

PLENARY SESSION I: TECTONICS IN THEORY (UN)PREDICTING MATTER AND INTELLIGENCE

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For this talk, I would like to articulate certain philosophical issues that concern tectonic debates in architecture. I carefully emphasize here the word debate and not the word doctrine. Tectonics is not an organized theory or a clear pathway toward architectural intuition. As any historical perusal of the subject demonstrates, and there are a great many, tectonics has neither a consistent trajectory over the course of the past 200 years nor a discernable rhythm of refinement. The phenomenological school, to take an example, for all its desires to be accepted as the immediate modality of architectural experience as construction, is but one facet of tectonics. So are the variables of style, mechanization, detailing, and craft that have made up the pages of tectonic pleading in modern/postmodern times.

But if tectonics is debate and not doctrine, how do its controversies congeal into something recognizable? Does tectonics extol any salient characteristics that would distinguish it from other architectural debates? In what follows, I will argue that tectonics does possess such a characteristic: a sustained engagement of architecture's pre-modern systematic cosmology with its modern (and postmodern) instrumental journeys into the unexplored.

Let me explain further. Through tectonics, architecture's possible loss of identity within a stream of differentiating cultural affiliations is checked in the background light of a universal metaphysical paradigm. In other words, tectonics may be regarded as the exploding present gathered and ordered by the homogeneous perspectives of the past. Even if this past—largely Graeco-Roman classicism and its offshoots—is more a mythic longing for fundamental rules and consensus than a concrete reality, its symbolic importance to the present cannot be underestimated.

In an institutional sense, the modern infatuation with technological change, constructional invention, and creative drive is decelerated by tectonic illusions of inter-disciplinary balance. In this sense, tectonics is the architectural discipline sustaining itself in uncharted waters, preventing its decomposition within the build-up connections and reconnections that characterize contemporary life in a worldwide commodity economy. After all, without traditional provocations to its big spaces, elevated heights, and seismic combinations of matter, who is to say that architecture as a field would continue to insulate any common intelligence?

Within this crucible, tectonics becomes a simultaneous act of compression and tension; it may be said, in fact, that tectonics is the ongoing reassemblage of the architectural profession within the parallel universes of day-to-day performance and historical reflection. There is a perversity to this endeavor: through tectonics, we approach architecture's manifold of present

situations by back-pedaling through the times and places of its memories.

Since the Enlightenment, architecture has become immeasurably vast within spaces pioneered by the mind and technology. From beginnings of the industrial, scientific, and bourgeois revolutions, customary relations between matter and intelligence became an issue of subjectivity, an unresolvable difference between "the world" and "the world for us." For architecture, this has meant a divide between building in and of itself and building as it is perceived, between building as an essence and building as representation, and between structure/program and ornament/artistry. Nowhere is this architectural labyrinth more pronounced than in the discourse on tectonics.

The emergence of a discourse on tectonics during the nineteenth century signalled a momentous transition within architectural thought from a religious and Aristotelian cosmology to one of modern science and aesthetics. Aristotelian philosophy had understood the world through dyadic pairs: for instance, opposition of hot and cold, hard and soft, moist and dry, transparent and opaque. These pairs were evidence of a closed universe, of an abstract rationalism that saw fundamental continuity between the domains of matter and intelligence. Both were parts of a single, hierarchical and transcendental order.

In the age of classicist architecture that lasted well into the eighteenth century, this attitude implied continuity between building and its descriptive vocabulary: no disparity existed between building as function and building as representation. The physical elements that symbolized architecture—that were its emblems or schema—were revelations of a primary reality just as much as the physical elements that established architecture's stability and utility. Ornament, structure, and program—the Vitruvian trinity—all pointed in the same direction.

It is no wonder, then, that classicist architecture's purposes were for a long time well served by intricate procedures of composition that worked to establish values of hierarchy, order, and closure. These included dyadic contrasts under the headings of symmetry, eurythmy, and propriety. The Renaissance notion of creating a greater whole through a harmonization of parts referred not just to individual buildings but to the entire cosmos. Architecture was part of a continuum of human activities whose symbolic mediation to an all-compassing divine plan was critical.

The modern predicament of the subject introduced an altogether different equation for architectural production. The new primacy of imagination demonstrates the unexcavated depths of art, and described for artists a protean creative drive akin to divine creation. At the same time, architects could no

longer ignore the new building nature emerging around them, an everyday language of forms and spaces premised on scientific innovation, industrial mechanization, and imperial observation. In both instances, they were forced to abandon their customary reliance on the paradigm of antique mimesis. A new compositional design beckoned, tuned to the new rhythms of the universe as emitted directly from the naturalized soul or humanized macrocosm. This attitude was not really new to the nineteenth century.

