

Architecture: The Hinged Discourse

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In 25 BC, Marcus Vitruvius Pollio wrote *The Ten Books on Architecture*, the earliest surviving architectural treatise. In it, he spoke of the architect, as the artisan, designer and builder, as the master craftsman. He argued for a triple essence to be achieved by the architect, those of constructive strength, practical utility, and aesthetic effect. The triple essences were to be achieved through the architect's first hand, mechanical, and tactile knowledge of materials, and their structural, aesthetic, and formal properties. The singularity of the piece of stone, its form, its grain, the pattern of its breakage, its material strength, and its surface texture was understood through a tactile analysis by the hand of the master craftsman, on-site and off-paper. On the other hand, this tactile analysis had to be accompanied by an aesthetic analysis, on-paper, and off-site.

Vitruvius writes:

"The architect should be equipped with knowledge of many branches of study and varied kinds of learning, for it is by his judgement that all work done by the other arts is put to test. This knowledge is the child of practice and theory. Practice is the continuous and regular exercise of employment where manual work is done with any necessary material according to the design of a drawing. Theory, on the other hand, is the ability to demonstrate and explain the productions of dexterity on the principles of proportion.

It follows, therefore, that architects who have aimed at acquiring manual skill without scholarship have never been able to reach a position of authority to correspond to their pains, while those who relied only upon theories and scholarship were obviously hunting the shadow, not the substance. But those who have a thorough knowledge of both, like men armed at all points, have the sooner attained their object and carried authority with them."

Architecture, for Vitruvius was conceived as a form of knowledge; a form of knowledge about the physical environment that was acquired and practiced through the active and ambulatory presence of the architect on the construction site: seeing where the sun rises, and sets, where the prevailing winds come from, and where the high and low spots of the site are. The architect/builder/artisan/de-

signer, through presence on the construction site, by handling the stone, the chisel, and the hammer, was to achieve the triple essences of constructive strength, practical utility and aesthetic effect in the building that was built.

A number of key issues arise in relation to this 2000 year old treatise by Vitruvius:

1. Perhaps the most obvious and the most profound is the distinction, not raised, but acknowledged, between theory and practice. Vitruvius is theorizing on the practice of architecture. He is analyzing the constructive language of architecture built by other architects, and theorizing in the written language. The works of architecture referenced in *The Ten Books on Architecture* are representations of themselves in the books. They do not appear as language, rather described in language.
2. Perhaps not as obvious, but just as profound is the fact that the Vitruvian architect is engaged in the design, and the production of the building. Both the intellectual labor and the physical labor are a part of the architect's realm of responsibilities. The distinctions that are later drawn between design and construction, that elevate intellectual labor to the noble, and physical labor to the ordinary, are here non-existent. The two are considered as part and product of the same activity.
3. The presence of the architect on the job site, and the first-hand handling of material realities is assumed to communicate such realities to the architect.
4. Drawing, both in its techniques of construction and its use, was not a "blueprint" from which buildings were to be made; it did not exist as a representation or a reproduction in reference to the building yet to be made. Instead, it was a mode of studying and examining construction and material issues.

In 1452 AD, during the Renaissance, Leone Battista Alberti (1404-72) wrote *Ten Books on Architecture*, The most significant treatise on architecture since Vitruvius. In it he spoke of the architect as the artist and the designer, and not as the craftsman, or the builder.



Yet he still insisted on the Vitruvian triple essences, rephrased to strength, convenience, and beauty. Alberti, as the pre-eminent theorist of architecture during the Renaissance, was reflecting on the contemporary developments in Italy. The Renaissance was associated with a growing secularism and a renewed interest in Classical Roman civilization. Patronized by merchant-aristocrat families, a new kind of architect emerged who was no longer a craftsman but a creative and a versatile artist in pursuit of aesthetic excellence. Filippo Brunelleschi (1377-1446), whose Founding Hospital and cathedral dome at Florence are the inaugural buildings of the Renaissance, was a goldsmith, and Michaelangelo (1475-1564) considered himself primarily a sculptor. Hence a new breed of architects was born: those who would privilege the aesthetic over the constructive, the on-paper over the on-site. Not only is intellectual labor separated from and privileged over the physical labor, but also a particular type of intellectual labor is preferred; that related to the oculus. The primacy of visual aesthetics has greatly altered the path of architecture since the Renaissance. Alberti as the theorist of the age, poses the relationship of the three essences to be different than the Vitruvian model. Here Alberti argues for beauty, to be of utmost importance.

"...this part of building, which relates to beauty and ornament, being the chief of all the rest, must without doubt be directed by some sure rules of art and proportion, which whoever neglects will make himself ridiculous. But there are some who will by no means allow of this, and say that men are guided by a variety of opinions in their judgment of beauty and of buildings; and that the forms of structures must vary according to every man's particular taste and fancy, and not be tied down to any rules of art. A common thing with the ignorant, to despise what they do not understand!"²

The post-Renaissance architect as the artist and the designer, would have first hand knowledge of the rules of art and proportion, but would only be familiar with the craft and the constructive aspects of architecture through deferred learning.

