

Kenneth Frampton

RAPPEL À L'ORDRE: THE CASE FOR THE TECTONIC

Owing to the generosity of Kenneth Frampton, noted theorist and professor of architecture, we are honored to place one of his famous essays as an introduction year edition of *Defining the Architectural Space – Durability and Fleetingness of architecture*.

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 eminently amortizable, with all the consequences that this entails for the future of the environment. We have in mind, of course, not the pleasing decay of nineteenth-century Romanticism but the total destitution 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 man's spiritual centre of gravity towards the inorganic, his feeling of his way into the inorganic world, may indeed legitimately be called a cosmic disturbance in the microcosm of man, who now begins to show a one-sided development of his faculties. At the other extreme there is a disturbance of macrocosmic relationships, a result of the especial favour and protection which the inorganic now enjoys – almost always at the expense, not to say ruin, of the organic. The raping and destruction of the earth, the nourisher

of man, is an obvious example and one which in its turn reflects the distortion of the human microcosm from the spiritual [1].

Against this prospect of cultural degeneration, we may turn to certain rear-guard 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 1965 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] looked as though they were going to be assimilated to entertainment pure and simple, and entertainment itself looked as though it was going to be assimilated, like religion, to therapy.

The arts could save themselves from this leveling down only by demonstrating that the kind of experience they provided was valuable in its own right, and not to be obtained from any other kind of activity [2].

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 constructional 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 1980 essay 'Avant-Garde and Continuity', the Italian architect Giorgio Grassi had the following

comment to make about the impact of avant-gardist art on architecture:

... as far as the vanguards of the Modern Movement are concerned, they invariably follow in the wake of the figurative arts Cubism, Supremalism, 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 'isms'; experimenting in a perplexed manner because of their fascination with the new doctrines, measuring them, only later to realize their ineffectuality... [3].

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 to challenge spatial invention as an end in itself: a pressure to which modern architecture has been unduly subject. Rather than join in a recapitulation of avant-gardist tropes or enter into historicist pastiche or into the superfluous proliferation of sculptural gestures – all of which have an arbitrary dimension to the degree that they are based in neither structure nor in construction – we may return instead 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 *poesis* as an act of making and revealing. While I am well aware of the conservative connotations that may be ascribed 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 aestheticism.

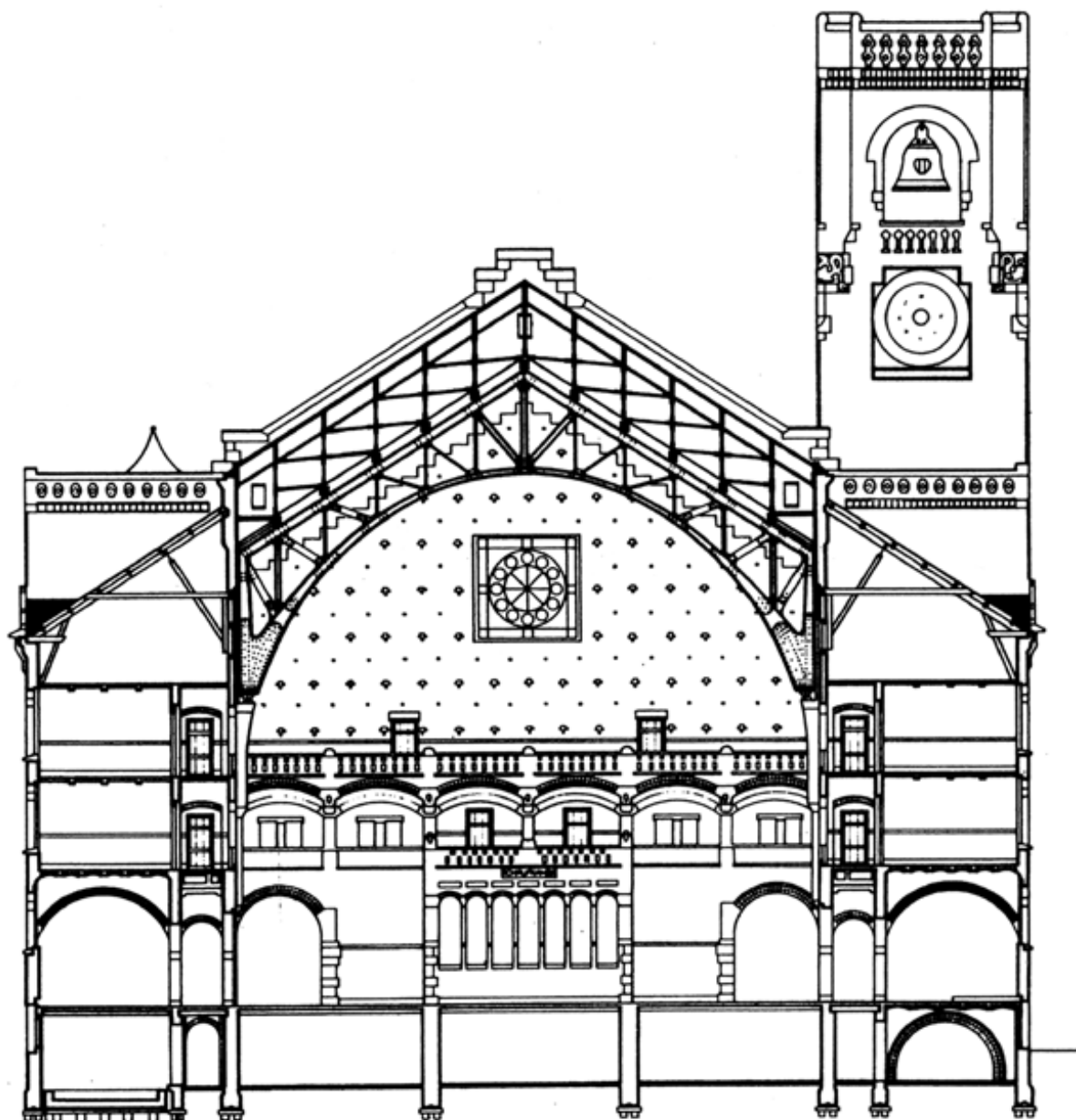
Perhaps the most balanced assessment of Grassi has been made by the Catalan critic Ignasi Solà Morales, when he wrote:

Architecture is posited as a craft, that is to say, as the practical application of established knowledge through rules of the different levels of intervention. Thus, no notion of architecture as problem-solving, as innovation, or as invention ex novo, is present in Grassi's thinking, since he is interested in showing the permanent, the evident, and the given character of knowledge in the making of architecture.

...The work of Grassi is born of a reflection upon the essential resources of discipline, and it focuses upon specific media which determine not only aesthetic choices but also the ethical content of its cultural contribution. Through these channels of ethical and political will, the concern of the Enlightenment... becomes enriched in its most critical tone. It is not solely the superiority of reason and the analysis of form which are indicated, but rather, the critical role (in the Kantian sense of the term) that is, the judgement of values, the very lack of which is felt in society today... In the sense that his architecture is a meta-language, a reflection on the contradictions of its own practice, his work acquires the appeal of something that is both frustrating and noble... [4].

The dictionary definition of the term 'tectonic' to mean 'pertaining to building or construction in general; constructional, constructive used especially in reference to architecture and the kindred arts', is a little reductive to the extent that we intend not only the structural component *in se* but 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 with the writings of Karl Bötticher and Gottfried Semper, the term not only indicates a structural and material probity but also a poetics of construction, as this may be practised in architecture and the related arts.

The Doric Order from Lafever's *The Modern Builder's Guide*, 1983. According to Karl Bötticher's theory the *Kunstform* is the fluting and the *Kernform* is the body of the column



The beginnings of the Modern, dating back at least two centuries, and the much more recent advent of the Post-modern, are inextricably bound up with the ambiguities introduced into Western architecture by the primacy given to the scenographic in the evolution of the bourgeois world.

However, building remains essentially tectonic rather than scenographic in character and it may be argued that it is first and foremost an act of construction rather than a discourse predicated on the surface, volume and plan, to cite Le Corbusier's 'Three Reminders to Architects'. Thus one may assert that building is *ontological* 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 it as a 'thing' rather than a 'sign'. I have chosen to engage with this theme because I believe it is necessary for architects to reposition themselves given that the predominant tendency today is to reduce all architectural expression to the status of commodity culture. In as much as such resistance has little chance of being widely accepted, a 'rear-guard' posture would seem to be an appropriate stance to adopt rather than the dubious assumption that it is possible to continue with the perpetuation of avant-gardism. Despite its concern for structure, an emphasis on tectonic form does not necessarily favour either Constructivism or Deconstructivism. In this sense it is astylistic. Moreover it does not seek its legitimacy in science, literature or art.