As much as Descartes's plenum of motion and Newton's infinitesimal calculus, Spinoza's concept of pantheism is of vital relevance to the origins of tectonic theorizing within architecture. After the publication of the *Tractatus Theologico-politicus* (1670), which set forth a purely historical description of the Bible, and the *Ethica* (1677), which argued that the truth of things can only be discovered through subjective reason, Spinoza became the philosophical heretic of Europe. He refuted theism, the belief that God was a non-accessible, transcendent being with the power to shape the world. In its place, pantheism proclaimed that self-reflection leads to the god inside of humanity and nature. It followed that human reason would take the place of divine revelation. Or better stated, divine revelation would take form of human reason.

Previously, architecture in the age of classicism could be characterized as the partial, patterned description of essence; from the Renaissance to eighteenth century the discipline is best likened to a rhetorical posturing beneath the ordering hand of the theistic cosmos. Now, the onset of subjectivity meant the permanent loss of classicist consciousness, just as Dalibor Vesely tells us: "The richness of symbolic mediation between the ideal and real nature of things was replaced by hypothetical experiment, in which the distinction between that which is only possible and that which is factual lost its meaning."

Pantheistic secularism led architectural construction into a world of measure, mechanics, and quantitative reasoning; but also infinitude, imagination, and new creation. Symbol was replaced by instrument, rhetorical exercise by the pyrotechnics of proof and evidence. The worlds of industrial construction and artistic symbolism, as much as Spinoza's pantheistic universe, began to represent remote mechanisms of efficient powers—the modern predicament of existence.

To its numerous critics, pantheism insinuated the absence of ultimate knowledge of first or final causes. For architecture, building reality threatened to become a phantasm of blindly evolving energies, a chaotic mechanism of efficient powers. What would hold architecture together in such a world?

The answer I would argue is architecture considered as an autonomous language. From approximately 1830 till 1960, the tectonic dialectics of constructive necessity and artistic freedom established the grammar and syntax of such an autonomous language, and in the event ameliorated the nihilistic consequences of pantheism and humanist secularism. In the modern era, architecture responded to the loss of symbolic meaning through the invention of autonomous systems of understanding, beholden in the end only to themselves and to architecture's ability to predict the worlds of matter and intelligence.

Nonetheless, as the legacy of modernity tells us, this language engendered its own instabilities. Modern architecture encountered a free-fall of linguistic reductionism, encompassing both art's libidinous energy as well as the functional intensities

of scientific reason. Indeed as the languages of art and science acquired the centrality formerly accorded to religion, architecture's supposed autonomous language was torn apart. On the one hand, the discipline was required to transcend materiality and neglect purpose. On the other hand, architecture had cut all ties to its astonishing artistic clairvoyance. The secular transformation of religion into art/science undermined the Vitruvian trinity of beauty, structure, and function that had steered the ontology of classical architecture since the Renaissance and that was supposedly going to be preserved within modern tectonics as autonomous language. To repeat, building in the secular era became trapped within reconciliatory schemes for construction and art. As Schopenhauer wrote during the early nineteenth century, the world of physical things is beyond description because we cannot know anything concrete about its motivating force, the human will. Human languages, he was saying, are forms of fractious idolatry, poor substitutes for the consistency of God's will.

Theories of modern tectonics express the goals and problems inherent in recognizing within architecture a complete and total language. What, after all, would hold the diverse aspects of this language together? For instance, modern architecture, as a response to unanchored essence, had to distribute its forces beyond mere material construction, which by the nineteenth century was widely criticized as a lowly mechanical process of making, an incomplete language so to speak. To this extent, another language, stylistic ornament, extended constructive materiality both within and beyond itself. Ornament began to speak in tongues, situating architecture in multiple, confusing, and frequently ridiculous imaginings of lost being.

During the 1830s and 1840s Karl Friedrich Schinkel and Karl Botticher made perhaps the foundational contributions to tectonics as a theoretical debate. They imagined architecture's grammatical homogeneity alongside its diversity of vocabulary. To this extent, they re-positioned ornament to serve the potentially new and contradictory purposes of industrial technology and national centralization. Both architectural theorists were preoccupied with creating new connections between beauty and utility so as to articulate architectural language as the new universal nature of modern civilization. Of course, their themes of connective communication between dynamic structure and lost images of art dramatically raised the stakes of disciplinary unity beyond any notion held in the age of Vitruvianism. Architecture became its own destination. As Scott Wolf writes: "Schinkel sought to universalize tectonic perception outside space and time; to arouse a momentary perception that becomes both cause and effect." How much more subjective and autotomizing could the tectonic project be?