Here, in this first major break in the conception of architecture, a number of bifurcations are introduced in the production of architecture:

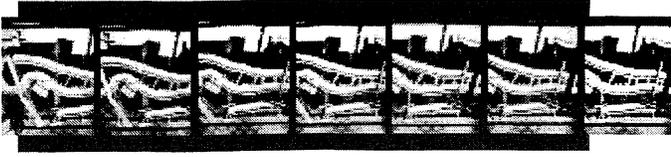
1. The design and the construction of architecture are bifurcated. The Medieval architect as the designer/artisan/builder has been split into the Renaissance architect and the stone mason, or builder. The architect is responsible for the creative aspects of the design, the communication of that design; and the builder is responsible for the execution of the design. As a result, the architect is no longer physically engaged in the construction of buildings.

2. The simultaneity of the intellectual labor and the physical labor of the medieval architect has been split, so that the architect is responsible for the more noble intellectual labor, and the builder is responsible for the more ordinary physical labor.
3. The product of the work of the architect is no longer a building, it is a representation of the building. The architect produces drawings, the blueprints from which the builder manufactures the building. The architect works in reference to the building, and not on the building. The architect works on-paper, and off-site. As a result, the architect is primarily concerned with the appearance of the building, that which could most readily be reproduced and represented in a drawing, especially one constructed using the rules of perspective.
4. Situations, territories, materials, and their singularities have been split apart. The Medieval architect worked with a piece of stone, as a piece of stone with all of its material singularities. The Renaissance architect works with a drawing of the piece of stone, only able to specify its shape, and dimension, and estimate its texture.

Through the separation of design and construction, theory and practice, drawing and building, and profession and discipline, the architect's work is always mediated through drawings, which are on paper, and off site. The static geometry of the appearance of the artifact is reproduced in absolute measure, on paper, with only notational or referential information to its material and constructive conditions, as they are experienced on site, and off paper. Given that material singularities, and constructive particularities do not appear visually in an architectural drawing, the whole nature of architectural drawing in relation to material singularities becomes suspect.

Perhaps the most fundamental shift in architecture that can be attributed to the Renaissance is the ocularization of the practice of architecture. With Brunelleschi's invention of the scientific construction of perspective, the single, self-centered eye of the architect and the viewer dictated the primacy of the privileged position of the center in any symmetrical design. Hence the experience of architecture was profoundly limited to the visual, more specifically, to that governed by the fixed point of view of perspective, and not by the activity of the human body, its motion, and other senses. Medieval architecture as a form of knowledge about the physical environment was transformed to Renaissance architecture as knowledge of form, knowledge of rules and mathematical proportions that dictate formal configurations.

In the Sixteenth Century, architecture, along with civil engineering, medicine, law, clergy, and accounting became "learned profes-



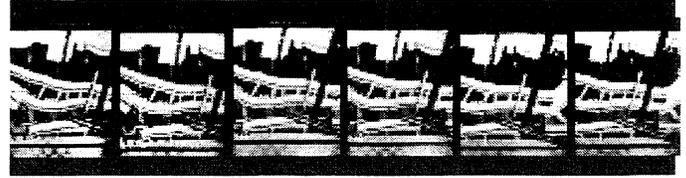
sions”, the first step towards the outlining of the legal within the architectural. It was not until the first part of the Twentieth Century that architects began to establish a “Code of Ethics”, and eventually specialized education and licensing laws. By this time, yet another bifurcation had been introduced in the production of architecture: that of the profession versus the discipline. The profession, bound by, licensed by, and educated by the Profession’s Code of Ethics, and the discipline, bound by the creative and constructive rigors of architecture.

This brief analysis of the history of architecture delineates a tendency towards the continual bifurcation of the discipline away from situational, material, and territorial singularities. This, perhaps, is not unique to the discipline of architecture, certainly not in an era when everything arrives as pixels, far from the tactile and the physical. Even the site of construction is no longer a territory to be followed and traversed in order to be studied; rather, it is a series of glowing dots of phosphorous recorded by the United States Geological Survey’s Land Satellite, with digital precision, part red pixel, part blue pixel, and part green.

The Medieval architect, having to materially follow the territory of the construction site, to materially scale the surfaces and record the landscape of each piece of stone, having to triangulate the different particulars of the surfaces in relation to one another, is now replaced by a drawing, a site map, or a satellite photo, which records the territory without ever touching it, measures the landscape without ever traversing it, forms the geometry of the stone without ever lifting it, and drafts a map without ever ruling it. The Medieval architect’s logic of operation could not exist purely outside of the territory, outside of the landscape, and outside of the material; it could not exist purely on paper, and off-site.