Greek in origin, the term *tectonic* derives from the term *tekton*, signifying carpenter or builder. This in turn stems from the Sanskrit *taksan*, referring to the craft of carpentry and to the use of the axe. Remnants of a similar term can also be found in Vedic, where it refers to carpentry. In Greek it appears in Homer, where it again alludes to carpentry and to the art of construction in general. The poetic connotation of

the term first 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 Aristophanes we even find the idea that it is associated with machination 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* (a 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 1850 the German oriental scholar K. O. Muller was to define the term rather rudely, as 'A series of arts which form and perfect vessels, implements, dwellings and places of assembly'. The term is first 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 or Practical Aesthetic*, published between 1863 and 1868.

The term 'tectonic' cannot be divorced from the technological, and it is this that gives it a certain ambivalence. In this regard it is possible to identify three distinct conditions: 1) the *technological object*, which arises directly out of meeting an instrumental need; 2) the *scenographic object*, which may be used equally to allude to an absent or hidden element; and 3) the *tectonic object*, which appears in two modes. We may refer to these modes as the *ontological* and *representational* tectonic. 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. The second mode involves the representation of a constructional element which is present, but hidden. These two modes can be seen as paralleling the distinction that Semper made between the *structural-technical* and the *structural-symbolic*.

Aside from these distinctions, Semper was to divide built form into two separate material procedures: into the *tectonics* of the frame, in which members of varying lengths are conjoined to encompass a spatial field; and the *stereotomics* of compressive mass that, while it may embody space, is constructed through the piling up of identical units (the term *stereotomics* deriving from the Greek term for solid, *stereos* and cutting, *-tomia*). In the first case, the most common material throughout history has been wood or its textual equivalents such as bamboo, wattle and basketwork. In the second case, one of the most common materials has been brick, or the compressive equivalent of brick such as rock, stone or rammed earth and later, reinforced concrete. There 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 so familiar as to hardly need repetition, we tend to be unaware of the ontological consequences of these differences; that is to say, of the way in which framework tends towards the aerial and the dematerialization of mass, whereas the mass form is telluric, embedding itself ever deeper into the earth. The one tends towards light and the other towards dark. These gravitational opposites, the immateriality of the frame and the materiality of the mass, may be said to symbolize the two cosmological opposites to which they aspire: the sky and the earth.

Despite our highly secularized techno-scientific age, these polarities still largely constitute the

experiential limits of our lives. It is arguable that the practice of architecture is impoverished to the extent that we fail to recognize these transcultural values and the way in which they are latent in all structural form. Indeed, these forms may serve to remind us, after Heidegger, that inanimate objects may also evoke 'being', and that through this analogy to our own corpus, the body of a building may be perceived as though it were literally a physique. This brings us back to Semper's privileging of the joint as the primordial tectonic element, as the fundamental nexus around which building comes into being, that is to say, comes to be articulated as a presence in itself.

Semper's emphasis on the joint implies that fundamental syntactical transition may be expressed as one passes from the *stereotomic* base to the *tectonic* frame, and that such transitions constitute the very essence of architecture. They are the dominant constituents whereby one culture of building differentiates itself from the next.

There is a spiritual value residing in the 'thingness' of the constructed object, so much so that the generic joint becomes a point of ontological condensation rather than a mere connection. The work of Carlo Scarpa would seem to exemplify this attribute.

The first volume of the fourth edition of Karl Bötticher's *Tektonik der Hellenen* appeared in 1843, two years after 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 1852, the year of Semper's 'Four Elements of Architecture'. Bötticher elaborated the concept of the tectonic in a number of significant ways. At one level he envisaged a conceptual *junction*, 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 *Körperbilden* of the building that not only guaranteed its material finish, but also enabled this function to be recognized as a symbolic form. At another level, Bötticher distinguished between the *Kernform* or nucleus and the *Kunstform* or decorative cladding, the latter having the purpose of representing and symbolizing the institutional status of the work. According to Bötticher, this shell or revetment had to be capable of revealing the inner essence of the tectonic nucleus. At the same time Bötticher insisted that one must always try to distinguish between the indispensable structural form and its enrichment, irrespective of whether the latter is merely the shaping of the technical elements – as in the case of the Doric column, or the cladding of its basic form with revetment. Semper will later adapt this notion of *Kunstform* to the idea of *Bekleidung*, that is to say, to the concept of literally ‘dressing’ the fabric of a structure.