The problems of nineteenth-century German tectonics were realized by Walter Benjamin in his monumental work of fragments, *Das Passagen Werk*. It described a process of abstraction within tectonic theorizing of the 1920s and 1930s, a movement toward a self-confident identification with industrial materiality epitomized by the writings of Adolf Meyer and Sigfried Giedion. Had architecture finally come upon a language that was fully consistent with its past and utterly emblematic of the world around it? A material language—steel, glass, reinforced concrete—that exuded immediate intellectual comprehension? Benjamin, to his credit, realized the futility of this endeavor. He remarked on matter's precarious existence, the inherently fleeting nature of fabricated product in an age when

the intelligibility of such products was increasingly fragmented within multiple mechanized reproductions. Architecture as matter could not be predicted as autonomous intelligence. To this extent, Detlef Mertins remarks on Benjamin's radicalization of the terms of tectonic discourse: "When and how would construction—pursuing its own inherent logic of purification, working within but against the system of production, working within but against the object riddled with error—bring about the ruination of bourgeois culture and society, and do so without overt politics, but rather through a collective physiological labor that had the character of a constantly renewed originary upsurge?"

In the last thirty years, the Will as it is expressed within architecture has reached new levels of linguistic spectacle and indeterminability. Buildings are increasingly structured through the synchronic predicaments of subjective world-making and through their resonance of the unbinding pressures of language-making. We recognize that structural system and signage, programmatic parti and communications networks are hardly distinguishable from each other, or, to put it another way, more revealing of their linguistic affinities to each other than their ties to any so-called real world. Has tectonics come to an end?

I would argue not. The recognition, on the part of many architects and theorists that tectonics is more about itself—as an architectural historiography—than anything else is no reason to assume the theoretical debates are at an end. Tectonics in its postmodern guises—in its ever deeper self-referentiality—more than ever affirms architecture's identity as a historical discipline, and, furthermore, unlike modern tectonics, adds critical awareness to the limits of pure instrumental subjectivity.

What then does tectonics hold for the future? Looking to the past as we must, tectonics tells us that over the past 200 years architecture has encompassed a monumental strategy of investing itself with the range of knowledge shared by both the human and divine worlds in the pre-modern era. Thus, instead of studying nature through its strata of classical symbolizations, as had been the case in this latter period, modern architecture shifted to a study of nature as a completely subjective architec-

tural language. Nature was no longer a symbolic language but firsthand language. Tectonics, rather than the symbolic representation of constructional forces, as is commonly believed, was much more a drive to stabilize architectural existence within the enormities of that state of autonomous becoming. Without any doubt, modern and postmodern architecture has been all about Babeling in the ruins of Eden.

Yet, unlike other autonomous drives within modernity, tectonics consistently holds one enduring symbolic value; the idea of an architectural discipline patterned on its historic past. Tectonics may be looked at, as I've been saying, as the symbolization of architecture itself and not divine nature. Both modern and postmodern tectonic theories have been consistently measured against the terms of an utterly distinct and inaccessible architectural mentality. Thus the linguistic desire to understand aesthetic, functional, structural laws, to realize architecture as complete nature, as autonomous system, ultimately returns time and time again to earlier metaphysical illusions, to architecture's earlier encounter with cosmological symbolism. Tectonics, considered philosophically as a state of debate and not a trajectory of doctrine, is in the new result a meditation on the impossibility of a full emancipation of the modern from the classical, of subjectivity from divinity, of instrumental from symbol. Today, in a contemporary world intent on reexamining the legacy of the interdependence of history and contemporaneity, theory and practice, epistemology and metaphysics. For architecture, despite its frequent notions to the contrary, is much more an ongoing articulation of nervous identity than a sure-fire route to pragmatic action.

To conclude, tectonics is architecture's experiment with tradition. As such, it is a set of reflections most important to this present day of dogmatic traditionalism and equally dogmatic avant-gardism. For tectonics demonstrates the futility of both pure dependency and pure autonomy, of ridding of either the call for the new or history's mousetraps. Tectonics speaks of architecture in-between, of the fact that as architecture catapults onto the screen it can only recognize itself in long-lost lyrical meters.