The architect had to physically engage the territory and the materials, their surfaces, and their nuances. The tools and the techniques of reproduction: measurement, recording, and drafting techniques, had to be continuously altered according to the terrain of the territory, and the complexity of the material at hand. On the other hand, the site plan, though far more precise in its measure, neutralizes the territory, and the participants. The same drawing technique will record a site in Baltimore, that will record the Amazon, New York City, and the Salt flats, each reproduced from a fixed position in space.

This analysis is not nostalgia for a manual, mechanical, or analog world. On the contrary, it is in search of a material hyper-tactility, and a material language with real-time engagement and real-material consequences, in a mediated, binary, always-already-reproduced environment. It is in search of a productive model that is on paper and off-site, which is mediated, and digital, yet off paper and on-site, with hyper material sensibilities. It is in search of a produc-

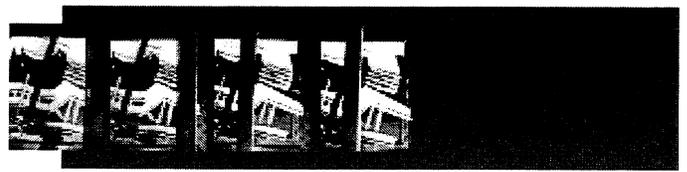
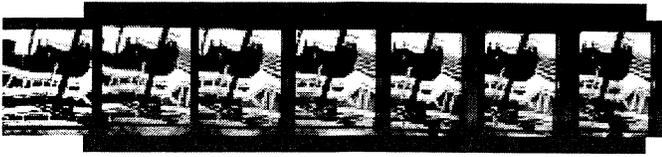


tive model that is mediated, yet material, which reproduces with the measured precision of the static eye, and can yet experience frenetic mobile flux as an ambulant, heuristic architect. This model is neither solely about composition nor solely about organization.

The hinge model proposes the space of architecture to be the space of projection, where the material singularities, and architecture’s measured organization can be projected onto one another; a projected space for the deployment of the tactile presence as the undermining agent of resistance for the mediated reality of the drawn and the digital, and the deployment of the mediated as the undermining agent of resistance for the tactile.

The space of the hinge is a continuously moving, tense-space between opening and closure, between design and construction, between theory and practice, between profession and discipline, and between intellectual labor and physical labor. The complexity of this position is in maintaining the tension of the hinge: never to be permitted to be simply open, nor simply closed, always in fluxive tension. The complexity of this position is in engaging the potentially violent unrelieved stress of a sheet of steel without fixing it, in engaging the potential energy within the torques and bends of a piece of lumber without straightening it, engaging the unpredictable movements of vapor, and chaotic wind-blown rain without controlling it. The complexity of the hinge-position is in the mobilization of the static geometry and the absolute measure of the architectural drawing for sudden material flight. It is to make the architectural drawing move beyond its own structure of two-dimensional representation and address the possibility of the impossible-to-reproduce. It is to construct the mobile fluxive space through the geometry of the immovable within the space of reproduction. It is to construct the ground-level plane of the medieval architect through the metric plane of the Land-Satellite image.

The accompanying project, SLIP, was produced in a graduate architecture design studio at the University at Buffalo during the Spring semester of 2000.³ The proposal, as the name might imply, was a slip between drawing and construction, between the precise Land-Sat accuracy of a map of Buffalo, NY, and the material consequences of slip-forming the same map in concrete. It was a slip between the physical labor of producing the slip-formed concrete structure, a continuous 96 hour effort, beginning on Friday February 25, 2000, and ending on Tuesday February 29, 2000, and the intellectual labor of programming Freudian slips. It was a slip between the production of architecture on-paper, off-site, and the production of the same on-site and off-paper. It was a slip between the studio as a construction site, and the studio as the site for drawing and modeling of architecture. It was a slip between Derrida’s hinge theories in “Plato’s Pharmacy”, and the practical requirements for the design of a pharmacy. It was a slip between a 16" masonry circular



saw, and a draughting compass; a slip between half a ton of concrete and 90 grams of mylar. It was a slip between architecture as theory and practice, as drawing and building, as discipline and profession, as intellectual labor and physical labor, and as artistic production and constructive production. It was a slip between architecture.

NOTES:

¹Marcus Vitruvius Pollio, *The Ten Books on Architecture*. Translated by Morris Hickey Morgan (New York: Dover Publications, Inc., 1960) p. 5.

²Leone Battista Alberti, *Ten Books on Architecture*, Translated by James Leoni (London: Transatlantic Arts, Inc., 1755) p. 113.

³SLIP was conducted as a graduate architecture design studio at the University at Buffalo, spring 2000 by the author. The contribution of the following students to the development of "slippery" ideas and to the work of the studio was invaluable: Gloria Arango, Eric Brodfuehrer, Melisa Delaney, Carrie Galuski, Rami Haydar, Charlotte Kahr, Michael Maggio, Sean McCormack, Kerron Miller, David Misenheimer, Bharat Patel, Redman Toska, Ron Trigilio.