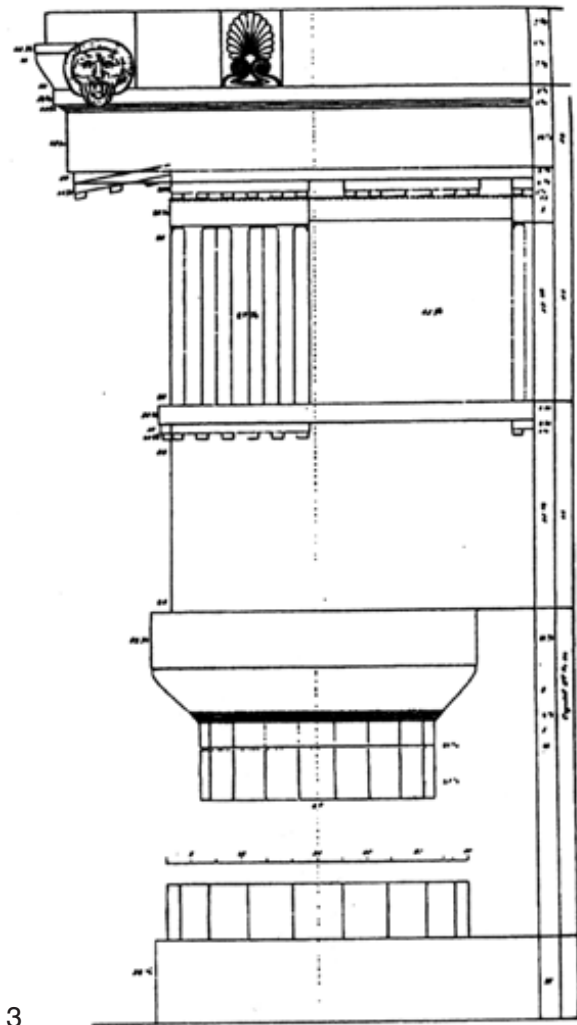
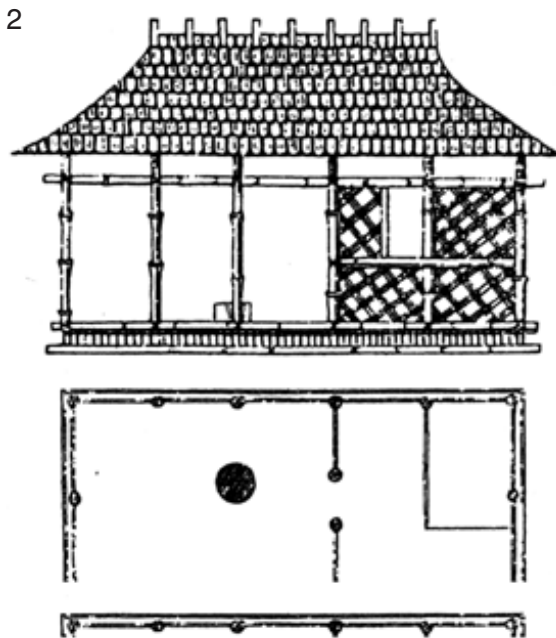
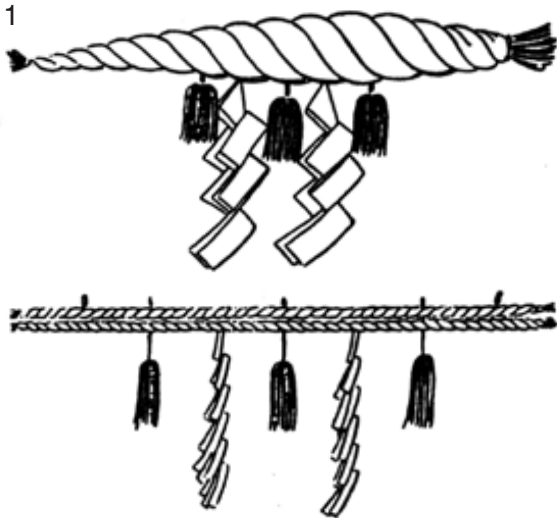
Bötticher was greatly influenced by the philosopher Josef von Schelling’s view that architecture transcends the mere pragmatism of building by virtue of assuming symbolic significance. For Schelling and Bötticher alike, the inorganic had no symbolic meaning, hence structural form could only acquire symbolic value by virtue of its capacity to engender analogies between tectonic and organic form. However, any kind of direct imitation of natural form was to be avoided since both men held the view that architecture was an imitative art only in so far as it imitated itself. This view tends to corroborate Grassi’s contention that architecture has always been distanced from the figurative arts, even if its form can be seen as paralleling nature. In this capacity architecture simultaneously serves both as a metaphor of, and as a foil to, the naturally organic. In tracing this thought retrospectively, one may cite Semper’s ‘Theory of Formal Beauty’ of 1856 in which he no longer grouped architecture with painting and

