CONSTRUCTING MONSTROUS FAMILIES: ALBERTI, MASTER BUILDERS, AND MONOLITHS

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INTRODUCTION

In Europe, from the fourth to the fourteenth century, architecture was practically a crime. In fact, far worse than a criminal act, design and construction were crimes against God for which the participants risked the loss of their souls to eternal damnation.

To build for any purpose implied an inappropriate faith in the permanence of material things in this world and was easily seen as an expression of personal vainglory. [1]

Beginning with the disastrous results encountered by the inhabitants of Babel, architecture is frequently in a state of crisis. Today, the profession of architecture suffers from many maladies and few cures. (Is this a sickness of the body or the mind?) Questions such as *Can This Profession Be Saved?* [2] illuminate a growing, if not omnipresent fear about the stability and future of the profession. Corporate realigning and down-sizing are inevitable as electronic multi-tasking increases efficiency while reducing the size of an already shrinking world. But the perceived instability of the architectural profession is more a question of public need rather than departmental re-organization. The tremor of fear rippling through the profession is a realization that the general public does not need or value the services (product?) of the architect. As stated above, in 1994, the profession was questioning whether it could survive. Now, in typical scapegoat fashion, a struggling profession slits its own throat and points the finger of blame at the schools. According to a recent article in a now defunct periodical, "Practitioners are expressing disappointment, if not outright disgust, about how well students are trained for the profession." [3] This article goes on to state that, "The rift between the architecture schools and practitioners has never been greater, and the profession as a whole suffers." [4]

Despite this grim state of affairs, architects are a secretly optimistic bunch, and hope for miracle cures to the problems which plague the profession allow many to continue their dedicated practice. In the past, theoretical realignment and subsequent paradigm shifts have revived a comatose profession. In Medieval Europe, the moral/religious dilemma of building was handled through careful theoretical definition. Architecture was acceptable as long as there was direct religious justification. (For example, a ten column facade may have been considered materialistic—however, twelve columns, because they related to the number of apostles, were acceptable.) By the early Renaissance, inquiry by Saint Thomas Aquinas advanced the cause even further. He re-analyzed the moral position of expenditure and through a variety of sources, most notably Aristotle, developed a theological hierarchy which claimed that great work could first be used to honor God; could second, be for the benefit of the common good; and third, could be for the benefit of the individual. [5] Today, justifying construction is not our most pressing concern; however, justifying architecture is. Building is still taking place, only less frequently does it involve architects or the aesthetics of architecture on which the profession is predicated. Beyond the inevitable financial recessions and drops in the building market, the dilemma facing architecture is one of compromised aesthetics, rather than functional or structural competence. Aesthetics were once (a century ago?) a "legitimate concern within the public consciousness and indeed provided a secure foundation on which to base the architectural profession." [6] Architecture is not a service, it is a product. And yet we continue to base our profession on aesthetics defined by terms and ideas which ignore the tangible stuff.

Two architectural events, independent, although somehow synchronous, have recently transpired which appear to offer hope for our current malaise. A new theoretical position described in Kenneth Frampton's book, *Studies in Tectonic Culture*, asserts that architecture is primarily about the building and secondarily about abstract signifiers. Paul Goldberger, from *The New York Times*, states:

[Frampton] believes that the way in which buildings are built—the materials architects use and the way in which they choose to put them together—can be a complete, even profound, expression of an architectural idea. [7]

From a physical/built standpoint, the various works collected for the show, *Monolithic Architecture*, while avoiding any obvious visual similarities, do contain the germ of a consistent ideology or tectonic preference. The monoliths share a focus of tactility, concern for openings, and a formal/spatial disparity. Echoing Frampton's claim, these monolithic buildings appear to be primarily about themselves (structure, function, and material as program) and are secondly referential signs.

Do these two items constitute a new hope for reinstating the architect as the much revered and necessary master builder, or as in the case of so much rhetoric, do they only add to the death throes of a doomed profession? Before contemplating those questions it is necessary to ask: how did tectonics ever become anything but the primary focus of architecture; and how can a renewed interest in tectonics begin to correct any wrongs that may have been done. Fifteenth-century Florence, Italy offers a platform for observing the initial de-centering of tectonics and subsequent devaluing of aesthetics.

AN HISTORIC X-RAY

The Master Builder is dead. Long before Henrik Ibsen or Ayn Rand attempted to define a creature of self, proceeding on intuition and divine inspiration, the master builder was crushed by the dome of a Catholic cathedral.

