also a consequence of the subjective, "collective" elaboration of archetypal myth, that is to say an assembly of those existential symbolic truths residing in human experience. The critical myth of the tectonic joint points to just this timeless, time-bound moment, excised from the continuity of time.