sculpture as a plastic art, but with dance and music as a cosmic art, as an ontological world-making art rather than as representational form. Semper regarded such arts as paramount not only because they were symbolic but also because they embodied man’s underlying erotic-ludic urge to strike a beat, to string a necklace, to weave a pattern, and thus to decorate according to rhythmic law.

Semper’s ‘Four Elements of Architecture’ brings the discussion full circle in as much as Semper added a specific anthropological dimension to the idea of tectonic form. Semper’s theoretical schema constitutes a fundamental break with the 400-year-old humanist formula of *utilitas, firmitas, venustas* that first served as the intentional triad of Roman architecture and then as the underpinning of post-Vitruvian architectural theory. Semper’s radical reformulation stemmed from his seeing a model of a Caribbean hut in the Great Exhibition of 1851. The empirical reality of this simple shelter caused Semper to reject Laugier’s primitive hut, adduced in 1753 as the primordial form of shelter with which to substantiate the pedimented paradigm of Neoclassical architecture. Semper’s ‘four elements’ countermanded this hypothetical assumption and asserted instead an anthropological construct comprising: 1) a hearth, 2) an earthwork, 3) a framework and a roof, and 4) an enclosing membrane. While Semper’s elemental model repudiated Neoclassical authority it none the less gave primacy to the frame over the load-bearing mass. At the same time, Semper’s four-part thesis recognized the primary importance of the earthwork, that is to say, of a telluric mass that serves in one way or another to anchor the frame or the wall, or *Mauer*, into the site.

This marking, shaping and preparing of ground by means of an earthwork had a number of theoretical ramifications. On the one hand, it isolated the enclosing membrane as a differentiating act, so that the *textual* could be literally identified with

1. Gottfried Semper, drawing of a Caribbean hut exemplifying the „four elements”: structure and roof, podium, hearth, and infill wall, 1851
2. Hendric Petrus Berlage, Stock Exchange, Amsterdam, 1897–1904, cross-section
3. Reconstruction of a typical medieval Town from Karl Gruber's *Die Gestalt der Dutscher Stadt*, 1937. The image shows the difference between the heavyweight monumental architecture and the lightweight residential fabric



the proto-linguistic nature of textile production that Semper regarded as the basis of all civilization. On the other hand, as Rosemary Bletter has pointed out, by stressing the earthwork as the fundamental basic form, Semper gave symbolic import to a non-spatial element, namely, the hearth, which was invariably an inseparable part of the earthwork. The term 'breaking ground' and the metaphorical use of the word 'foundation' are both obviously related to the primacy of the earthwork and the hearth.

In more ways than one Semper grounded his theory of architecture in a phenomenal element having strong social and spiritual connotations. For Semper the hearth's origin was linked to that of the altar, and as such it was the spiritual nexus of architectural form. The hearth bears within itself connotations in this regard. It derives from the Latin verb *aedificare* which in its turn is the origin of the English word *edifice*, meaning literally 'to make a hearth'. The latent institutional connotations of both hearth and edifice are further suggested by the verb *to edify*, which means to educate, strengthen and instruct.