Filippo Brunelleschi's double-shelled (skin and structure) dome in Florence, designed perhaps for the first time beyond the limitations of existing skills and techniques, signaled the end of the master builder's reign. Through its conception, Santa Maria del Fiore's dome laid the groundwork for Leone Battista Alberti to develop a theoretical position separating form and substance and ultimately signifying the end of the master builder.[8] Book I, chapter I of Alberti's *Ten Books on Architecture* states, "We shall therefore first lay down, that the whole art of building consists in the design, and in the structure."[9] By the middle of the eighteenth century, the basic structural principal of displacement was known, the structural characteristics of common building materials were being calculated, and scientists and engineers were mathematically predicting the static behavior of buildings.[10] In 1743, Pope Benedict XIV requested a structural analysis of St. Peter's Dome to determine the cause of several serious cracks.[11] The public's desire to be reassured, to whatever limited degree, prior to construction, that buildings and structures would be stable forced the development of structural statistics and engineering as a building profession separate from the building design profession. The master builder's basic theoretical understanding of structural principles and intuitive design process gave way to outside consultation.[12]

The demise of the master builder marks a significant language shift for architectural aesthetics. Pre-modern design of the master builder upheld the logos of inspired truth, and as such, design was a single language proceeding from the self while producing a product which proclaimed the aspirations of the collective. The inspired truth of the pre-modern master builder gave way to the quantifiable proof and empirical truth of the Renaissance or modern architect. Math became the language of the engineering consultant, and the architect assumed responsibility not only for the implementation of his inspired truth (aesthetics), but for a montage of languages. Today, with the inclusion of consultants and special interest groups such as real estate brokers, insurance agents, and lawyers, multiple languages abound. The logos of empirical proof has transformed again to that of economic marketability, and commodification of image marks the embrace of nihilist philosophies. It becomes important, at this point, to maintain a distinction between product and image. As stated earlier, this paper contends that architecture is too often considered as providing a service. It would be more beneficial to education and practice if architecture was conceived of as producing a product. The problem with image is one of superficiality. When the tangible product of architecture becomes second in importance to the image that is being sold, the possibility of the architecture actually impacting our lives is diminished—it is marginalized...

...in the margin it does not lose its quality as [architecture], it only loses its direct relevance to our existence: it becomes a splendid superfluity.[13]

When [architecture] is removed to a zone of safety, it may remain very good [architecture] indeed, and also very popular [architecture], but its effect on our existence will vanish.[14]

First printed in Florence in 1485, Alberti's ten books described a fracture between design and technology which, 500 years later, has become a deadly chasm and splintered off into many other pieces. The two-part architectural conundrum of design and structure gave birth to the modern movement which quickly pulled the wall from the frame and opened up vast buildings of space and light while universally attempting to disassociate itself from any specific cultural or historic references. From the inauspicious separation of skin and frame, the tectonic fragmentation has intensified to such a fevered pitch in post-modern architecture that every last hinge, bolt, and screw is polished to glimmering perfection in an attempt to account for the multiplicity of languages which must be heard in each building.

Benevolent societies seem persistently engaged in bringing things together that are apart, and taking things apart that are together, thus fostering the perpetual mobility of [architecture], which is destructive of genuine concentration.[15]

From Alberti's original statement breaking architecture into design and structure, continued fragmentation has completely neutralized it by constantly making it about something other. Post-modernism has been criticized for its uncritical attempt at forming connections to all cultures as well as its superficial historic applique and excessive formal playfulness. "In most architectural theory, the physical object of the building is but a vehicle to some less tangible end."[16]

TECTONICS AND MONOLITHS: PENICILLIN OR PLACEBO

Saint Thomas Aquinas may have once revived architecture by reinterpreting a theological position—perhaps reasserting tectonics may do the same. The aesthetic problem faced by architecture is not one of finding the correct theory to interpret the building, the problem appears to be one of ordering the interpretations. "The built is first and foremost a construction and only later an abstract discourse based on surface, volume and plan."[17] Frampton's statement is not making a case for the mundane of utility, he is suggesting that the horse be kept in front of the cart. This linear understanding however may be problematic. In much the same way that form does not follow function and function does not follow form, so too must the way in which the building is constructed support the architectural experience in conjunction with its theoretical interpretation.