Influenced by the 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 *Mauer*, from the light frame and in-fill – wattle and daub, say – of medieval domestic building, for which the term *Wand* is used. This fundamental distinction has been nowhere more graphically expressed than in Karl Gruber's reconstruction of a medieval German town. Both *Mauer* and *Wand* reduce to the word 'wall' in English, but the latter in German is related to the word for dress, *Gewand*, and to the term *Winden*, which means to embroider. In accordance with the primacy that he gave to textiles, Semper maintained that the earliest basic structural artefact was the knot, which predominates in nomadic building form – especially in the Bedouin tent and its textile interior. There are

etymological connotations residing here of which Semper was fully aware, above all, the connection between *knot* and *joint*, the former being in German *die Knoten* and the latter *die Verbindung*, which may be literally translated as 'the binding'. All 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 Gunter Nitschke's research into Japanese binding and unbinding rituals as set forth in his seminal essay 'Shime' of 1974 [5]. In Shinto culture these proto-tectonic binding rituals constitute agrarian renewal rites. They point at once to that close association between building, dwelling, cultivating and being that was remarked on by Martin Heidegger in his essay 'Building, Dwelling, Thinking' of 1954.

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

...the worst enemy of modern architecture is the idea of space considered solely in terms of its economic and technical exigencies indifferent to 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 geo-environmental 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 principles and methods can be seen for design.

Principles and methods that give precedence to the siting in a specific area [sic]. This is an act of knowledge of the context that comes out of its architectural modification [my emphasis]. The origin of architecture is not the primitive hut, the cave or the mythical Adam 's House in Paradise'. Before transforming a support into a column, a roof into a tympanum, before placing stone on stone, man placed a stone on the ground to recognize a site in the midst of an unknown universe, in order to take account of it and modify it. As with every act of assessment, this one required radical moves and apparent simplicity. From this point of view, there are only two important attitudes to the context. The tools of the first are mimesis, organic imitation and the display of complexity. The tools of the second are the assessment of physical relations, formal definition and the interiorization of complexity [6].

With the tectonic in mind it is possible to posit a revised account of the history of modern architecture, for when the entire trajectory is reinterpreted through the lens of *techne* certain patterns emerge and others recede. Seen in this light a tectonic impulse may be traced across the century, uniting 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 a very similar level of tectonic articulation patently links Hendrik Petrus Berlage's Stock Exchange of 1897–1904 to Frank Lloyd Wright's Larkin Building of 1904 and Herman Hertzberger's

Centraal Beheer office complex of 1968–72. In each instance there is a similar concatenation of span and support that amounts to a tectonic syntax in which gravitational force passes from purlin to truss, to pad stone, to corbel, to arch, to pier and abutment. The technical transfer of this load passes through a series of appropriately articulated transitions and joints. In each of these works the constructional articulation engenders 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 Auguste Perret and Louis Kahn. In each instance the joint guarantees the probity and presence of the overall form while alluding to distinct different ideological and referential antecedents. Thus, where Perret looks back to the structurally rationalized classicism of the Greco-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 Eugene Viollet-le-Duc as from Semper, although clearly Wright's conception of built form as a petrified fabric writ large, most evident in his textile block houses of the Twenties, 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 1961 back to Wright's Larkin Building. In each instance there is a similar 'tartan', textile-like preoccupation with dividing the enclosed volume and its various appointments into *servant* and *served* 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 hierarchic importance as the structural frame. Thus the monumental brick ventilation shafts of the Richards' Laboratories are anticipated, as it were, in the hollow, ducted, brick bastions that establish the four-square monumental corners of the Larkin Building. However dematerialized, there is a comparable discrimination between servant and served spaces in Norman Foster's Sainsbury Centre of 1978, combined with a similar penchant 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 tectonic approach and the influence of this on the later phases of the Modern Movement have been underestimated, for Wright is surely the primary influence behind such diverse European figures as Carlo Scarpa, Franco Albini, 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 Jørn Utzon, Javier Sáenz de Oiza 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 syntactically tectonic nature of this architecture. This dimension has been brilliantly characterized by Marco Frascari in his essay on the mutual reciprocity of 'constructing' and 'construing':

Technology is a strange word. It has always been difficult to define its semantic realm. Through the changes in meaning, at different times and in different places, of the word 'technology' into its original components of techne and logos, it is possible to set up a mirror-like relationship between the techne of logos and the logos of techne. At the time of the