...venustas, utilitas, and firmitas are the formative themes of an architectural knowledge in which style is integrated with the rules of gravity and the property of materials.[18]

A rethinking of the Vitruvian trilogy while simultaneously resisting the desire to separate or linearize the words is necessary for understanding his message. The word technique which speaks about fulfilling the technical requirements of a problem (a two-part equation of design and fabrication) did not exist for Vitruvius. Instead, *techne* suggested a "unity of means and end."[19] In a similar manner, an ontological relationship between sign and signifier must emerge. Aesthetics, at one time the basis of the architectural profession, may bring a renewed public interest to the product of architecture if it can be re-centered on a more progressive understanding of tectonics.

This then provides the opportunity to scrutinize the monolith, most easily introduced through the pragmatic realities of the "dumb box." In many architecture offices, the "dumb box" is perhaps the most frequent client request for two reasons: economics and functional flexibility. From the shopping mall, to the movie theater, to the convenience store, the tectonic coupling of monolithic, stereotomic mass with tactile surface affords one the opportunity to, in good design conscience, give the client what they want. [20] Monoliths, be they Latent, Composite, Hollow, Epidermal, Floating, Digital, Domesticated, Familiar, or Penetrable, all have a "character that ostensibly defies current preoccupations with arbitrariness, shapelessness, fragmentation, and heterogeneity."[21] These buildings feign indifference to the formal excess that has become a contemporary preoccupation. Through an intense and disciplined focus they provide structures which are capable of ordering experiences while preserving diversity. "Their capacity to deliver tremendous eloquence with very little formal means"[22] describes a critically limited palate in which a resolution between meaning and fabrication may finally be broached.

...we shall choose our material not only according to standards of economy and pure science but with the spirit of emotional freedom and artistic imagination. Hence architecture finally stands beyond pure purpose; higher than the achievements of logic and cold calculation.[23]

An inherent superficiality of our current post-modern paradigm is that the fragmented layerings of this epoch do not remove hierarchical systems and empower the fringe. They merely insult the disenfranchised through impotent and patronizing gestures. The monolith is a tectonic response to kinetic, post-modern architecture which expends itself before our eyes and reveals itself completely through excess of form and senseless exploitation of every line and connector. The brooding monolith's restraint becomes the source of its power. Like the awesome quiet of an empty city street or a de Chirico painting full of anticipation and possibility, the monolith's unfathomable potential comes from its ability to compose and frame itself moments before what would otherwise become a post-modern cataclysm.

NOTES AND REFERENCES

1. Onians, John. *Bearers of Meaning.* (Princeton, N.J., Princeton University Press, 1988), p.112
2. Fisher, Thomas. "Can This Profession Be Saved?" *Progressive Architecture.* (February 1994), p.44
3. Crosbie, Michael. "The Schools: How They're Failing the Profession (and What We Can Do About It)"*Progressive Architecture.* (September 1995), p.47
4. Ibid
5. Onians, p.124
6. Fisher, p.46
7. Goldberger, Paul. "Bricks and Mortar" *The New York Times Book Review.* (10 March 1996), p.5
8. Hartoonian, Gevork. *Ontology of Construction.* (Cambridge, England. Cambridge University Press, 1994), p.2
9. Alberti, Leone Battista. (translated to English by James Leoni) *Ten Books on Architecture.* (London. Alec Trianti Ltd., 1955), p.1
10. Garrison, Ervan. *A History of Engineering and Technology: Artful Methods.* (Boston, MA. CRC Press, 1991), p.126
11. Ibid
12. Interesting anomalies to this break up of design and engineering are characters such as Christopher Wren (1632-1723) who was a distinguished mathematician by the age of 28, before he was an architect. Today, Santiago Calatrava maintains a similar design/engineering discipline.
13. Wind, Edgar. *Art and Anarchy.* (Northwestern University Press, 1985), p.10
14. Ibid, p. 13
15. Ibid, p. 88
16. Goldberger, p.5
17. Frampton, Kenneth. *Studies in Tectonic Culture: The Poetics of Construction in Nineteenth and Twentieth Century Architecture.* (Cambridge, MA, MIT Press, 1995), p.2
18. Hartoonian. p. 7
19. Ibid. p. 11
20. Machado, R. and Rudolphe el-Khoury, (eds.) "Monolithic Architecture" *Monolithic Architecture.* (New York, Prestel-Verlag, 1995), p.23
21. Ibid (pp. 12-23) These pages contain fuller explanations of the types of monoliths listed in the paper.
22. Ibid (p.12)
23. Frampton, p.335. This quote is by Aris Konstantinidis, 1964.