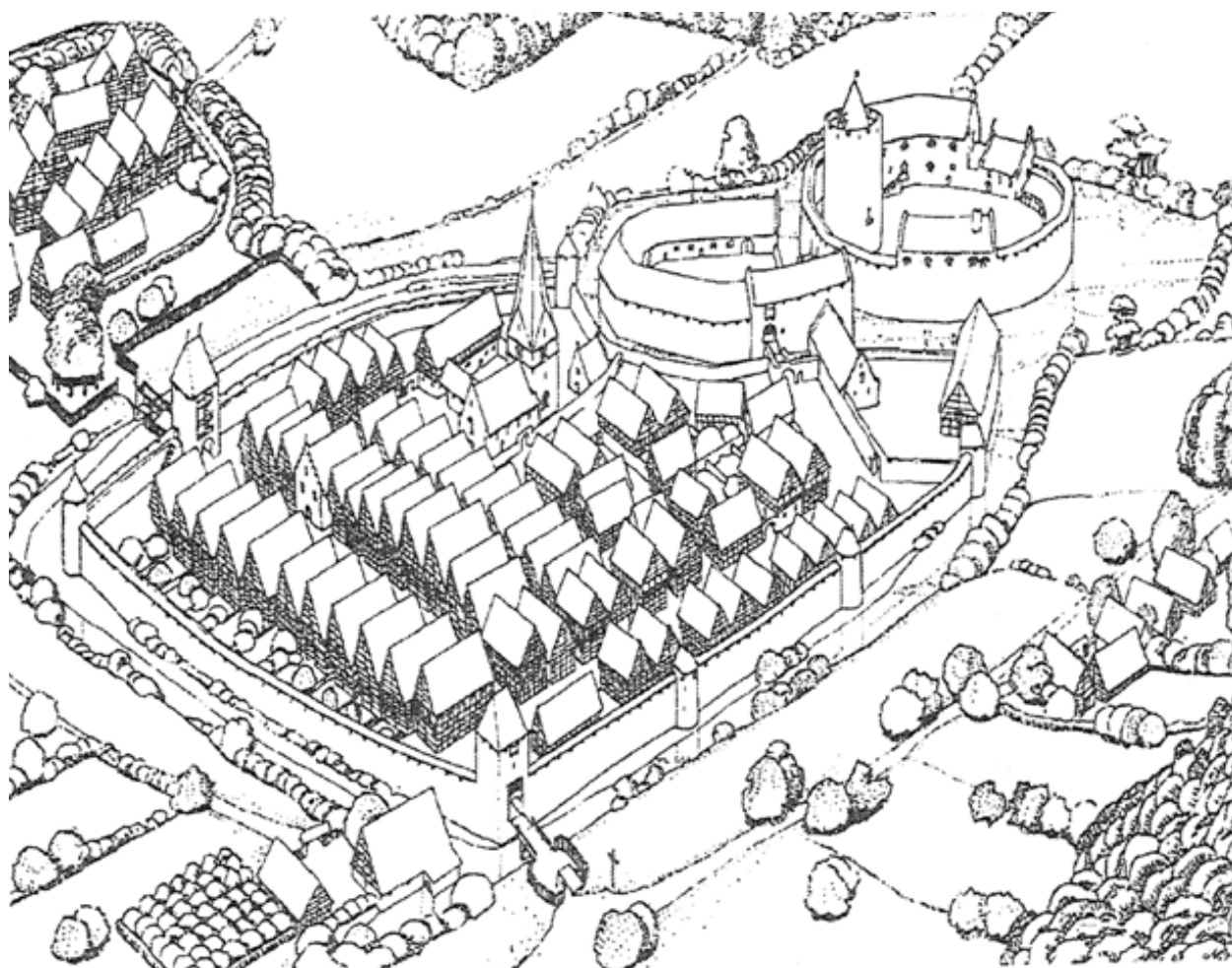
Enlightenment the rhetorical techne of logos was replaced by the scientific logos of techne. However, in Scarpa's architecture this replacement did not take place. Technology is present with both the forms in a chiasmic quality. Translating this chiasmic presence into a language proper to architecture is like saying that there is no construction without a construing, and no construing without a construction [7].

Elsewhere Frascari writes of the irreducible importance of the joint not only for the work of Scarpa but for all tectonic endeavours. Thus we read in a further essay entitled 'The Tell-the-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 the meaningful manner. This occurs through formal and actual joints. The joint, that is the fertile detail, is the place where both the construction and the construing of architecture takes place. Furthermore, it is useful to complete our understanding of this essential role of the joint as the place of the process of signification to recall that the meaning of the original Indo-European root of the word art is joint... [8].

If the work of Scarpa assumes paramount importance for stress on the joint, 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, which invariably break down into the earthwork and the surrogate hearth, embodied in the podium, and into the roof and the textile-like in-fill, to be found in the form of the 'pagoda' – irrespective of whether this crowning roof element comprises a shell vault or a folded slab (as in the Sydney Opera House of 1973 and the Bagsvaerd Church of 1976). It says something for Moneo's apprenticeship under Utzon that a similar articulation of earth – work and roof is evident in his Roman archaeological museum completed in Merida, Spain in 1986.

Shime-nawa, traditional apotropaic Shinto signs in bound rice straw and paper.



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-stereotomics*, and the culture of the *light-tectonics*. The first implies load-bearing masonry and tends towards the earth and opacity. The second implies the dematerialized A-frame and tends towards the sky and translucence. At one end of this scale we have Semper's earthwork reduced in primordial times, as Gregotti reminds us, to the marking of ground. At the other end we have the ethereal, dematerialized 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 the one thing or the other, it can be claimed that the poetics of construction arise, in part, out of the inflection and positionings of the tectonic object. Thus the earthwork extends itself upwards to become an arch or a vault, or alternatively withdraws first to become the cross-wall support for a simple light-weight span and then to become a podium, elevated from the earth, on which an entire framework takes its anchorage. Other contrasts serve to articulate this dialogical movement further – such as smooth versus *rough* at the level of material (see Adrian Stokes's study *Smooth and Rough*, 1951), or *dark* versus *light* at the level of illumination. Finally, something has to be said about the signification 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 rather than connect: that significant fulcrum at which one system, surface or material abruptly ends to give way to another. Meaning may be thus encoded through the interplay between 'joint' and 'break', and in this regard rupture may have just as much meaning as connection. Such considerations sensitize the architecture to the semantic risks that attend all forms

of articulation, ranging from the over-articulation of joints to the under-articulation of form.

Postscript: tectonic form and critical culture

As Sigfried Giedion was to remark in the introduction to his two-volume study *The Eternal Present* (1962), among the deeper impulses of modern culture in the first half of this century was a 'transavantgardist' desire to return to the timelessness of a pre-historic past; to recover in a literal sense some dimension of an eternal present, lying outside the nightmare of history and beyond the processal compulsions of instrumental progress. This drive insinuates itself again today as a potential ground from which to resist the commodification of culture. Within architecture the tectonic suggests itself as a mythical category with which to acquire entry to an anti-processal world wherein the 'presencing' of things will once again facilitate the appearance and experience of men. Beyond the aporias of history and progress and outside the reactionary closures of historicism and the neo-avant-garde lies the potential for a *marginal* counter-history. This is the primeval history of the logos to which Vico addressed himself, in his *Nuova Scienza*, in an attempt to adduce the poetic logic of the institution [9]. 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 the human experience. The critical myth of the tectonic joint points to just this timeless, time-bound moment, excised from the continuity of time.

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ENDNOTES

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[2] C. Greenberg, „Modernist Paining” (1965), republished In Gregory Battcock, Ed., *The New Art.*, New York: Dutton, 1966, pp. 101–102.

[3] G. Grassi, „Avant-Garde and Continuity”, In *Oppositions*, no. 21, summer 1980, pp. 26–27.

[4] I. S. Morales, „Critical Discipline”, In *Oppositions*, no. 23, Winter 1981, pp. 148–150.

[5] G. Nitschke, „Shime: Building/Unbuilding”, *Architectural Design*, no. 44, 1974, pp. 747–791.

[6] V. Gregotti, „Lecture AT the New York Architectural League”, *Section A.*, no. 1; February/March 1983.

[7] M. Frascari, „Technometry and the work of Carlo Scarpa and Mario Røidolfi”, *Proceedings of the ACSA National Conference on Techdoom*, Washington 1987.

[8] M. Frascari, „The Tell-the-Tale Detail”, In *VIA*, no. 7, Philadelphia: University Of Pennsylvania and MIT Press, 1984, pp. 23–37.

[9] See J. Mali, „Mythology and Counter-History: The New Critical Art. Of Vico and Joyce”, In *Vico and Joyce*, Donald P Verene, Ed., Albany: State University of New York Press, 1987.